

El Sur Ranch
Water Right Application No. 30166
Final Environmental Impact Report
SCH No. 2006061011
Monterey, California



Prepared for:
California State Water Resources Control Board
Division of Water Rights

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ATKINS

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1.0 INTRODUCTION

1.0 INTRODUCTION

The State Water Resources Control Board (SWRCB) is the Lead Agency for preparing an Environmental Impact Report (EIR) for the El Sur Ranch water right Application No. 30166 (the proposed project). This document is the Final EIR and was prepared pursuant to the State of California Environmental Quality Act (CEQA) of 1970 (as amended) (California Public Resources Code 21000 et seq.) and in accordance with the State Guidelines for the California Environmental Quality Act (CEQA Guidelines). The Final EIR contains, by reference, the *El Sur Ranch Water Right Application 30166 Draft Environmental Impact Report* (DEIR) SCH# 2006061011 that was circulated for public review in October 2009. The review period for the DEIR concluded on December 14, 2009.

PROJECT OVERVIEW

The El Sur Ranch (Ranch) is a working cattle operation located on the coast of Monterey County, California, just north of the Big Sur River and west of State Route 1 (Highway 1). The Ranch has been in operation at this location for more than 150 years. Irrigation of the upland pastures has historically come from water pumped from wells located within the adjacent Andrew Molera State Park, on land originally deeded to the California State Parks system from the Ranch. One of the wells (the "Old Well") has been in operation since 1949, while the other (the "New Well") was put into operation in 1984.

The SWRCB has determined that water pumped from these wells is groundwater flowing in a subterranean stream,³ rather than from percolating groundwater. As a result, the appropriation of this water comes under the jurisdiction of the SWRCB's Division of Water Rights (Division). In determining whether to approve a water right application and under what conditions, the SWRCB must consider the project's potential environmental impacts and any appropriate mitigation measures identified through the CEQA process. The Ranch originally filed Application No. 30166 with the Division in July 1992 for the appropriation of water from the subterranean flow of the Big Sur River. The application was amended in November and December 2005, and again on October 17, 2006; the current amendment represents the proposed project.

This EIR evaluates the environmental impacts of the El Sur Ranch water right Application No. 30166, as amended. If approved, this would allow for the appropriation of water from the subterranean flow of the Big Sur River, Monterey County, California. The "points of diversion" are the two existing El Sur Ranch groundwater wells located in Andrew Molera State Park. The "place of use" is existing irrigated pasture on El Sur Ranch just north of the park and west of Highway 1. The proposed project would allow for water from the El Sur River's subterranean flow to continue to be used for irrigation of existing pasture.

3 The SWRCB initially found that the water came from the "underflow" of the Big Sur River. At the time of the SWRCB's determination, the term "underflow" was commonly used in referring to a subterranean stream subject to the SWRCB's permitting authority. Although El Sur Ranch is diverting from the subterranean stream portion of the Big Sur River, henceforth the document will just refer to diversion from the Big Sur River.

PROJECT LOCATION

El Sur Ranch (the Ranch) is located along the Big Sur Coast in Monterey County, California, approximately 25 miles south of the City of Monterey on Highway 1 between the Santa Lucia Mountains to the northeast and the Pacific Ocean to the southwest (Figure 1-1). The Ranch, established in 1834, consists of approximately 7,000 acres of privately-owned land located immediately north of the Big Sur River and Andrew Molera State Park and approximately one and one-half miles south of the Point Sur State Historic Park.

The project site occupies approximately 292 acres within the Ranch. As illustrated in Figure 1-2, it is bounded by Highway 1 on the northeast, the Andrew Molera State Park on the east, and the Pacific Ocean on the southwest. Groundwater wells that provide water to the site are within Andrew Molera State Park, between the park boundary and the Big Sur River. Swiss Canyon bisects the project site. The northwestern border is approximately 1,400 feet west of Swiss Canyon. Swiss Canyon is a perennial, incised creek supporting native grass, shrubs, and other riparian plants. It is fed indirectly by seepage from the Ranch, and it conveys runoff from off-site areas east of Highway 1 and from the Ranch to the ocean. The canyon is accessible to cattle for grazing.

EXISTING SITE CONDITIONS

The “project site” consists of the intended place of use (POU) for water diverted under the proposed water right, the intended points of diversion (PODs), the existing ranch roads and irrigation facilities/infrastructure, a tailwater pond, and two outfalls, the locations of which are shown in Figure 1-2.

Existing Place of Use

The POU boundaries are generally delineated physically by barbed-wired fencing and the following major features: Highway 1 to the northeast; the Pacific Ocean to the southwest; an unnamed creek to the northwest; and the Andrew Molera State Park to the south. Evidence of continuous water use in the POU since 1950 is documented in the records of the Ranch, and includes the irrigation system plans and specifications, contracts for construction of the irrigation systems, well logs, and records of pumping and power use at the wells.

The POU is divided into two functional units for accommodating the Ranch’s pumping and irrigation requirements. The POU contains the North Pasture and Pastures 1, 2, 7, and 8, and the South Pasture, Pump House Field Pasture, and Pastures 3, 4, 5, and 6 (see Figure 1-3).

Approximately 25 acres of the 292-acre project site comprise dunes, the tailwater pond, outfall, access roads, and irrigation canals. The remaining 267 irrigated acres is the POU. Of those 267 acres, approximately 25 acres is within the Big Sur River watershed and is, therefore, served by the applicant’s existing riparian water right. The location of the riparian area within the POU is shown in Figure 2-2. Under a riparian right, water diverted from the Big Sur River can only be applied to land adjacent to the river and within the watershed. It cannot be diverted to irrigate other pasture land that is non-riparian. The remaining 242 acres of pasture comprise the area for which the proposed appropriative water right is being requested.

Although Swiss Canyon bisects the POU, it is not within the POU and is not part of the irrigated area under existing or proposed conditions.



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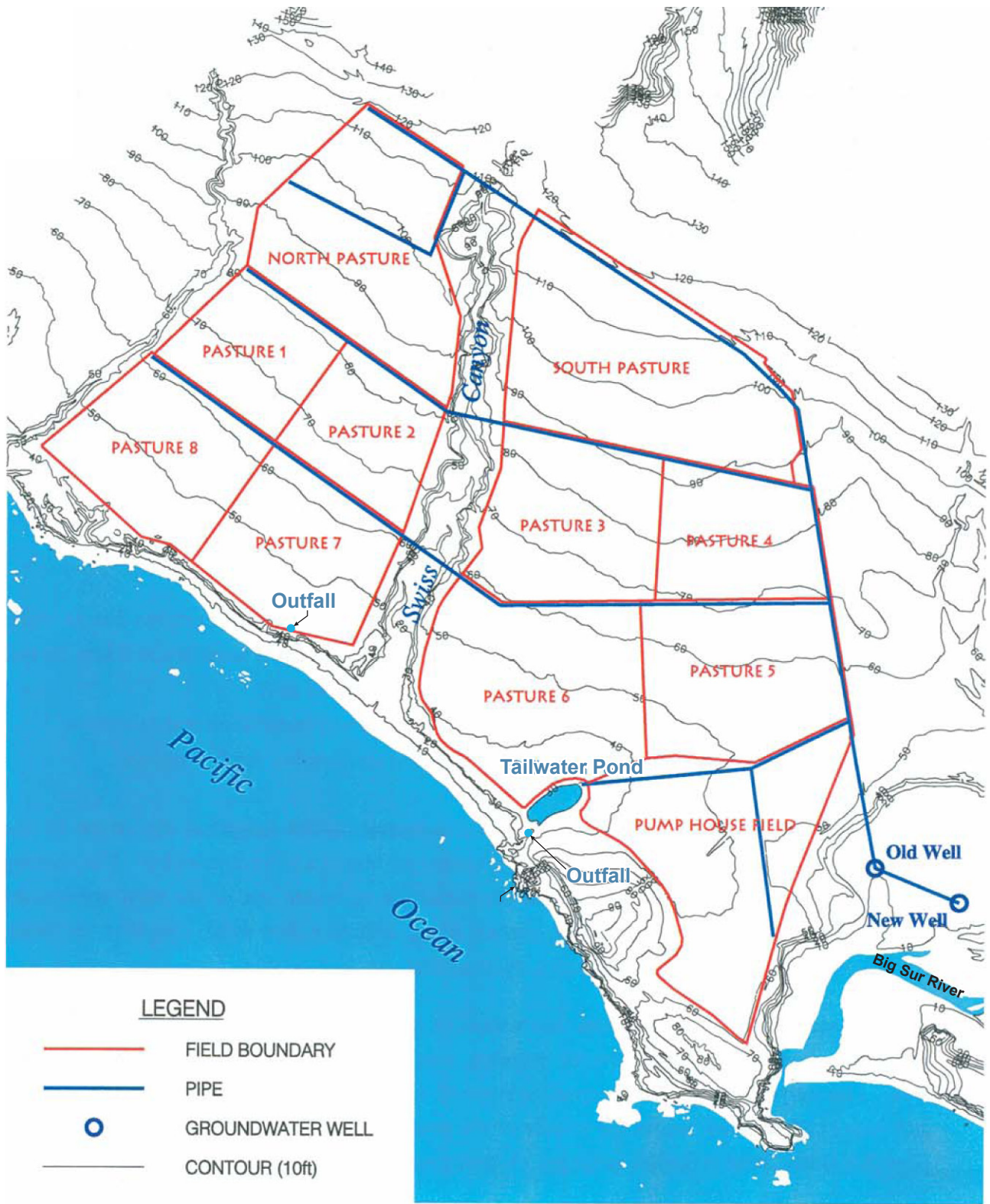


Source: Microsoft Trips and Streets, 2006; PBS&J, 2008.

Figure 1-1
Regional Location



Figure 1-2
Project Location



LEGEND

- FIELD BOUNDARY
- PIPE
- GROUNDWATER WELL
- CONTOUR (10ft)



Source: Microsoft Trips and Streets, 2006; PBS&J, 2008.

Figure 1-3
El Sur Ranch Property and Infrastructure Irrigation System

Existing Points of Diversion

Groundwater from subterranean flow used to irrigate pasture within the Ranch POU is pumped from two wells: the Old Well, which was constructed in 1949, and the New Well, which was constructed in 1975 and placed in operation in 1984. The locations of these wells are shown in Figures 1-2 and 1-3, above. The Old Well and New Well are located approximately 500 and 1,000 feet east of the Ranch pasture boundary, respectively, in an easement within Andrew Molera State Park. As stated in the Application No. 30166, both points of diversion are in SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Section 16, Township 19 S, Range 1 E, Mount Diablo Base Meridian. Under the California Coordinate Zone System (Zone 4), North American Datum 1927, the coordinate distances are N 358,650/E 1,158,000 for the Old Well and N 358,750/E 1,158,400 for the New Well.

The Old Well, located approximately 500 feet from the river and approximately 1,300 feet from the mouth of the Big Sur River, includes a secured pump house with corrugated metal siding and noise reduction material, two standpipes, an electric-powered pump and associated pipes and fittings. The New Well, located approximately 400 feet from the river and approximately 1,375 feet upstream from its mouth, is surrounded by brush and trees, and is situated adjacent to a side trail along the park boundary. The New Well is housed in a secured structure with an electric-powered turbine pump and associated valves, pipes, and fittings. Three sides of the New Well housing are covered in noise abatement material to reduce pump noise detection along the park trail. Together, these wells convey water directly west and uphill to the Ranch's pasturelands via an underground pipe.

The Old Well is equipped with an electric motor, 60-horsepower (hp) pump that has reported pump rates between approximately 1,145 and 2,000 gallons per minute (gpm). Since no well drilling report exists, the depth of the Old Well is unknown. The New Well is approximately 32 feet deep and equipped with an electric motor driving a 50-hp pump that has reported pump rates between approximately 963 and 1,567 gpm. Both wells' pumps can be operated simultaneously at their maximum pump rates when water is needed for irrigation of pastures, typically during dry periods of the year (e.g., summer months). However, the pumps are typically used to irrigate different fields, so they are operated simultaneously only when the needs of those fields require it.

EI Sur Ranch Irrigation System Operation

The Ranch's irrigated pasture is surface irrigated with "border strips." Border-irrigated fields consist of strips of land that slope slightly from top to bottom with minimal sloping side to side. These strips of land are contained between low earth berms (i.e., dikes, checks, or ridges). The border strips on the Ranch's irrigated pasture are 14 feet wide (top to bottom) and vary in length from about 500 to 1,000 feet (side to side). Border strips are irrigated from lateral pipelines. Irrigation water is introduced at the upslope end of the border strips and gravity directs flows to the bottom slope end of the border strips. The tailwater from all but the bottom set of borders flows to the next downstream set of borders. The tailwater from the northern pastures ultimately drains to an outfall at the bottom of the northern pastures, while the tailwater in the southern pastures drains to a tailwater pond located at the southwestern edge of the Ranch property. There is an outfall from the tailwater pond to the beach consisting of two 4-foot-diameter corrugated metal pipes that direct flow into a concrete culvert then the beach (see Figures 1-2 and 1-3).

Water from the wells is conveyed through a pipeline system with valves to deliver water to the pasture. The pipeline consists of 14-inch diameter concrete or PVC with valves placed 28 feet apart across the head of the pastures. One valve irrigates two border strips. While both wells can be used to irrigate any of the pastures, the Old Well is used primarily to supply water to the upper irrigated pastures and the New Well is primarily used on the middle and lower pastures.

The frequency of irrigation of each field is adjusted according to soil conditions and topography. For example, the Pump House field has more porous soil and, therefore, needs shorter, higher-velocity flows than other fields. The irrigation schedule is periodically adjusted to accommodate unscheduled outages and/or scheduled outages for maintenance of the irrigation system. Precipitation and other climatic conditions, including wind, temperature, humidity, solar radiation, are also factors that affect the timing and duration irrigation.

The pastures are fertilized annually and are occasionally aerated to improve water percolation, reduce compaction, and improve overall productivity. On rare occasions, in years with late spring and early summer rains, the grazing of cattle in the non-irrigated portion of the Ranch is extended, allowing the irrigated pasture area to be cut and harvested for hay. After the hay is harvested, the pastures are irrigated and grazed through the remainder of the summer and fall. The number of cattle raised on the Ranch varies with the productivity of the pastures, but averages approximately 400 head, up to a maximum of 700 head.

As described in the DEIR (see page 2-11), under the terms of a 1982 easement agreement with the Andrew Molera State Park, the Ranch may be prohibited from pumping from the New Well when salinity levels exceeding specific thresholds are observed in the well water.

PROJECT HISTORY

The Ranch's Old Well (State Well Number 19S 01E 16F 02M) was constructed in 1949 on what was then El Sur Ranch property (now Andrew Molera State Park property), and has been used continuously to flood irrigate lands on the Ranch since that time. In 1957, the Ranch allowed construction of another well (i.e., the "Navy Well") to serve the U.S. Naval Facility at Point Sur, approximately two miles to the northwest. Plans, specifications, and contracts for the construction of the original irrigation system document that the system was built in 1950. The system has been in continuous operation to the present time.

In 1971, the Molera Parcel, on which the Old Well was originally located, was deeded to the California Department of Parks and Recreation (DPR) and became part of the Andrew Molera State Park. The deed reserved the Ranch's water rights associated with the parcel, and allowed for continued use of, and access to, the Old Well. During the early 1970s, the Ranch sought to improve water distribution reliability by increasing access to available water supplies through the development of the New Well and associated pump system.

In 1972, a temporary use permit was issued by DPR authorizing the drilling of three wells in the park. One well was intended to serve the Andrew Molera State Park headquarters, a second well was intended to serve the U.S. Naval facility, and the third well was intended for Ranch irrigation (Letter from H.R. Howell to file of El Sur Ranch, July 12, 1985). This permit granted an easement for construction and access if a sufficient water supply was discovered. The first well was drilled at the DPR headquarters in 1972 (DWR Drillers Report No. 86694).

Litigation related to development of the well sites ensued in 1977, and ultimately resulted in DPR granting access to the Molera Parcel by the Ranch to complete development of its new irrigation well. This process and related actions are discussed in greater detail in the DEIR beginning on page 2-12.

On August 31, 1990, the DPR filed a complaint with the SWRCB alleging the excessive use of water by the Ranch resulted in potential impacts on the Big Sur River, and questioning the Ranch's right to divert water. As described in the DEIR (see page 2-13), a 1990 report by DPR staff asserted that the Ranch's pumping caused the dewatering of the river.

The SWRCB subsequently conducted a field investigation in 1991 to determine whether the Ranch's diversion of water from the Big Sur River was subject to the SWRCB's permitting authority. SWRCB staff determined the Ranch was diverting subterranean streamflow from the alluvium of the Big Sur River and, therefore, the Ranch's diversion was subject to SWRCB permitting authority under the Water Code. As noted above, technical studies supported the SWRCB's conclusion that the Ranch was diverting water from a subterranean stream (Jones & Stokes, 1999).

On April 12, 1992, the SWRCB issued a letter report documenting the investigation conducted by its staff in response to DPR's complaint. This report confirmed DPR's claim that the source of water for the two wells was indeed a subterranean stream, rather than percolating groundwater. The SWRCB concluded, however, based on the terms of the deed of the Molera Parcel, that the Ranch possessed a valid riparian right to use the wells to divert water to a portion of the Ranch. Under a riparian right, water cannot be diverted outside of the watershed or conveyed to parcels of land not contiguous to, or not abutting, the watercourse. Due to the topography of the pasturelands, the SWRCB concluded that this right was limited to 90 acres of riparian pastureland owned by the Ranch, (Moeller, 1992) with a corresponding total diversion limit of 270 acre-feet per annum (AFA).⁴ The SWRCB recommended that the Ranch either cease diversions of water that serve non-riparian land or, alternatively, apply for an appropriative water right that would serve the non-riparian land. The project applicant subsequently submitted Water Right Application 30166 which is the basis for this EIR. The SWRCB allowed the applicant to continue its historical irrigation practices on the irrigated pasture portion of El Sur Ranch pending approval or denial of that application.

The historical application practices for El Sur Ranch are described in detail in the DEIR (see page 2-14). Table 2-1 (page 2-15 of the DEIR) presents the estimated historical irrigation diversions for the ranch based on analysis of energy usage by the irrigation pumps and pump efficiency tests.

LAND USE/CROPS

El Sur Ranch is largest remaining working cattle ranch on the coast between San Simeon and Monterey. The Ranch's irrigated pastures are an integral part of the Ranch's cattle operation. The irrigated pastures provide a suitable location near the Ranch's headquarters and high-quality forage for the calves when they are weaned. The pastures are used by the weaned calves from May through August (the date the calves are moved from the pasture can vary based on the forage needs for the next group of cattle moved to the pasture). In August, the pregnant cows are moved to the irrigated pasture for calving. The irrigated pastures provide good forage for the mother cows, and the pastures are near the Ranch headquarters so the cows can be observed and assisted during calving. The mother cows are left in the pasture for a few months or until the pastures become wet and muddy from winter rains. The cows are then put back on the non-irrigated pasture and range on the Ranch to preserve the pasture border dikes and maintain the pasture (i.e., prevent damage that can be caused by cattle traffic on wet soils). The date the calves are moved from the pasture varies based on the forage needs of the next group of cattle moved to the pasture.

Species historically grown on the Ranch pastures have been orchard grass, fescue, harding grass, clover, birdsfoot trefoil, and other native weeds and grasses. These pasture crops are suitable for forage by cattle, as well as for harvest for hay.

⁴ When the Ranch amended its application on November 1, 2005, it identified the riparian portion, in two distinct areas, as totaling 25 acres.

PROJECT OBJECTIVES

The objectives of the proposed project are to:

- allow for the appropriation of water from the Big Sur River for use on the El Sur Ranch through issuance of an appropriative water right permit, consistent with the SWRCB's responsibility to consider water availability, the public interest, the protection of fish, wildlife, and public trust resources, water quality, prior legal water rights, and to condition the appropriation as necessary;
- allow for the continued diversion and beneficial use of water for irrigation of 267 acres of pasture for cattle grazing; and
- continue economic use of the land for agricultural purposes and grazing of cattle consistent with Monterey County Zoning Ordinance, Coastal Implementation Plan, and the Monterey County General Plan.

PROPOSED PROJECT: WATER RIGHT APPLICATION 30166

Proposed Purpose of Use

As discussed above, El Sur Ranch's irrigated pastures are an integral part of the Ranch's cattle operation. The irrigated pastures provide a suitable location near the Ranch's headquarters and high-quality forage for the calves when they are weaned from their mothers in May. The proposed purpose of use is irrigation of pasture crops.

Proposed Place of Use

The proposed water right would allow water diverted from the Big Sur River to be applied on 267 acres of the Ranch's 292 acres. For purposes of the application, and as used in this EIR, the area to be irrigated includes the 25 acres of land that is currently served by an existing riparian water right. Riparian land consists of 25 acres of irrigated pasture that are riparian to the Big Sur River. The project applicant used recent field topographic survey and stereographic analysis of 1929 aerial photographs to delineate that portion of the irrigated pasture that is within the Big Sur Basin. The Irrigated Area, which includes the riparian land, comprises the POU, the boundary of which is illustrated in Figure 1-2, above. The "Irrigated Area" consists of Assessor Parcel Numbers (APN) 159-011-05 and 159-031-04).

Proposed Points of Diversion

The proposed points of diversion would be the existing Old Well and New Well.

Numerical Diversion and Rate Limits Assumptions

El Sur Ranch's water right application is for the irrigation of pasture, which is considered a beneficial use of water. The law also requires that this water be put to reasonable use and that waste or unreasonable use of water be prevented (i.e., the amount required to supplement the water naturally provided by precipitation and other climatic factors should reasonably match the requirements of that use so that the water is not wasted). Because precipitation, climate, and other factors vary, often considerably, from year-to-year, the diversions required for this reasonable and beneficial use will vary, considerably, from year-to-year, month-to-month, or even day-to-day. The rest of this chapter describes the applicant's basis for requesting to appropriate a particular amount of water that the applicant believes can be put to reasonable and beneficial use. This chapter does not reflect the

SWRCB's determination or judgment as to whether the proposed diversion and use of water is reasonable and beneficial.

The applicant has indicated that circumstances unique to El Sur Ranch (Table 1-1), and that are a factor in determining irrigation needs for the proposed diversion, include the Ranch's location at the very end of the Big Sur River system (i.e., the wells are located in the vicinity of the mouth of the river). Another relatively unique condition is the indirect method of diversion, by wells drawn from subterranean flow rather than direct surface water diversion or impoundment under the proposed appropriate right.

TABLE 1-1		
CRITERIA AFFECTING REASONABLE IRRIGATION EFFICIENCY ON THE EL SUR RANCH (TABLE 2-2 FROM THE DEIR)		
Criteria	Optimal	El Sur Ranch
Irrigation method	Based on soils, crops, slopes, economic considerations.	Limited to border surface irrigation to help maintain natural view of the coastline, regulatory prohibitions on natural landform alteration, grazing requirements, and economics.
Slope	Based on soil border length, soils, crops, and water supply.	Limited to existing slope due to soil profile, regulatory prohibitions on natural landform alteration, grazing requirements, and need to maintain natural view of coastline.
Border flow rates	Variable with the ability to apply water at optimal rates (i.e., generally order large flow rates for short durations of 1-2 days)	Limited to flow from two existing wells, and spring tide constraints on the Old Well that can limit pumping.
Border irrigation set times	Based on soil border length, soils, crops, and water supply.	Limited based on available ranch labor.
Labor	Full-time irrigator during irrigation that occurs over a few days at timely scheduled irrigation intervals.	Limited to periodic checking and two set changes per day, based on available ranch labor and herd size conditions.
Irrigation scheduling	Irrigation scheduling based on crop needs.	Limited based on water supply that limits the irrigation interval.
Tail water recovery	Installed to capture and use tail water for irrigation	May be limited due to regulatory, environmental and cost constraints on expanded tail water recovery.
Irrigation efficiency	75 to 85 percent	60 to 70 percent (65 percent typical)
Source: El Sur Ranch Water Right Application No. 30166, revised October 17, 2006.		

According to the applicant, in many years the Ranch applied less water for irrigation than was required for optimal crop production. Ranch foremen have described the historic levels of irrigation as being generally adequate for irrigation of the pasture for ordinary grazing purposes. In a few instances, the annual diversions exceeded crop irrigation diversion requirements; such occurrences have been rare, although it can be reasonably expected that such conditions could occur again in the future.

The historical estimated irrigation diversions provide a range of irrigation needs based on the unique conditions that existed at that time. According to the applicant, these conditions do not necessarily provide a reliable forecast of irrigation needs in the future, so the monthly and annual amount of irrigation water needed to supplement that provided by precipitation and other climatic factors cannot be known in advance. However, they do provide good historical evidence of past practices, and can be used as basis for the assumptions made in calculating crop irrigation diversion requirements (or calculated crop water need), including irrigation efficiency, crop water use, and leaching

requirements at the Ranch. These data, and the analyses thereof, provide the technical basis for amount of diversions requested in the water right application.

Irrigation Efficiency

The applicant's review of technical literature concluded that reasonable or acceptable irrigation efficiencies are based on several factors, including crop, irrigation method, economics, uniformity and properties of soils, uniformity of water application, water supply, and weather conditions. The applicant has indicated irrigation efficiency on Ranch pasture is limited by the water supply, irrigation system, soils, labor constraints, regulatory constraints, and imperfect forecast of rainfall events. Criteria affecting reasonable irrigation efficiency on the El Sur Ranch, as compared to optimal practices, are summarized in Table 1-1 to illustrate the specific constraints for determining El Sur Ranch irrigation efficiency.

Based on these factors, the applicant proposes that a reasonable irrigation efficiency achievable on the Ranch is expected to be approximately 65 percent. Analysis of historical pumping indicates the irrigation efficiencies on the Ranch have been both above and below this value. The water right Application No. 30166, which is the source of information presented in Table 1-1, contends that often times high irrigation efficiencies are indicative of under irrigation, which decreases crop production.

Crop Water Use

Potential crop water use is a function of the crop, crop health and vigor, and climate. Crop water requirements for the Ranch were based on weather data obtained at the Ranch irrigated pasture from August 2004 through August 2006. The site-specific data was correlated with weather from Monterey, California (approximately 25 miles north) to calculate the irrigation diversion requirement for optimal pasture production for 1975 through 2005.

Leaching Requirement

Leaching is required when irrigating with water that has a salinity level that can, over time, affect yield. The salinity of the irrigation water supply for the Ranch depends highly on which well is being used. Water salinity from the New Well is relatively stable, and water from the Old Well is often higher in salinity as a result of spring tides. The leaching requirement at the Ranch varies based on the variable salinity of the water pumped from the wells and the spatial variability of the soils, but is estimated to be approximately 10 percent.

Calculated Irrigation Diversion Requirement

The irrigation diversion requirement is a mathematical equation that compares the net overall requirement to the irrigation efficiency, expressed as a percent. That is, the irrigation diversion equals the net overall requirement divided by the irrigation multiplied by 100. The results of this calculation for the years 1977 through 2005 are presented in Table 1-2.

Future diversion volumes in most years are likely to continue to be less than the calculated crop irrigation requirement. It is not expected the volume of water diverted would be significantly greater than that needed to provide optimum forage production in those years when suitable forage would be reasonably required. As such, the water right application accounts for that maximum volume requirement based on both historic estimated irrigation levels and calculated need.

Specific Diversion Limitations

Table 1-3 summarizes the specific numerical limits the applicant is seeking in its water right application, as amended October 17, 2006. The basis for each of the limits is described in this section.

Maximum Diversion Limit

Although the Ranch observed a 30-year average annual pumping rate of 937 AF (1975 to 2004), occasionally conditions have resulted in significantly higher totals. When reviewing the Ranch's pumping records, maximum historical diversions of 1,611 AF and 1,737 AF have occurred in 1977 and 1984, respectively (see Table 1-1, above). The conditions that led to these two totals were very different. The water year 1976-77 represents the drought year of record in California, with practically no precipitation occurring during that period. As a result, water demand during the 1977 irrigation season was at an all-time high. The water year 1983-84 was not as dry, but the second well was put into production during that period, and the pumping associated with putting that well into operation led to an elevated amount of total pumping. Therefore, the totals from 1984 do not represent normal operational conditions. In establishing the proposed maximum diversion limit in the application, the applicant assumed that the cyclical nature of California's weather patterns could result in other extremely dry periods with conditions approaching those experienced in 1976-77, and used the observed 1977 diversions as a maximum limit in terms of potential effects.

For comparative purposes, a year with no precipitation at all would result in an estimated water demand of 1,730 AF (see Table 2-3), while the dry year of record (1977) would have required 1,430 AF of pumping. Thus, although Application No. 30166 requests a 20-year rolling average for pumping in the amount of 1,200 AFA, it also includes a maximum diversion rate (1,615 AFA) that matches the highest observed total during the period of record. The calculated irrigation diversion requirements for the same period of time were developed to estimate the maximum diversion limit based on historical climatological records, the irrigation efficiency and leaching requirement noted above, and irrigation values based on monthly crop evapo-transpiration (ET) and estimated precipitation.

According to the applicant, years 1977 and 1997 represent the years of greatest water use on the project site since 1975. Assuming 65 percent irrigation efficiency and a 10 percent leaching requirement, approximately 1,430 AF would be the calculated need for 1977, and 1,441 AF would be the calculated need for 1997. If years like 1977 and 1997 should repeat, including a repeat of the relative monthly allocation of precipitation, it could be difficult to provide reasonable forage with diversions limited to 1,430 AF or 1,440 AF. "Banking" soil moisture ahead a full calendar year by extra irrigation during the previous December to ensure adequate crop production would be difficult and probably ineffective as compared to banking prior to the seasonal (July through October) diversions, according to the water right application, as amended October 17, 2006.

Therefore, based on these data, the water right application requests an annual maximum irrigation diversion of 1,615 AF. This volume is considered by the project applicant to be the volume required to provide "optimum forage production" in those years when it is reasonably required to provide suitable forage. According to the application, as amended October 17, 2006, it would not be reasonable for the applicant (regardless of water reasonably needed to provide suitable forage) to divert a volume of water significantly greater than that required for the growth of the "optimal forage production", and this requirement is reasonably suited as a limit or "cap."

TABLE 1-2

**ESTIMATED IRRIGATION DIVERSION REQUIREMENTS ON THE EL SUR RANCH
(BASED ON 65 PERCENT IRRIGATION EFFICIENCY AND 10 PERCENT LEACHING FRACTION)
(REVISED TABLE 2-3 FROM THE DEIR)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
No Precip ^a	93	101	124	143	172	200	193	164	145	129	101	84	1647
1975	47	0	0	57	165	181	184	142	130	57	74	67	1103
1976	96	4	60	68	172	214	196	134	131	112	93	30	1310
1977	35	80	48	133	113	193	196	171	122	121	90	0	1303
1978	0	0	0	0	187	202	188	165	148	129	24	21	1064
1979	0	0	0	118	169	202	183	164	164	73	12	0	1085
1980	0	0	44	90	136	193	175	152	140	134	107	48	1219
1981	0	40	2	104	159	219	181	148	130	50	0	37	1070
1982	0	29	0	44	157	165	180	158	90	53	0	0	875
1983	0	0	0	4	163	196	204	184	124	127	0	0	1003
1984	90	24	90	100	172	180	212	165	176	51	0	12	1271
1985	46	53	0	118	146	209	203	158	137	69	0	39	1178
1986	41	0	0	124	156	210	188	152	97	121	100	33	1223
1987	0	11	37	139	184	202	188	171	141	99	40	0	1213
1988	23	83	131	85	141	191	196	171	135	114	11	0	1282
1989	33	13	35	129	153	210	181	158	96	72	62	88	1229
1990	0	0	63	119	106	210	204	178	146	126	86	16	1255
1991	63	36	0	116	143	185	188	156	135	84	97	0	1204
1992	27	0	11	179	195	213	220	164	146	121	109	0	1384
1993	0	0	40	118	162	193	204	178	135	141	51	19	1241
1994	8	0	123	97	133	193	173	158	146	118	0	5	1155
1995	0	88	0	70	143	148	220	171	146	139	112	18	1255
1996	0	0	40	131	137	193	204	158	135	91	18	0	1108
1997	0	98	129	138	217	202	196	177	164	113	0	0	1433
1998	0	0	0	31	80	189	180	165	134	97	2	14	892
1999	0	0	0	59	144	166	181	158	130	129	46	83	1095
2000	0	0	45	118	149	210	173	152	137	0	64	82	1130
2001	0	0	43	44	187	210	181	151	128	118	10	0	1072
2002	31	51	63	118	110	176	181	152	141	114	34	0	1171
2003	59	22	82	39	122	202	188	165	152	120	32	0	1182
2004	21	0	121	149	173	188	185	161	175	18	62	0	1253
2005	0	0	122	134	161	206	202	167	150	148	85	0	1375

Source: NRCE Appendix C, March 2007.

^aBased on average monthly irrigation requirement from Table 7-8 Monthly Net Irrigation Requirements for El Sur Ranch (inches) and Annual (acre-feet) plus Table 7-7 Estimated Effective Precipitation at El Sur Ranch (inches) (NRCE March 2007) for 267 acres.

TABLE 1-3	
SUMMARY OF DIVERSION LIMITS, RATES, AND OPERATING PRACTICES FOR EL SUR RANCH WATER RIGHT APPLICATION NO. 30166 AS AMENDED (TABLE 2-4 FROM THE DEIR)	
Limitations	
Place of Use (Irrigated Area)	Any 267 acres of 292 acres, includes riparian area (25 acres)
Riparian Area	25 acres of the 267 acres
Method of Diversion	Two existing wells (the Old and New Wells) located on lands deeded to the California Department of Parks and Recreation and within Andrew Molera State Park
Crops	Coastal grasses, pasture crops for cattle
Total Annual Diversion	<ul style="list-style-type: none"> ▪ No more than 1,615 AF in any one calendar year; ▪ 20-year running average of no more than 1,200 AFA; and ▪ In no event exceed that quantity reasonably required for irrigation, taking into account leaching and irrigation efficiency
Period of Use	January 1 to December 31
Seasonal Limit	735 AF (July 1 to October 31)
Monthly Limit	230 AF each calendar month from July 1 to October 31
Maximum Rate	5.84 cfs instantaneous
Average 30-day Rate	5.34 cfs 30-day running average
Operating Practices Limits	Crop types, irrigation system and operation
Source: El Sur Ranch Water Right Application No. 30166, revised October 17, 2006.	

20-Year Running Average Diversion Limit

In addition to the maximum annual diversion limits discussed above, the application requests implementing a 20-year running average³ diversion limit of 1,200 AFA. The Ranch has observed an average annual pumping total of 937 AFA (1975-2004). Over the 20-year period of 1985-2004, the average was somewhat less (857 AFA) as the extreme drought years of 1976 and 1977, as well as 1984 (when the New Well was added) were removed. The proposed 20-year running average diversion limit of 1,200 AFA would allow for fluctuations in demand due to annual variations in precipitation, temperature, soil moisture, and other factors that would affect the irrigation demand. The running average would take the pumping records for the previous 19 years, and then calculate what the maximum diversion for the coming year would be to reach the 20-year running average.

Seasonal Diversion Limitation

July 1 through October 31 is the period of lowest flows in the Big Sur River. The seasonal maximum irrigation diversion limit would be 735 AF during that period. This volume is the calculated maximum diversion requirement for optimal forage production during those months using 65 percent irrigation efficiency and 10 percent leaching requirement, based on the estimates of irrigation diversion requirements from 1975 through 2005. Historically, July through October diversions have exceeded 735 AF twice over a 30-year period. As a measure of protection against the risk of these high seasonal demands occurring again, although infrequently, the applicant may decide to irrigate the pasture prior to July to minimize the need to divert more than 735 AF during July through October. However, any diversion prior to July would be subject to the approved and permitted annual diversion limits.

³ A 20-year running average is calculated by adding the volume of annual diversions for the previous 19 years to the projected maximum diversion for the coming irrigation season and dividing by 20. Under the proposed project, if the 20-year average exceeds 1,200 AFA, the projected diversion limit for the coming irrigation seasons would need to be reduced until the 20-year average is equal to or less than 1,200 AFA.

Monthly Diversion Limitation

For the period July through October, the maximum calendar month diversion would be limited to 230 AF. This volume is the calculated maximum irrigation diversion requirement for optimal forage production in July, and is based on an average pumping rate not-to-exceed 5.34 cfs for the period July through October.

In developing the 230 AF limit, the applicant assumed the soil moisture is the same at the beginning and ending of the month, which seldom exists, however. For example, if the soil moisture is low at the beginning of the month, it would be desirable to apply more irrigation than the amount calculated based solely on crop ET. A higher-than-calculated irrigation diversion in one month will normally be preceded or followed by a lower-than-calculated monthly irrigation diversion.

If diversions were to occur at the maximum monthly cap for the entire four-month period, the seasonal limit for that period would be exceeded. This monthly cap slightly exceeds the seasonal limit (i.e., if the seasonal limit were equally divided among the four-month period) to provide flexibility for unforeseen conditions such as pipeline breaks, labor disruptions, or other unavoidable circumstances. Regardless, total diversions during the four-month July to October period would be limited to 735 AF under conditions presented in the application, as amended October 17, 2006.

Operating Practices

Crops

As noted previously, species historically grown on the Ranch's irrigated pasturelands have been orchard grass, fescue, harding grass, clover, birdsfoot trefoil, and other native weeds and grasses. Under the proposed project, crops would be limited to pasture crops, primarily grasses and legumes such as those historically grown and suitable for forage by cattle.

Irrigation System Components

The irrigation system would consist of the existing irrigation facilities that have been used historically and as shown in Figure 2-3. Operation and maintenance of the following irrigation system elements are considered part of the project description evaluated in this DEIR:

- transmission pipelines conveying water from the river-level pumps to the system of distribution laterals located at the higher elevation pastures of the POU;
- pipeline laterals that carry water from the transmission lines across the head (i.e., the upper elevation boundary of each pasture field to facilitate irrigation;
- the borders leading down-gradient through the fields from the laterals for a distance of 500 to 1,000 feet;
- adjustable valves located within the laterals to discharge water into the borders;
- borders that are designed to allow tailwater to flow to the next down-gradient set of borders, with tailwater from the bottom set of borders discharged to the tailwater pond or to a water control structure to discharge water to the ocean;
- an approximately 1-acre tailwater pond facility designed to facilitate the reuse of accumulated tailwater or discharge the same to the ocean through a water control structure; and

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- From an operational standpoint, a three- to four-week pasture rotation would be employed to satisfy the irrigation requirements of all of the fields, with temporary cessation if useful precipitation occurs. Although both the Old Well and the New Well have the capability to irrigate the entire pasture, it is more energy efficient to use the Old Well primarily to irrigate the upper portion of the pasture, and the New Well to primarily supply the middle and lower pastures.

Irrigation System Operating Practices

Under the proposed water right application, the irrigation system would continue to be operated as it has in the past, with the timing, order or irrigation, extent of irrigation to the various pastures, and frequency determined by the irrigator. The DEIR assumes the following practices, as stated in the water right application:

- frequency of irrigation of each field would be adjusted according to soil conditions and topography (e.g., the Pump House field has more porous soil and, therefore, needs shorter, higher-velocity flows than other fields);
- adjustment of irrigation schedule would occur due to unscheduled outages and/or scheduled outages for maintenance of the irrigation system;
- adjustment of irrigation timing and duration would be made in response to precipitation and other climatic conditions, including wind, temperature, humidity, solar radiation;
- adjustment of diversion would be made based on salinity readings at the pumps (e.g., water quality exceeding 1.0 mmhos/cm may occasionally be pumped from the Old Well in the future);
- adjustment of valves would be made to equalize the down-gradient advances of water flows within certain areas of the borders;
- controlled discharge of tailwater to ocean and/or reuse of certain quantities of water from the tailwater pond would occur;
- adjustments to irrigation would occur based on soil moisture conditions of the fields at the beginning of an irrigation set;
- adjustment of duration and timing of irrigation set would be made taking into account factors such as grazing stages, or the mix of grasses and legumes present within the pasture;
- adjustment of the operating rates of the pumps would be made to take into account the elevation above the wells of the particular pasture fields being irrigated, and the limits on the rates of diversion identified in Table 2-4;
- adjustment of duration of irrigation set taking into account whether irrigation occurs in daytime or nighttime irrigation and taking into account labor constraints;
- potential soil erosion would be controlled, in part, by maintaining dense growth within the pasture fields, by maintaining drainage gullies, and by controlling runoff into the canyons, the bluff at the bottom of the pasture, and the embankment at the tailwater pond; and
- diversion greater than the lesser of those required for the reasonable and beneficial irrigation of the POU or than permitted by the volumetric limitations of the permit would be avoided (for example, the operator normally would not irrigate to optimize forage production, but would do so only in response to the reasonable and beneficial use standard).

REQUIRED DISCRETIONARY ACTIONS

The SWRCB has consulted with other trustee agencies as required by CEQA. These agencies, through consultations during the DEIR and water rights process, will provide input related to appropriate areas of responsibility and any proposed mitigations and/or conditions on the water rights permit. The California Department of Fish and Game may require a Stream Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code, for any activity that will divert or obstruct the natural flow of a river or stream; and that the applicant must submit a notification to the Department regarding such proposed actions. Before issuing a SAA, the Department is required to independently make a determination of environmental effects pursuant to CEQA. Additionally, there may be listed and/or fully protected species which may need consultation and/or permits from the Department. There are no other permits or approvals that are anticipated.

CEQA PROCESS

The SWRCB circulated a Notice of Preparation (NOP) of an EIR for the proposed project in June 2006 (Appendix A to the DEIR). An Initial Study checklist was included with the NOP. The NOP and IS were provided to government agencies and to other interested parties to inform responsible agencies and the public that the proposed project could have significant effects on the environment and to solicit their comments. Written comments on the Initial Study/NOP are included in Appendix B to the DEIR.

Two scoping meetings were held in September and November 2007 to solicit input on the DEIR. On September 18, 2007, SWRCB staff met with representatives of the California Department of Fish and Game and the California Department of Parks and Recreation. A meeting was held on November 13, 2007 with National Marine Fisheries Service.

This DEIR was circulated for public review and comment on October 8, 2009. The 45-day public review period initially scheduled to conclude on November 23, 2009, was extended to December 14, 2010 by the SWRCB. Pursuant to Section 15088 of the State CEQA Guidelines, the lead agency reviewed all comments on the DEIR received during the comment period and prepared written responses to all substantive comments received. These responses will be included in this Final EIR (FEIR). This Final EIR also includes a comment letter submitted by the law firm Shute, Mihaly, & Weinberger LLP on behalf of Trout Unlimited (Comment Letter 14). Comment 14 was received by SWRCB in June 2010, approximately six months after the close of the public comment period.

All mitigation measures adopted by the SWRCB as conditions of approval for the proposed project, are included in a monitoring and reporting program (MMRP) presented in Chapter 4 of this Final EIR. The MMRP is intended to help facilitate and monitor effective implementation of adopted mitigation measures. These measures are also likely to be included in the conditions for the proposed water right permit.

CONTENTS OF THE FINAL EIR

This Final EIR contains all written comments on the DEIR received during the public review period, revisions to the DEIR made as a result of public comments, and written responses to all substantive comments. This Final EIR also includes final revisions to the Summary Table for Impacts and Mitigation (Table 3-1) from the DEIR and a Mitigation Monitoring and Reporting Plan (MMRP). The SWRCB will consider certification of the Final EIR as adequate under CEQA at a public hearing. The date and location of this hearing will be publicly noticed in advance of the hearing.

Responses to all substantive comments were prepared by SWRCB staff and its consultant in accordance with the State CEQA Guidelines. Comments and responses are grouped by letter. As the subject matter of one topic may overlap between letters, the reader must occasionally refer to more than one letter and response to collect all information on a given subject. Where this occurs, cross-references are provided. These comments and responses, in conjunction with the DEIR, constitute the Final EIR, which will be considered for certification by the SWRCB.

The Final EIR is organized as follows:

Chapter 1 - Introduction: This chapter includes an overview of the project description, project background, environmental review process and the Final EIR contents. This chapter also includes a revised impact and mitigation measure summary table.

Chapter 2 – Text Changes to the DEIR: This chapter summarizes the text changes to the DEIR. Except where noted, changes to the text of the DEIR are shown by either a line through text that has been deleted or underlined where new text has been inserted. The text revisions do not result in a major change to the proposed project or substantive changes to information, analysis or conclusions presented in the DEIR that would require recirculation of the DEIR for public review under criteria presented in Section 15088.5 of the State CEQA Guidelines.

Chapter 3 – Written Comments and Responses: This chapter contains comment letters on the DEIR followed by responses to comments. Each letter and each comment within each letter has been given a number. Responses are numbered so that they correspond to the appropriate comment. Where appropriate, responses are cross-referenced between letters.

Chapter 4 - Mitigation Monitoring and Reporting Plan (MMRP): This chapter includes the full text and a discussion of the mitigation measures and monitoring measures presented in Chapter V of the DEIR. The MMRP also contains monitoring details such as the implementing party, the agency responsible for monitoring, the timing of implementation, and the standards of mitigation success.

Chapter 5 – Report Preparation: This chapter lists those primarily responsible for preparing the Final EIR.

Chapter 6 – References: This chapter lists references and agencies consulted in preparing the DEIR and Final EIR.

Appendices – Included with this Final EIR are appendices containing reports, correspondences, and other materials to supplement the information and analysis presented in Chapter 3 of the Final EIR.

FINDINGS OF FACT

Prior to certification of the EIR, the lead agency is required to prepare written findings of fact for each significant environmental impact identified in the EIR. For each significant impact, the lead agency must:

- determine if the proposed project has been changed to avoid or substantially lessen the magnitude of the impact;
- find that changes to the proposed project are within another agency's jurisdiction, and such changes have been or should be adopted; and
- find that specific economic, social, or other considerations make mitigation measures or proposed project alternatives infeasible.

The findings of fact prepared by the lead agency must be based on substantial evidence in the administrative record and must include an explanation of any differences between evidence in the record and the conclusions required by CEQA.

If the lead agency elects to proceed with the proposed project and the project would result in significant impacts that cannot be feasibly mitigated to a less-than-significant level, a “statement of overriding considerations” must be prepared. A statement of overriding considerations explains why the lead agency determines that the benefits of the project outweigh the unavoidable environmental impact of the project. As shown in this Final EIR, mitigation measures for all potentially significant impacts of proposed project are proposed that will reduce those impacts levels that are found to be less than significant; therefore, no statement of overriding considerations is required for the proposed project: Water Right Application 30166.

2.0 TEXT CHANGES TO THE DRAFT EIR

INTRODUCTION

This chapter presents changes to the text of the October 2009 DEIR made either in response to public comments on the DEIR or at the initiative of the State Water Resources Control Board (SWRCB); the state CEQA Lead Agency for this EIR. These changes correct minor errors or clarify information in the DEIR. The DEIR page number and location of revised text is shown prior to all revisions listed below. Deleted text is shown in “strike through” (e.g. ~~strike-through~~) and new text is indicated in “underline” (e.g. underline). Text changes are presented in the order in which they appear in the DEIR.

The revisions to the DEIR included in this chapter are in keeping with the requirements of section 15088(d) of the State CEQA Guidelines (Evaluation of and Response to Comments). Where the responses to comments make important changes in the information contained in the DEIR, those changes are reflected in revised text from the DEIR as discussed above.

This chapter also presents the evaluation of a new alternative to the proposed project. This evaluation was carried out by the SWRCB and the EIR preparer in response to a request made by the California Department of Fish and Game (CDFG); one of the commenter’s on the DEIR. This evaluation of this new alternative is presented in this chapter as a revision to Chapter 6 of the DEIR (Project Alternatives). The evaluation of the CDFG alternative and all other changes to the DEIR presented in this chapter do not provide “significant new information requiring recirculation” of the DEIR as defined in section 15088.5 of the State CEQA Guidelines. The decision not to recirculate is supported by substantial evidence presented in responses to comments contained in Chapter 3 of this Final EIR.

In regard to this Final EIR’s evaluation of the CDFG-recommended alternative specifically, the decision not to recirculate the DEIR is warranted under section 15088.5(a)(3) of the State CEQA Guidelines which states that recirculation is required when new information includes, “ A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project...” The CDFG-recommended alternative does not meet these criteria for two reasons. First, as noted in the evaluation below, the CDFG alternative is not considered a “feasible alternative” because it does not meet the basic project objectives. Second, while implementing the alternative would somewhat reduce the need to implement proposed project mitigation measures, the alternative would not eliminate or reduce significant impacts of the proposed project because all potentially significant impacts of the proposed project are mitigable to levels considered less than significant relative to the environmental baseline used in this EIR.

REVISIONS TO THE DEIR

Page 1-1. Footnote 2 is revised as follows:

2. The SWRCB initially found that the water came from the “underflow” of the Big Sur River in 1991. At the time of the SWRCB’s determination, the term “underflow” was commonly used in referring to a subterranean stream subject to the SWRCB’s permitting authority. Although El Sur Ranch is diverting from the subterranean stream portion of the Big Sur River, henceforth the document will just refer to diversion from the Big Sur River.

Page 2-5. Third and fourth paragraphs under the heading “Existing Place of Use” are revised as follows:

Approximately 25 acres of the 292-acre project site comprise dunes, the tailwater pond, outfall, access roads, and irrigation canals. The remaining 267 irrigated acres is the POU. Of those 267 acres, approximately 25 acres is within the Big Sur River watershed and is, therefore, served by the applicant’s existing riparian water right. The location of the riparian area within the POU is shown in Figure 2-2. Under a riparian right, water diverted from the Big Sur River can only be applied to land adjacent to the river and within the watershed. It cannot be diverted to irrigate other pasture land that is non-riparian. The remaining 242 acres of irrigated pasture and pasture within Swiss Canyon comprise the area for which the proposed appropriative water right is being requested.

~~Although Swiss Canyon bisects the POU, it is not within and comprises approximately 19 acres of the POU. Although this area is not, and would not be directly irrigated; this area is irrigated by seepage water from the irrigated fields and is therefore, included in the irrigation requirements calculations. and is not part of the irrigated area under existing or proposed conditions.~~

Page 2-6. Text is revised as follows to reflect the most current pump test results:

The Old Well is equipped with an electric motor, 60-horsepower (hp) pump that has reported pump rates between approximately 1,11045 and 1,2082,000 gallons per minute (gpm) ~~(2.47 and 2.69 cubic feet per second [cfs], respectively)~~. Since no well drilling report exists, the depth of the Old Well is unknown. The New Well is approximately 32 feet deep and equipped with an electric motor driving a 50-hp pump that has reported pump rates between approximately ~~872963~~ and 1,567 gpm (1.94 and 3.49 cfs, respectively). Both wells’ pumps can be operated simultaneously at their maximum pump rates when water is needed for irrigation of pastures, typically during dry periods of the year (e.g., summer months). However, the pumps are typically used to irrigate different fields, so they are operated simultaneously only when the needs of those fields require it.

Page 2-11. Text on pages 2-11 and 2-12 is revised as follows:

When electrical conductivity is above 1.0 mmhos/cm (uS/cm), the Ranch must perform additional analysis to determine if the chloride concentration exceeds 250 parts per million (ppm). In the event that the chloride concentration exceeds 250 ppm, the California Department of Parks and Recreation (DPR) may require the Ranch to terminate pumping until the chloride concentration in the well is reduced. According to information in the Ranch’s water right application (as amended October 17, 2006), the Ranch typically stops pumping the well voluntarily when salinity levels, measured as electrical conductivity, reach 1.0 micromhos per centimeter (mmhos/cm).³ ~~When electrical conductivity is above 1.0 mmhos/cm, the Ranch must perform additional analysis to determine if the chloride concentration exceeds 250 parts per million (ppm). In the event that the chloride concentration exceeds 250 ppm, the California Department of Parks and Recreation (DPR) may require the Ranch to terminate pumping until the chloride concentration in the well is reduced.~~

Page 2-18. The second paragraph under the heading “Water Availability Analysis” is revised as follows:

As presented in the project applicant’s Water Availability Analysis, sStreamflow and other hydrologic data were used to calculate the Cumulative Flow Impairment Index (CFII),

expressed as a percent. Typically, if the CFII is less than five percent there is little chance of significant cumulative impacts on fishery resources, and no further study is warranted. However, for the proposed project, additional extensive hydrologic and biotic studies (see following paragraph) were completed during a low-flow year to support the WAA. According to the WAA, these studies showed that river flow below the POD exceeds that upstream of the POD, and the fish population is large and healthy under the conditions of the historic diversions in the vicinity of the POU. According to the study, the data and history of the Big Sur River fishery, flows, and diversions support a conclusion that water is available for the diversions sought by Application No. 30166.

Based on our evaluation of the information contained in the WAA pertaining to the current Big Sur River steelhead population, the extensive hydrologic and biotic studies described in the WAA showed that river flow below the POD exceeds that upstream of the POD, and that there were numerous steelhead observed within the POU under the conditions of the historic diversions. According to the studies, flows and diversions support a conclusion that water is available for the diversions sought by Application No. 30166.

Page 2-23. Table 2-3 is revised. We present the table below as shown in the DEIR with values struck out, followed by the current table with revised values:

Page 2-28. The last paragraph has been revised as follows:

REQUIRED PERMITS AND APPROVALS

There are no other permits or approvals that are anticipated. The SWRCB has consulted with other trustee agencies as required by CEQA. These agencies, through consultations during the DEIR and water rights process, will provide input related to appropriate areas of responsibility and any proposed mitigations and/or conditions on the water rights permit. The California Department of Fish and Game may require a Stream Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code, for any activity that will divert or obstruct the natural flow of a river or stream; and that the applicant must submit a notification to the Department regarding such proposed actions. Before issuing a SAA, the Department is required to independently make a determination of environmental effects pursuant to CEQA. Additionally, there may be listed and/or fully protected species which may need consultation and/or permits from the Department. There are no other permits or approvals that are anticipated.

TABLE 2-3

**ESTIMATED IRRIGATION DIVERSION REQUIREMENTS ON THE EL SUR RANCH
(BASED ON 65 PERCENT IRRIGATION EFFICIENCY AND 10 PERCENT LEACHING FRACTION)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
No Precip	88	98	131	168	166	195	195	169	172	154	112	83	1730
1975	34	0	0	99	152	183	193	147	167	98	92	62	1227
1976	82	0	64	74	159	175	190	126	139	114	76	11	1210
1977	37	63	57	150	120	213	197	177	148	157	111	0	1430
1978	0	0	0	0	152	188	197	177	164	148	49	40	1116
1979	0	0	11	142	171	196	176	170	188	89	11	0	1153
1980	0	0	48	99	151	196	167	170	194	160	109	35	1331
1981	0	40	3	141	147	188	205	153	167	85	0	46	1176
1982	0	28	0	56	159	191	181	157	101	62	0	0	935
1983	0	0	0	25	144	175	182	164	120	136	0	0	946
1984	94	23	90	135	159	191	205	191	202	97	0	24	1409
1985	49	49	14	121	162	171	212	170	204	84	0	25	1262
1986	11	0	0	155	136	213	205	164	131	145	84	30	1274
1987	0	14	54	144	163	204	190	157	155	106	57	0	1242
1988	13	75	132	114	156	186	190	177	167	162	22	0	1394
1989	35	33	43	141	147	196	197	177	124	82	58	74	1307
1990	0	0	78	159	93	204	182	164	155	151	102	34	1323
1991	62	11	0	160	159	204	205	175	174	106	113	0	1369
1992	12	0	0	157	146	174	190	169	161	129	106	0	1244
1993	0	0	38	173	155	178	222	170	174	169	65	11	1355
1994	0	0	130	126	155	221	205	184	161	161	30	9	1382
1995	0	66	0	90	137	133	175	164	174	154	86	4	1183
1996	0	0	43	136	109	196	222	177	174	126	43	0	1226
1997	0	104	136	179	179	188	205	156	161	132	0	0	1441
1998	0	0	7	61	112	183	188	191	187	137	29	25	1120
1999	0	0	0	90	167	184	190	170	161	137	46	63	1207
2000	0	0	33	114	109	172	182	164	145	17	91	76	1104
2001	0	0	41	98	174	204	175	156	178	136	0	0	1163
2002	35	35	78	120	138	203	182	157	155	148	33	0	1282
2003	24	25	76	62	110	172	182	157	167	127	61	0	1164
2004	35	0	103	148	152	195	184	170	178	36	59	0	1260
2005	17	19	43	116	146	189	192	167	163	119	51	19	1240

Source: El Sur Ranch Water Right Application No.30166, revised October 17, 2006

TABLE 2-3

**ESTIMATED IRRIGATION DIVERSION REQUIREMENTS ON THE EL SUR RANCH
(BASED ON 65 PERCENT IRRIGATION EFFICIENCY AND 10 PERCENT LEACHING FRACTION)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
No Precip ^a	93	101	124	143	172	200	193	164	145	129	101	84	1647
1975	47	0	0	57	165	181	184	142	130	57	74	67	1103
1976	96	4	60	68	172	214	196	134	131	112	93	30	1310
1977	35	80	48	133	113	193	196	171	122	121	90	0	1303
1978	0	0	0	0	187	202	188	165	148	129	24	21	1064
1979	0	0	0	118	169	202	183	164	164	73	12	0	1085
1980	0	0	44	90	136	193	175	152	140	134	107	48	1219
1981	0	40	2	104	159	219	181	148	130	50	0	37	1070
1982	0	29	0	44	157	165	180	158	90	53	0	0	875
1983	0	0	0	4	163	196	204	184	124	127	0	0	1003
1984	90	24	90	100	172	180	212	165	176	51	0	12	1271
1985	46	53	0	118	146	209	203	158	137	69	0	39	1178
1986	41	0	0	124	156	210	188	152	97	121	100	33	1223
1987	0	11	37	139	184	202	188	171	141	99	40	0	1213
1988	23	83	131	85	141	191	196	171	135	114	11	0	1282
1989	33	13	35	129	153	210	181	158	96	72	62	88	1229
1990	0	0	63	119	106	210	204	178	146	126	86	16	1255
1991	63	36	0	116	143	185	188	156	135	84	97	0	1204
1992	27	0	11	179	195	213	220	164	146	121	109	0	1384
1993	0	0	40	118	162	193	204	178	135	141	51	19	1241
1994	8	0	123	97	133	193	173	158	146	118	0	5	1155
1995	0	88	0	70	143	148	220	171	146	139	112	18	1255
1996	0	0	40	131	137	193	204	158	135	91	18	0	1108
1997	0	98	129	138	217	202	196	177	164	113	0	0	1433
1998	0	0	0	31	80	189	180	165	134	97	2	14	892
1999	0	0	0	59	144	166	181	158	130	129	46	83	1095
2000	0	0	45	118	149	210	173	152	137	0	64	82	1130
2001	0	0	43	44	187	210	181	151	128	118	10	0	1072
2002	31	51	63	118	110	176	181	152	141	114	34	0	1171
2003	59	22	82	39	122	202	188	165	152	120	32	0	1182
2004	21	0	121	149	173	188	185	161	175	18	62	0	1253
2005	0	0	122	134	161	206	202	167	150	148	85	0	1375

Note:

^aBased on average monthly irrigation requirement from Table 7-8 Monthly Net Irrigation Requirements for El Sur Ranch (inches) and Annual (acre-feet) plus Table 7-7 Estimated Effective Precipitation at El Sur Ranch (inches) (NRCE March 2007) for 267 acres.

Source: NRCE Appendix C, March 2007.

Page 4.1-6. Table 4.1-1 is revised as follows:

TABLE 4.1-1			
WATER RIGHT APPLICATION NO.30166			
SUMMARY OF BASELINE ASSUMPTIONS AND PROPOSED CHANGES (1985-2004)			
AS EVALUATED IN THIS DEIR			
Diversions Type	Baseline ¹ 1985-2004	Proposed Project ² 19 years plus next year	Net Change Evaluated in the DEIR
Maximum annual usage	1,136 AF (2004)	1,615 AF	+479 AF
Maximum calculated usage	1,441 AF (1997)	1,615 AF	+174 AF
20-year annual rolling average	857 AF	1,200 AF	+343 AF
Maximum 30-day average rate (5.34 cfs)	234 339 AF (Aug/Sept 1997; June 1986: 5.70 cfs)	318 AF (5.34 cfs)	+84 -21 AF (-0.36 cfs)
Maximum monthly instantaneous rate	>6.05-8.4 cfs	5.84 cfs	<=±0.16 cfs
Maximum monthly diversion (July 1 – Oct 31)	269 AF (Sept 1997); 4.52 cfs)	230 AF (3.87 cfs)	- 39 AF (-0.65 cfs)
Maximum seasonal diversion (July – Oct 31)	701 AF (1997)	735 AF	+34 AF
Notes:			
1. See Table 2-1, this DEIR (1985-2004 historic average with two wells in operation).			
2. El Sur Ranch Application No. 30166, revised October 17, 2006			
Source: El Sur Ranch Application No. 30166, revised October 17, 2006; ESR Technical reports (SGI 2005, 2006).			

Page 4.2-21. The first full paragraph following Figure 4.2-3 is revised as follows:

The width of the groundwater basin decreases substantially at the downstream end, where the river and alluvium pass through a narrow gap in the Franciscan Formation near where the Big Sur River curves to flow southwestwardly (Jones and Stokes 1999). However, because this narrow gap is very deep and composed of materials with a likely hydraulic conductivity (e.g., boulders and rocks) (SGI 2005), the narrowing does not likely form a constriction to freshwater groundwater flow from the alluvial aquifer to the Pacific Ocean. ~~This bedrock constriction naturally forces groundwater to seep into the lower-most reach of the river as the path of least resistance to the ocean.~~ Moist, seeping banks were observed above the river level near the upper end of the lagoon, which presumably was discharging groundwater (Jones and Stokes 1999). Additionally, the resumption of streamflow downstream of the intermittent reach in 1990 (when the river ran dry near the Andrew Molera State Park, further upstream) is evidence that groundwater discharges into the river in the lower reaches. Geophysical surveys (SGI 2005) identified a deeper ancestral canyon on the northern boundary of the alluvial aquifer within the floodplain. Density dependant groundwater flow and transport modeling using SEAWAT 2000¹¹ indicated that this canyon is a preferential flow path for seawater intrusion (SGI 2005).

Page 4.2-25. First paragraph after Table 4.2-3 is revised as follows:

Two of the tributaries, Pheneger Creek and Pfeiffer Creek, are essentially dry during the summer and have no base flow. The total base flow from the other tributaries is about 0.98 cfs, which is about 18 percent more flow added to the Lower Big Sur River below the USGS gage. However, there is evidence in the SGI studies that the Lower Big Sur River is a losing reach¹⁷ below the USGS gage at least downstream of the Andrew Molera State Park, which would serve to further modify flows reaching the project site. ...

Page 4.2-26. Table 4.2-4 is revised as follows:

Month	At USGS Gage ^a	At Andrew Molera State Park	Difference	
	cfs	cfs	cfs	%
January	223	251	28	13%
February	267	292	25	9%
March	220	239	19	9%
April	146	150	4	3%
May	66	68	2	3%
June	36	37	1	3%
July	23	24	1	4%
August	17	18	1	6%
September	15	16	1	7%
October	18	19	1	6%
November	47	64	17	36%
December	102	125	23	23%

Note:
a. Data presented is for the same time frame as data for the Andrew Molera State Park
Source: Jones and Stokes 1999 and PBS&J 2008.

Page 4.2-26. Second paragraph, first two sentences are revised as follows:

To better characterize flow the flow regime in the Lower Big Sur River near the project site, temporary continuous gage stations (velocity transects [VT]) were installed during a series of three studies that were conducted in 2004, 2006, and 2007 (SGI 2005; 2007; and 2008, respectively). The locations of the velocity transects for the 2007 study are is shown in Figure 4.2-5. ...

Page 4.2-34. First paragraph, last sentence is revised as follows:

Table ~~65~~-1 in Chapter ~~65~~ of this DEIR under the subheading "Cumulative Impacts" lists the appropriate water rights in more detail.

Page 4.2-42. Text under the heading "Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Irrigated Lands WDR)" is revised as follows:

~~The proposed project would not be subject to CCRWQCB Order No. 2009-050, Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands. On July 9, 2004, the CCRWQCB adopted Order No. R3-2004-0117, Conditional Waiver of Waste Discharge Requirements (WDR) for Discharges from Irrigated Lands. The Irrigated Lands WDR is a mandatory program for all commercial, irrigated farming operations in the Central Coast. All commercial, irrigated farming operations were required to comply beginning January 1, 2005. Lands that are being prepared for planting also need to enroll. Appendix F in this DEIR contains additional information about enrollment requirements.~~

~~Inspections are an integral part of all CCRWQCB regulatory programs, and the CCRWQCB conducts on farm inspections throughout the region, both on a random basis to verify submitted information, to better understand what farmers are implementing, and in response to complaints or identified problems. The primary goal of inspections is to see what practices~~

farmers are implementing, work with them to solve problems, and make referrals to technical assistance providers when appropriate.

Monitoring is also a mandatory part of the Irrigated Lands WDR. The Cooperative Monitoring Program was established to allow growers a lower cost alternative to individual monitoring. All those who have selected cooperative monitoring on their Notice of Intent are obligated to pay fees established by the Cooperative Monitoring Program, run by Central Coast Water Quality Preservation, Inc.

The CCRWQCB is responsible for enforcing the Irrigated Lands WDR requirements. The current focus of enforcement effort is twofold: to bring the remaining growers who have not yet enrolled into the program, and to ensure that those who are in the program are meeting their monitoring obligations (either by conducting individual monitoring or by participating in the Cooperative Monitoring Program). Those that do not enroll are out of compliance and subject to enforcement. Initial letters are sent out to potential non filers. Those that have not responded are sent Notice of Violation letters by certified mail. Those that do not respond to the Notice of Violation will be scheduled for Administrative Civil Liability Complaints (ACL), which will involve fines. All those receiving ACL Complaints must either pay the fines or appear at a hearing before the Regional Water Quality Control Board.

Page 4.2-45. Table 4.2-6 is revised as follows:

TABLE 4.2-6						
BASELINE AND PROPOSED PROJECT DIVERSIONS						
Period	Baseline Mean (1985-2004)		Project 20-Year Average ^a		Project Maximum ^{a,b}	
	acre-feet	cfs	acre-feet	cfs	acre-feet	cfs
November through April	741	0.0211	485-0	0.52 (0.50-0.02)	244	0.68 (0.66)
May	104	1.69	318-147	5.34 2.39 (3.65 0.70)	318	5.34 (3.65)
June	172	2.89	318	5.34 (2.45)	318	5.34 (2.45)
July	152	2.48	184	3.09 (0.62)	230 184	3.09-3.74 (1.26 0.62)
August	143	2.32	184	3.09 (0.76)	230 184	3.09-3.74 (1.42 0.76)
September	155	2.60	184	3.09 (0.49)	230 184	3.09-3.87 (1.27 0.49)
October	90	1.47	184	3.09 (1.63)	230 184	3.09-3.74 (2.27 1.63)
Seasonal (July through October)	540	2.21	735	3.01 ^{bc} (1.80)	735	3.01^b 3.87^c (1.80 1.56)
Seasonal Maximum Monthly 30-day Avg.	269	4.52	230	3.87 (-0.65)	230	3.87-5.34 (-0.65 +0.82)

Notes:
^a Values in parenthesis are the difference between the proposed project and baseline. Bold italics are proposed project application constraints. Other values are calculated based on application constraints. The Project 20-Year Average has a 20-year average annual diversion of 1,200 acre feet; the Project Maximum has a maximum annual diversion rate of 1,615 acre-feet. Values for cfs assume the acre-feet are distributed evenly across the time period; daily and instantaneous flow data was not available for baseline, therefore, determination of diversion rates used the same process to assess potential project conditions.
^b Project maximum is included for informational purposes. It is not appropriate to compare the Project maximum with the baseline mean; Project maximum should only be compared with baseline maximum. Additionally, the project maximum diversion rates cannot be sustained for the entire season or year; 230 AF for each month in the irrigation season would exceed the 735 AF seasonal maximum.
^cThe difference between this value and monthly values is based on rounding errors.
 Source: PBS&J 2008.

Page 4.2-64. First sentence under the heading “Big Sur River Flow” is revised as follows:

In the 2007 SGI study, the average flow rate was higher at the furthest downstream station (VT2) compared to the station within the section of the Big Sur River adjacent to the area of diversions (VT3), except when both pumps were pumping. ...

Page 4.2-64. Last paragraph is revised as follows:

Therefore, based on this single flow rate loss situation, identified when both pumps are pumping, and assuming a ‘worst-case’ linear relationship between diversion rate and river flow, the overall river loss to groundwater would be 0.08 cfs per 1.0 cfs diverted, or an overall loss of flow rate (loss of flow gain plus flow loss to groundwater) of 0.16 cfs per 1.0 cfs diverted. It follows then that for baseline conditions (average July through October diversion rate of 2.21 cfs), the loss of surface water to groundwater would be about 0.18 cfs and the overall loss of river flow would be 0.35 cfs. The proposed project could increase the typical irrigation season average diversion rate and monthly maximum diversion rate compared to baseline. The higher diversion rates would translate into a greater an increase in loss to groundwater of 0.18 cfs for average irrigation season conditions and 0.36 cfs at the maximum July through October monthly diversion rate. The greater increase in overall loss of river flow would be 0.06 cfs more than baseline for the average July through October season and 0.05 cfs less than baseline at the maximum monthly July through October diversion rate because the baseline maximum diversion was higher than the Application requested instantaneous maximum diversion rate.

Page 4.2-65. Table 4.2-8 is revised as follows:

TABLE 4.2-8		
ESTIMATED BANKFULL AND FLOOD FLOW IN THE LOWER BIG SUR RIVER AFFECTED AREA		
Return Period Return Year	Flow Rate	
	Baseline cfs	Proposed Project cfs
Bankfull		
1.5	48.02 1206.4	47.94 1206.3
2	28.24 1663.1	28.29 1662.9
2.5	44.02 1772.6	40.86 1772.4
Flood		
10	257.2 4294.9	257.0 4294.8
Source: PBS&J 2008.		

Page 4.2-65. Last paragraph is revised as follows:

Slight proposed project changes in stream flow of 0.24 cfs per 1.0 cfs of increased diversions (Table 3-1 SGI 2008) are higher than those calculated based on flow gradient changes. However, use of this value provides for a more conservative (‘worst-case’) estimate of potential effects of diversions. Proposed project changes in the hydrologic flow regime, across Zones 4 through Zone 2, would not substantially alter bankfull flow or flood flows. The estimated bankfull flows would be reduced by only ~~0.08~~ 0.1 to ~~0.16~~ 0.2 cfs, depending upon the appropriate relationship. This would lengthen the proposed project return period by less than 0.02 years²⁷ compared to baseline. The 10-year storm event flows (flood flows) through Zone 4 through Zone 2 are over ~~257.2~~ 4294.9 cfs for the baseline conditions. The

proposed project effect would have only a slight effect (0.21 cfs decrease) on the flood flow return period (increase by less than 0.01 years). Overall, the proposed project diversions would alter Big Sur River flow statistics by only a very small amount. Flow diversion effects would be small compared to the overall river hydrologic system flow regime, and diversions would not be expected substantially alter the frequency or amount of these channel forming flows compared to baseline diversions. Therefore, potential effects of the incremental increase in proposed project diversions over baseline on channel-forming flood and bankfull flows would be **less than significant**. Furthermore, the proposed project diversions would result in the 1.5- and 2-year bankfull flows and 10-year flood flows that are ~~more similar to~~ not substantially different than no-diversion conditions when compared to baseline (17.96, 28.64, and 256.4 1206.4, 1663.1, 1772.6, and 4295.0 cfs non-diversion flow rates for the 1.5-year, 2-year, 2.5-year, and 10-year flows, respectively).

Page 4.2-66. Footnote 27 is revised as follows:

27. The recurrence interval for ~~48-02~~ 1663.1 cfs, the baseline ~~4.5~~ 2-year return flow, is about a ~~4.52~~ 2.113-year return flow in the proposed project hydrologic regime.

Page 4.2-66. The second paragraph is revised as follows:

A reduction in flow rate within Zones 4 through 2 of the Big Sur River caused by increased diversions would be critical during extreme low flow conditions. The sustained maximum diversion rate of 5.34 cfs could ~~increase~~ result in flow losses by an average of 1.28 cfs, while the average irrigation season diversion rate could be up to 3.09 cfs, with average flow losses of 0.74 cfs.²⁸ However, these diversions do not constitute a project effect as project effects are compared to baseline conditions. If these diversions cause flow in the river to drop to zero more often than under baseline conditions, this would be considered a substantial effect on river hydrology. Moreover, if flow drops below a minimum flow rate necessary to maintain aquatic habitat and riparian vegetation more often than baseline conditions, this would also be a substantial effect on river hydrology. Because no minimum flow has been established, a flow rate of at least 1 cfs was used to estimate potential proposed project effects on maintaining minimum flows. As for bankfull flow and flood flows, the proposed project diversions were applied to the baseline period of record flows at the USGS gage to determine the frequency with which these conditions occur (0 flow or 1 cfs of flow). Table 4.2-9 lists the effects of proposed project on critical flows through the Big Sur River Zones 4 through Zone 2.

Page 4.2-67. Text under the heading “Winter Diversions” is revised as follows:

Winter Diversions

Operational constraints outlined in the proposed water right application would allow for greater winter diversions of up to 201 acre-feet to achieve maximum allowable diversions during all seasons. However, up to 5.34 cfs of sustained (30-day) pumping could occur during any month from November through June. This could reduce the Zone 4 through Zone 2 flow by 1.28 cfs.²⁹ The ~~average median~~ average median baseline November flow is ~~29.8~~ 17.6 cfs and over ~~100~~ 39 cfs for all other winter months.³⁰ Consequently, diversions during November would be expected to have the greatest effect. A flow reduction of 1.28 cfs during November would reduce the flow rate by an average of ~~4.3~~ 7.3 percent. However, historically, November may have no flow within Zone 4 and Zone 2. Diversions during conditions of no-flow in November would result in a **potentially significant impact**.

Page 4.2-68. First paragraph under the heading Mitigation Measure, second sentence is revised as follows:

Although this mitigation measure would reduce the proposed project incremental increase in diversions above baseline impacts to less-than-significant levels, continued pumping at baseline levels during the Critical Dry and Extreme Critical Dry conditions would still result in ~~adverse effects on reductions in the BSR flow regime relative to no-diversion conditions,~~ although effects would be small (0.16 percent more no-flow days and 0.62 percent more days with flow less than 1 cfs than under no-diversion conditions).

Page 4.2-68. The first two bullet items under Mitigation Measure 4.2-2 are revised as follows:

- *For July through October, May, and December, when mean daily flow at the USGS gage is below the 20th-40th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 20th percentile mean daily flow rate (see also Mitigation Measures MM #4.3-1 and MM #4.3-2).*
- *For January through April, when mean daily flow at the USGS gage is below the 10th-5th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 10th percentile mean daily flow rate (see also Mitigation Measure MM #4.3-1).*

Page 4.2-69. First paragraph, first sentence is revised as follows:

The Applicant shall submit the IWMP to the SWRCB for review and approval and incorporate any additional requirements identified by the SWRCB into the IWMP. Any modification to the IWMP by the Applicant shall require the Applicant to incorporate and implement a monitoring program in the IWMP to field verify that Project diversion protocols and operations do not reduce flows within Zone 4 through Zone 2 such that the Extreme Critical Dry or Critical Dry flow rate conditions, as appropriate, critical passage conditions, and critical dissolved oxygen (DO) conditions are not violated. ...

Page 4.2-71. The last three sentences of the last paragraph is revised as follows:

... The tailwater pond may be sufficient to detain the baseline irrigation excess runoff, but may not be able to detain a sustained runoff from a 64 percent increase in application rate. ~~Furthermore, a greater intensity of cattle grazing (as a result of increased irrigation) could cause or contribute to surface conditions more susceptible to erosion.—~~Therefore, the proposed project impact on increasing surface runoff and erosion is **potentially significant impact**.

Page 4.2-73. The first two paragraphs under the heading “Impact 4.2-6” are revised as follows:

As discussed above in Impacts 4.2-4 and 4.2-5, the proposed project could increase excess irrigation runoff rates. Irrigation runoff could carry pollutants such as nutrients from fertilizers and animal waste, and pathogens from animal waste to the tailwater pond, Swiss Canyon Creek, or the Pacific Ocean. The El Sur Ranch typically fertilizes and aerates the pastures on an annual basis.

The proposed project would not be subject to any WDRs. ~~CCRWQCB Order No. R3-2004-0117, Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands. The Irrigated Lands WDR is a mandatory program for all commercial, irrigated farming operations in the Central Coast Region. All applicants must submit and Notice of Intent (NOI) and additional information on operations, responsible parties, management practices, and water quality plan, if applicable. Additionally, monitoring is a mandatory part of the Irrigated Lands WDR. Operations that have not submitted an NOI and are not participating in a cooperative monitoring or other monitoring program are subject to enforcement including fines and hearings. The CCRWQCB conducts on farm inspections throughout the region, both on a random basis to verify submitted information, to better understand what farmers are implementing, and in response to complaints or identified problems. Currently there are no required best management practices or discharge limitations. However, the CCRWQCB has prepared this WDR to be protective of water quality from irrigated lands. Existing operations and drainage of the POU already prevents substantial erosion and runoff from the POU. Additionally, i~~ Implementation of Mitigation Measure 4.2-4 would ~~further~~ control erosion and minimize the potential for runoff. Therefore, the incremental increase in proposed project diversions, compared to baseline, would not substantially increase the amount of polluted runoff and impacts would be ***less than significant with incorporation of Mitigation Measure 4.2-4***. Continued irrigation under baseline conditions would also be subject to existing regulations that would serve to minimize potential effects on polluted runoff.

Page 4.2-76. Last paragraph, last sentence is revised as follows:

... Consequently, the proposed project diversions with a maximum average of 3.84 ~~3.67~~ cfs during July through October or 5.34 cfs maximum average throughout the rest of the year would not cause or contribute to violation of water quality standards with respect to temperature.

Page 4.3-20. The last sentence of the first paragraph is revised as follows:

The only others reported species that could occur within the area is the western snowy plover and ringtail (*Bassariscus astutus*).

Page 4.3-20. After the last paragraph, the following text is added:

Ringtail

Ringtail have been reported as occurring in Andrew Molera State Park and the habitat within Swiss Canyon and the Big Sur River corridor was characterized as suitable (Miriam Green Associates 2007) although there are no records in the California Natural Diversity Database (CNDDDB). This species is highly associated with riparian habitat and permanent water features. The proposed project would not impact the riparian corridor along the Big Sur River or in Swiss Canyon and permanent water features would remain essentially unchanged from their baseline condition. Therefore, the proposed project would not impact ringtail.

Page 4.3-28. The following text is added immediately preceding the heading “California Coastal Act;”

Marine Life Protection Act (MLPA)

As presented on the California Department of Fish and Game website,³⁴ the MLPA directs the state to reevaluate and redesign California’s system of marine protected areas (MPAs) to: increase coherence and effectiveness in protecting the state’s marine life and habitats, marine ecosystems, and marine natural heritage, as well as to improve recreational, educational and study opportunities provided by marine ecosystems subject to minimal human disturbance. The MLPA also requires that the best readily available science be used in the redesign process, as well as the advice and assistance of scientists, resource managers, experts, stakeholders and members of the public. California is taking a regional approach to redesigning MPAs along its 1,100 mile coastline, and has divided the state into five study regions.

Page 4.3-41. Last paragraph, first two sentences are revised as follows:

~~Passage data and the precise relationship between pumping attributable to the project and reductions in water surface elevations are both somewhat limited. However, t~~The reasonable assumptions made in this analysis based on the best available information indicate that the increase in proposed project pumping above baseline rates could reduce water surface elevations and streamflows. ...

34 <http://www.dfg.ca.gov/mlpa>, accessed April 3, 2011.

Page 5-3. Revisions to Table 5-1 are shown below:

TABLE 5-1					
EXISTING AND POTENTIAL WATER RIGHTS WITHIN THE BIG SUR WATERSHED					
Number	Date	Location/ Watershed Source	Amount (AFA [cfs])	Type	Status
S015407	4/10/2003	Big Sur River	67.2 (0.0002)	Statement of Div and Use	Claimed
S015408	4/10/2003	Big Sur River	7.6 (0.05)	Statement of Div and Use	Claimed
S014966	6/18/1998	Big Sur River	0 (NA)	Statement of Div and Use	Claimed
D030884R	6/7/2004	Big Sur River	5 (0.007)	Small Domestic Reg	Registered
S014133	11/10/1994	Big Sur River Underflow	0 (NA)	Statement of Div and Use	Claimed
S014132	11/10/1994	Big Sur River Underflow	0 (NA)	Statement of Div and Use	Claimed
A030946	9/17/1999	Big Sur River Underflow	42 (0.0058)	Appropriative	Pending
D031117R	6/30/2006	Big Sur River Underflow	5.8 (0.0070)	Small Domestic Reg	Registered
A013078	5/9/1949	Cold Spring	0.7 (0.0010)	Appropriative	Licensed
A020132	5/16/1961	Juan Higuera Creek Underflow, Unnamed Stream	Ø 3.4 (0.0046)	Appropriative	Licensed
A020133	5/16/1961	South Fork Juan Higuera Creek	Ø 8.2 (0.0113)	Appropriative	Licensed
A014302	5/11/1951	Pfeiffer-Redwood Creek	Ø 1.2 (0.0017)	Appropriative	Licensed
A008901	2/19/1937	Pfeiffer Creek	Ø 1.8 (0.0025)	Appropriative	Licensed
A023116	8/19/1968	Phenegar Creek	15 (0.05)	Appropriative	Licensed
A025573	n/a	Phenegar Creek	2.6 (0.0077)	Appropriative	Licensed
A019154	n/a	Phenegar Creek	Ø 9 (0.0125)	Appropriative	Licensed
A019156	n/a	Phenegar Creek	Ø 4.9 (0.0116)	Appropriative	Licensed
A021520	11/1/1963	Phenegar Creek	Ø 5 (0.007)	Appropriative	Licensed
A019029	n/a	Phenegar Creek	Ø 17.3 (0.0239)	Appropriative	Licensed
A027760	5/26/1983	Phenegar Creek	3.4 (0.0077)	Appropriative	Licensed
A012176	n/a	Post Creek	36.2 (0.05)	Appropriative	Licensed
F011093S	7/1/1984	Unnamed Spring	0 (NA)	Federal Filings	Claimed
F011094S	7/1/1984	Unnamed Spring	0 (NA)	Federal Filings	Claimed
F006373S	7/1/1984	Unnamed Spring	0 (NA)	Federal Filings	Claimed
F006374S	7/1/1984	Unnamed Spring	0 (NA)	Federal Filings	Claimed
A023152	n/a	Unnamed Spring	15 (0.05)	Appropriative	Licensed
A008094	6/23/1939	Unnamed Spring	36 (0.05)	Appropriative	Licensed
A029840	n/a	Unnamed Spring, Unnamed Stream	40 (0.06)	Appropriative	Permitted
A009206	n/a	Unnamed Stream	Ø 4 (0.0056)	Appropriative	Licensed
EI Sur Ranch Historical Maximum Annual Usage - Unpermitted (2004 Water Year)	n/a	Big Sur River	1,136 (6.05)	Unpermitted	Pending
Total Existing and Potential Diversions			4,411.8 1,465.9 (6.477)		
Proposed Project: A030166	7/27/1992	Big Sur River	1,615	Appropriative	Pending
Total Cumulative Diversions Plus the Proposed Project			1,890.8 1,944.9 (6.267)		

Note: "NA" = not applicable; no diversion rate because no annual diversion amount.
Source: State Water Resources Control Board, Division of Water Rights, 2008.

Page 6-1. The last paragraph is revised as follows:

ALTERNATIVES ANALYSIS

This DEIR considers and evaluates ~~four~~ five alternatives to the proposed project. These alternatives are:

1. No Project/No Permit Alternative;
2. No Change in Existing Practices/Historical Diversions Alternative;
3. Alternate Irrigation Efficiency Alternative; ~~and~~
4. Alternative Limits on Diversions Alternative; and
5. California Department of Fish and Game Alternative.

Page 6-3. Table 6-1 is revised as follows to include the CDFG Alternative:

	Irrigated Area (acres)	20-year Average		Annual Annual Maximum		Monthly Maximum		Seasonal (July through October)				Maximum 30 Day Average Diversion Rate (cfs)	Maximum Instantaneous Diversion Rate (cfs)		
		acre-feet	inches	acre-feet	inches	acre-feet	cfs	20-year Average	Seasonal Maximum	Seasonal Average	Monthly Maximum				
								acre-feet	average cfs	acre-feet	average cfs	acre-feet	cfs		
Baseline 1985-2004	267	857	38.5	1,137	51.1	339	5.70	540	2.21	702	2.88	269	4.52	5.70	>6.0 ^a
Project/Alternative Description															
Project	267	1,200	53.9	1,615	72.6	318	5.34	735	3.01	735	3.01	230	3.87	5.34	5.84
1 No Project/No Permit Alternative	25	80	38.5	106	51.1	32	5.70	51	2.21	66	2.88	25	4.52	0.53	>6.0 ^a
2 No Change in Historical Diversions^b	267	857	38.5	1,137	51.1	339	5.70	540	2.21	702	2.88	269	4.52	5.70	>6.0 ^a
3 Alternate Irrigation Efficiency^c	267	862	38.7	946	42.5	146	2.45	430	1.76	453	1.86	138	2.24	2.45	>6.0 ^a
4 Alternative Limitations on Diversion^d	267	1,200	53.9	1,615	72.6	318	5.34	735	3.01	735	3.01	230	3.87	5.34	5.84
5 CDFG Alternative	<u>223</u>	<u>557.5</u>	<u>30.0</u>	<u>557.5</u>	<u>30.0</u>	<u>166</u>	<u>2.79</u>	<u>27^e</u>	<u>0.14^e</u>	<u>277^e</u>	<u>1.36^e</u>	<u>166</u>	<u>2.79</u>	<u>2.79</u>	<u>2.79</u>
Above Base Line															
Project	0	343	15.4	478	21.5	-21	-0.36	195	0.80	33	0.13	-39	-0.65	-0.36	<-0.2
1 No Project/No Permit Alternative	-242	-777	0.0	-1,031	0.0	-307	0.00	-489	0.00	-636	0.00	-244	0.00	-5.17	0
2 No Change in Historical Diversions	0	0	0.0	0	0.0	0	0.00	0	0.00	0	0.00	0	0.00	0.00	0
3 Alternate Irrigation Efficiency	0	5	0.2	-191	-8.6	-193	-3.25	-110	-0.45	-249	-1.02	-131	-2.28	-3.25	0
4 Alternative Limitations on Diversion	0	343	15.4	478	21.5	-21	-0.36	195	0.80	33	0.13	-39	-0.65	-0.36	<-0.2
5 CDFG Alternative	<u>-43</u>	<u>-299.5</u>	<u>-8.5</u>	<u>-579.5</u>	<u>-21.1</u>	<u>-173</u>	<u>-2.91</u>	<u>-513</u>	<u>-2.08</u>	<u>-425</u>	<u>-1.52</u>	<u>-103</u>	<u>-1.73</u>	<u><-2.91</u>	<u><-3.21</u>
<p>a Based on Table 2-2 measured pumping in 2004 (SGI 2005)</p> <p>b Equal to baseline</p> <p>c APPROXIMATE VALUES based on historic (1975-2006) monthly Irrigation Requirements and a 80% Irrigation Efficiency</p> <p>d Diversion quantities same as Project with proposed operational limitations to reduce impacts.</p> <p>e <u>20-year Baseline average of 4.9 days during the irrigation season where flow is above interim bypass flow rate and diversions would be allowed at 2.79 cfs; 20-year Baseline maximum of 50 days during the irrigation season where flow is above the interim bypass flow rate and diversions would be allowed at 2.79 cfs.</u></p> <p>Bold text: Equal to greater than 10% increase over baseline.</p> <p>Blue bold text: EI Sur Ranch water right Application No. 30166 Request.</p>															

Page 6-5. Table 6-2 is revised as follows to include the CDFG Alternative:

TABLE 6-2							
IRRIGATION SEASON DIVERSION EFFECT ON BIG SUR RIVER FLOW LOSS							
	Baseline cfs	Proposed Project cfs	No Project Alternative cfs	Historic Diversions cfs	Alternative Irrigation Efficiency cfs	Alternative Limits on Diversions cfs	<u>CDFG Alternative cfs</u>
Diversion^a							
Monthly Maximum	--	3.87	0.42	4.52	2.24	3.87	<u>2.79</u>
Seasonal Average	--	3.01	0.21	2.21	1.76	3.01	<u>0.14</u>
Big Sur River Flow Loss^b							
Monthly Maximum	--	0.62	0.07	0.72	0.36	0.62	<u>0.45</u>
Seasonal Average	--	0.48	0.03	0.35	0.28	0.48	<u>0.02</u>
Difference from Baseline							
Monthly Maximum	--	-0.10	-0.66	0.00	-0.36	-0.10	<u>-0.27</u>
Seasonal Average	--	0.13	-0.32	0.00	-0.07	0.13	<u>-0.33</u>
Difference from Proposed Project							
Monthly Maximum	--	--	-0.62	0.12	-0.29	0.00	<u>-0.17</u>
Seasonal Average	--	--	-0.50	-0.14	-0.23	0.00	<u>-0.46</u>
Notes:							
^a From Table 6-1							
^b Where Big Sur River (BSR) Flow Loss is estimated as 0.16 cfs per 1.0 cfs diverted (See Section 4.2, Impact 4.2-2, gradient method)							
-- = not applicable							

Page 6-5. Table 6-3 is revised as follows to incorporate the CDFG Alternative:

TABLE 6-3												
COMPARISON OF FLOW RATES FOR CHANNEL-FORMING FACTORS AND FREQUENCY FOR NON-EXCEEDENCE OF CRITICAL FLOW RATES FOR BASELINE, PROPOSED PROJECT, AND PROJECT ALTERNATIVE CONDITIONS												
Flow Condition cfs	Baseline/ Historic cfs	Proposed Project/ Alternative Limits on Diversions cfs	No Project Alternative cfs	No Project Alternative Difference		Alternate Irrigation Efficiency cfs	Alternate Irrigation Efficiency Alternative Difference		CDFG Alternative Difference			
				Baseline cfs	Proposed Project cfs		Baseline cfs	Proposed Project cfs	CDFG Alternative cfs	Baseline cfs	Proposed Project cfs	
Flood												
10-year	<u>257.2</u> <u>4294.9</u>	<u>257.0</u> <u>4294.8</u>	<u>257.2</u> <u>4294.9</u>	0.04	<u>0.26</u> <u>0.1</u>	<u>257.2</u> <u>4249.9</u>	0.04	<u>0.26</u> <u>0.1</u>	<u>4294.9</u>	<u>0</u>	<u>0.1</u>	
Bankful												
2.5-year	<u>41.02</u> <u>1772.6</u>	<u>40.86</u> <u>1772.4</u>	<u>41.91</u> <u>1772.6</u>	0.89	<u>1.05</u> <u>0.2</u>	<u>41.45</u> <u>1772.6</u>	<u>0.43</u>	<u>0.59</u> <u>0.2</u>	<u>1771.9</u>	<u>0.3</u>	<u>-0.5</u>	
2.0-year	<u>28.24</u> <u>1663.1</u>	<u>28.29</u> <u>1662.9</u>	<u>28.64</u> <u>1663.4</u>	0.4	<u>0.32</u> <u>0.2</u>	<u>28.20</u> <u>1663.1</u>	<u>-0.04</u> <u>0</u>	<u>-0.09</u> <u>0.2</u>	<u>1662.4</u>	<u>-0.7</u>	<u>-0.5</u>	
1.5-year	<u>18.02</u> <u>1206.4</u>	<u>17.91</u> <u>1206.3</u>	<u>18.24</u> <u>1206.4</u>	0.22	<u>0.33</u> <u>0.1</u>	<u>18.13</u> <u>1206.4</u>	<u>0.11</u>	<u>0.22</u> <u>0.1</u>	<u>1205.7</u>	<u>-0.7</u>	<u>-0.6</u>	
Critical Flow (Frequency of Non- November Exceedence [%])												
1 cfs	<u>1.934</u>	<u>2.349</u>	<u>1.489</u>	<u>-0.46</u> <u>0</u>	<u>-0.82</u> <u>-1.15</u>	<u>1.979</u>	<u>0.03</u> <u>0.65</u>	<u>-0.33</u>	<u>1.34</u>	<u>0</u>	<u>-1.15</u>	
0 cfs	<u>1.08</u> <u>0.92</u>	<u>1.23</u>	<u>0.92</u>	<u>-0.16</u> <u>0</u>	<u>-0.31</u>	<u>1.07</u>	<u>-0.01</u>	<u>-0.16</u>	<u>0.92</u>	<u>0</u>	<u>-0.31</u>	

Page 6-6. The first paragraph is revised as follows:

Additionally, the No Project/No Permit Alternative would reduce the percent of flows that fall to 1 cfs and 0 cfs. Flows less than 1 cfs would occur approximately ~~40~~ 35 percent less often with the No Project/No Permit Alternative, compared to the proposed project, and no-flow conditions would occur about 25 percent less often for the No Project/No Permit Alternative compared to the proposed project.

Page 6-6. Second paragraph, last sentence is revised as follows:

During typical conditions,³⁸ the No Project/No Permit Alternative would result in the same number of slightly lower (0.12 to 0.17 percent) incidences of no flow and slightly fewer (0.15 percent) incidences of flow less than 1 cfs compared to baseline and fewer lower (0.50 to 0.84 percent) incidences of no flow (0.31 percent less) and flow less than 1 cfs (1.0 percent less) compared to the proposed project.

Page 6-20. Footnote 44 is revised as follows:

44. The two continuous recording data sondes deployed on the Big Sur River to monitor DO, one located near the river bottom within an upwelling pool (near Station 8) and the second located near the river bottom near the head of the lagoon at Station 6.

Page 6-21, last paragraph, last sentence is revised as follows:

... The project applicant could not resume diversions until the El Sur Ranch reach has at least 0.5 feet of water depth at the depth location, or no loss of surface water connectivity exists throughout the El Sur Ranch reach, and the and the water flow rate exceeds the low flow rate,⁴⁶ or the El Sur Ranch reach has at least 0.5 feet of water depth at the depth location, no loss of water connectivity exists throughout the Reach, and the DO at the downstream recording sonde is 6 mg/l or above.

Page 6-24. Immediately preceding the subheading “Environmentally Superior Alternative, the following evaluation of Alternative 5 is added:

Alternative 5: California Department of Fish and Game (CDFG) Alternative

Description

The CDFG Alternative (Alternative 5) would implement terms and conditions for dismissing CDFG’s protest of the Water Right Application No. 30166 that were submitted by the Department in a letter to Ms. Victoria Whitney of the SWRCB Division of Water Rights dated July 23, 2010. This letter is included in Appendix 1 of the Final EIR.

The CDFG Alternative requires that diversions from subterranean flow of the Big Sur River be limited to use on only 223 acres of the place of use (POU) identified in the project description: Chapter 2 of this EIR. The 223 acres would not include riparian lands (i.e., 25 acres of the POU that can be served via the project applicant’s existing riparian water right) nor would it include areas of the POU that are indirectly irrigated by seepage water (i.e., 19 acres of the POU that encompass Swiss Canyon).

The CDFG Alternative would require that the maximum diversion rate under the proposed appropriative water right would be limited to 2.79 cfs. The alternative also requires that diversions cease when any of the following conditions occurs:

1. The lagoon temperature exceeds 14°C.
2. The river mainstem temperature exceeds 13°C.
3. Salinity in the lagoon exceeds 12 ppt
4. Flow at the USGS gage is less than 40 cfs during June through November.
5. Flow at the USGS gage is less than 132 cfs during December through May.

New limits on the timing and rate of diversion that would be implemented under the alternative are based on interim bypass flows for fish passage, fish habitat in the lagoon, and a water duty factor of 1 cfs per 80 acres irrigated. In addition to diversion limits and restrictions, the CDFG Alternative includes runoff, erosion, and sedimentation management requirements; tailwater pond management requirements; monitoring and reporting requirements; and, other terms and conditions such as DFG access to monitor compliance. Please refer to Appendix 2 of this Final EIR for a detailed discussion of these elements. Implementation of the CDFG Alternative would not require El Sur Ranch to make substantial changes in the methods or facilities it currently uses to divert and apply irrigation water.

Comparative Analysis of Impact

Hydrology

The CDFG Alternative would result in substantial reductions in the amount of water historically diverted to irrigated pasture on El Sur Ranch and thus, substantial reductions in diversions relative to environmental baseline conditions. Under this alternative, annual irrigation diversions would generally be about 54 percent less than under the proposed project (maximum limit of 557.5 AFY compared to 1200 AFY rolling annual average). The July through October maximum average rate of diversion, would be about 28 percent less than the proposed project.⁴⁷— Additionally, the overall maximum 30-day diversion rate could be 48 percent lower than the proposed project. Consequently, irrigation season impacts on local groundwater levels and water supplies could be lower for this alternative compared to the proposed project, and the overall July through October seasonal average would be lower (0.22 cfs), as shown in Table 6-1, above. The reduction in diversions under the CDFG Alternative are primarily related to the CDFG Alternative conditions that all diversions cease when flow at the USGS gauge is less than 40 cfs from June through November and 132 cfs from December through May.

Diversion of less water, on average, would also mean that effects on flow within the Big Sur River would be less than would occur under the proposed project. Under this alternative, an average of 0.02 cfs of flow could be lost to the surface expression channel of lower reaches of the river during the irrigation season. This is 96 percent less than the reduction in flow loss attributable to the proposed project. The monthly maximum flow loss of 0.45 cfs under the CDFG Alternative would reduce flow loss by 27 percent compared to the proposed project (Table 6-2).

47 Calculated based on Table 6-1.

The CDFG Alternative would very slightly reduce the bankfull and flood flows compared to the proposed project by approximately 0.1 to 0.6 cfs (Table 6-3). Regardless, this alternative would not alter the frequency of the channel-forming bankfull flow or flood flow, compared to the proposed project. This alternative would also reduce the percent of flows that fall to 1 cfs and 0 cfs compared to the proposed project (Table 6-3). Flows less than 1 cfs would occur approximately 46 percent less often with this alternative, compared to the proposed project, and no-flow conditions would occur about 25 percent (less?) often for this alternative compared to the proposed project. Although these reductions are very small, the slightly lower incidence of low flow with the CDFG Alternative would be considered a beneficial change in stream hydrology relative to environmental baseline conditions and conditions expected to occur under the proposed project.

Winter diversions would be allowed under the CDFG Alternative, with December through March average diversions ranging from 0 to 2.79 cfs. Under the Alternative, November diversions would average of 0.27 cfs, with a maximum diversion of 1.29 cfs. November diversions would result in flow loss in the Big Sur River of about 0.04 cfs on average and 0.21 cfs maximum in November (Appendix 2, CDFG Alternative (Alt 5) El Sur Ranch Monthly Pumping Effect on BSR Flow Rate Losses (cfs)).⁴⁸ By comparison, the proposed project would divert approximately 0.5 cfs of flow on average throughout November.⁴⁹ Therefore, the CDFG Alternative would reduce November flow losses in the Big Sur River by 0.46 cfs on average. This would not affect no-flow conditions relative to the proposed project and environmental baseline conditions during November; the incidence of 0 cfs flow within the lower reaches of the Big Sur River would be the same for the CDFG Alternative, proposed project, and baseline conditions. Because the impact of the proposed project (relative to the environmental baseline) is mitigable to a level considered less than significant, no significant project impact would be avoided by implementing the CDFG Alternative that has not been mitigated already.

As with the proposed project, the CDFG Alternative would not substantially alter the lagoon water elevations or salinity, or groundwater salinity, because these are primarily controlled by external factors (e.g., tides, wind and wave action, and sea levels). This alternative could increase on-site flooding compared to the proposed project because mitigation incorporated into the proposed project would include management practices designed to minimize on-site flooding. The alternative as described in the July 23rd CDFG letter does not include such requirements. With implementation of these practices, however, the difference between the alternative and proposed project would be negligible relative to flooding.

The CDFG Alternative would reduce the potential for erosion due to irrigation by reducing the amount of applied water and, thus, the amount of excess irrigation runoff that could occur. Under the alternative, however, existing levels of vegetative cover would likely be reduced in response to reduced water applications which, in turn, could increase erosion potential relative to existing conditions. This potential increase, however, is not expected to be significant. For purposes of this evaluation, we assume that this alternative would incorporate runoff maintenance and erosion controls that are included as elements of the proposed project and, therefore, any benefit of these measures would be applied equally for the proposed project and this alternative for the area remaining under irrigation. Additionally, the CDFG Alternative would require an Erosion Control and Sedimentation Prevention Plan to stabilize areas subject to disturbance during water diversion, application, and tailwater discharge activities. This alternative also requires that off-site areas susceptible to erosion

48 See Appendix G, Daily Flow Calculations for details on methods.

49 See Appendix G, Daily Flow Calculations for details on methods.

be stabilized by planting and seeding with native species where feasible, or other materials where plant establishment is not feasible.

The CDFG Alternative would not divert as much low-DO groundwater from the Big Sur River, compared to the proposed project, allowing low-DO groundwater to continue to flow into the river. This alternative would divert an average of 0.14 cfs and maximum 30-day average of 2.79 cfs during the July through October season; whereas the proposed project would divert an average of 3.01 cfs and 30-day maximum average of 3.87 cfs during the July through October season (see Table 6-1). Therefore, this alternative could divert a 30-day maximum average of 1.08 cfs less low-DO groundwater during July through October from the river, compared to the proposed project and the seasonal average diversion would be about 2.87 cfs less for this alternative compared to the proposed project. It follows then that, if river flow remains high enough to prevent stagnant conditions, the CDFG Alternative would result in no significant benefit to Big Sur River DO conditions relative to the proposed project. However, if flows are low, the lower diversion rates under the CDFG Alternative could result in a lower incidence of stagnant conditions. This could result in a slight improvement in river DO compared to the proposed project and environmental baseline conditions.

Temperature and salinity in the river and lagoon are primarily affected by stream flow and natural conditions (e.g., precipitation, tidal action, lagoon opening and closure, wave overwash, upstream influences). The CDFG Alternative would reduce diversions during the dry season when temperatures are highest and fresh water flows from upstream are lowest. However, the alternative would not improve temperature conditions compared to baseline or the proposed project because even pumping at 5.04 cfs during a Critical Dry year did not demonstrate a measurable effect on temperature in the surface expression (SCG 2008). No relationship between lagoon and surface expression salinity and pumping could be identified in the SGI studies; natural phenomena such as wave overwash, precipitation, lagoon opening and closing, discharges from the upstream Andrew Molera State Park, and tidal action dominated salinity conditions. Therefore, the slight increase in surface expression flow with the CDFG Alternative project would not improve salinity conditions in the Big Sur River or lagoon compared to baseline conditions or conditions resulting from the proposed project. As such, the impact of the CDFG Alternative on salinity and temperature would be no different than that of the proposed project in that both alternatives would result in no significant impact relative to baseline conditions.

The CDFG Alternative would not substantially affect flow in Swiss Canyon that occurs under existing environmental baseline conditions. Under the proposed project however, flows to Swiss Canyon would be slightly reduced due to runoff controls that are included as part of the proposed project. Further, with the implementation of restrictions on application rates under the proposed project, allowable application rates could be as much as 2.55 cfs lower than those that would be allowed under the CDFG Alternative.

Aside from potentially increasing sediment in runoff water from the pasture areas, the CDFG Alternative could reduce the amount of pollutants in runoff compared to environmental baseline conditions because existing cattle grazing operations would likely be reduced. It is reasonable to assume that reduced grazing would require less fertilization and result in less animal waste deposited on the surface, which in turn, would reduce the potential for nutrients and pathogens to be transported in runoff. Because ongoing cattle operations are considered part of existing conditions and included as part of the environmental baseline, the impact of the CDFG Alternative relative to nutrients and pathogens in site runoff would be no different than that of the proposed project in that both alternatives would result in no significant impact relative to baseline conditions.

Overall, the CDFG Alternative would reduce potential effects on water supplies compared to the proposed project. This alternative would not alter the channel-forming flows, and the pollution potential from nutrients and pathogens would be less for this alternative compared to the proposed project. The CDFG Alternative impacts on the lagoon and seawater intrusion would not be different than the proposed project. This alternative would, however, likely increase erosion potential within the POU and Swiss Canyon, and possibly the bluffs along the Pacific Ocean side, and may contribute to depressed DO in the Big Sur River compared to the proposed project because mitigation measures recommended for the proposed project are not proposed under the CDFG Alternative.

Biological Resources

The CDFG Alternative would not maintain irrigation operations that have occurred historically on the POU. In fact, the CDFG Alternative would result in lower levels of pumping than baseline (Table 6-1). In relation to the proposed project, implementation of this alternative would on average result in substantially lower levels of diversion. As demonstrated in Sections 4.2 and 4.3 of this DEIR, there is a direct relationship between the diversion rate and instream flow and water depth. This means that a lower pumping rate results in less water diverted from the river in relation to the proposed project and environmental baseline conditions. The CDFG Alternative would result in 20-year average July-October diversion rates of 0.14 cfs, roughly 2.87 cfs less than the rate of the proposed project (see Table 6-1, above). This would result in about 0.86 cfs of water that would not be diverted (at 0.3 cfs of instream flow lost per 1 cfs pumped) under the CDFG Alternative when compared to the proposed project. Because minimum instream flows limit when pumping could occur, this alternative would on average result in more water being present in the river during the low flow season. Additionally, less water could be pumped under the monthly maximum (166 AF) compared to the proposed project (230 AF) during July-October and on an annual basis (318 AF) (see Table 6-1).

Because the CDFG Alternative would result in more instream flow than either the proposed project or baseline conditions, fish passage for both adult and juvenile steelhead would be improved. Minimum flows required before pumping could occur under this alternative are 40 cfs in the July-October period and 132 cfs from December through May. Passage transect data was not collected for flows at these levels. Regardless, the shallowest riffles generally exceeded the passage criteria at just over 20 cfs; doubling this or increasing flows by over six-fold would ensure that that adult and juvenile steelhead would be able to move up and downstream before any pumping was allowed. The relatively small amount of water removed from the channel by pumping would not be expected to create passage difficulties at these flows.

Temperature was discussed previously in relation to hydrology, but not in relation to conditions that exist within the river. The CDFG Alternative would require that all pumping cease when the mainstem water temperatures are above 13°C or when the lagoon water temperature is above 14°C. The alternative does not specify where this is to be monitored or if these are instantaneous or daily mean values. Regardless, temperature data collected within the river at various locations in 2004 observed mean daily water temperatures routinely above 13°C from at least May through late September (Hanson 2005). Data collected in 2006 and 2007 in August and September; none of these data sets shows water temperatures below the 13°C threshold (Hanson 2007; 2008). It would appear that based on the temperature restriction in this alternative, that pumping would not have been allowed in any of these periods. This is in contrast to the proposed project which would allow continued pumping and corresponding reductions in instream flows. This prohibition on pumping would

likely result in an improvement in conditions over baseline as it relates to temperature even though the analysis to date has not shown a meaningful relationship between temperature and pumping.

Because the Big Sur River is an unregulated stream, there are no controls over flow or temperature and both respond to climatic conditions. Therefore, it is reasonable to assume that in most years the water would warm rapidly in the spring as flow declines, likely exceeding the 13°C threshold by sometime in May. Although the data does not exist to determine this precisely, this threshold may be even more restrictive to pumping during the irrigation season than the minimum flow of 40 cfs. Regardless, in comparison to the proposed project the CDFG Alternative would minimize pumping related alterations in flow or temperature during the drier summer months when instream conditions are naturally the most stressful for steelhead.

Salinity is primarily driven by the tides, lagoon closure, and streamflow conditions. The CDFG Alternative would do nothing to change them for the better or worse in comparison to the proposed project.

The low levels of DO that have been observed in the lower river are exacerbated by periods of extremely low flow when the water stagnates thereby reducing gas exchange. This typically occurs during the warmer periods of the year, further reducing the amount of saturation levels for DO. During these periods, the amount of additional water left in the stream by this alternative could increase the period of time where the river continues to actively flow, thereby reducing stagnation and improving DO levels.

Overall, implementation of the CDFG Alternative would reduce the levels of impact on sensitive aquatic resources in the Big Sur River when compared to environmental baseline conditions and the proposed project. However, the magnitude of change relative to the proposed project is difficult to predict. Because unimpaired conditions present fish passage constraints, high water temperatures, and periods of low DO any additional water that remains in the channel under the CDFG Alternative compared to the proposed project may not be sufficient to allow for adequate passage or alleviate high temperature and low DO under all conditions. However, limitations on pumping in periods of low streamflow would ensure that this alternative would not exacerbate water quality and flow-related problems.

Indirect effects of the CDFG Alternative would be a potential reduction in the number of cattle grazed on the site that could occur as a result of decreased forage production due to reduced irrigation. If the assumed reduction in cattle numbers is valid, this reduction could result in less damage to the riparian habitat within Swiss Canyon, relative to the proposed project, and lower levels of bank-erosion from animal trails. Both of these factors could combine to somewhat improve conditions for California red-legged frogs known to exist within Swiss Canyon. Reduced irrigation, however, may also result in reduced vegetated coverage within the POU which could result in increased erosion potential and reduced water quality in Swiss Canyon during storm events.

The amount of water applied to the fields would be reduced under the CDFG Alternative and could affect the amount of groundwater entering into Swiss Canyon. However, a direct linkage has not been demonstrated to exist between irrigation and water in Swiss Canyon (Hanson 2007b)

Ability of the CDFG Alternative to Meet the Basic Objectives of the Proposed Project

The basic project objectives specified in the DEIR include allowing for “the continued diversion and beneficial use of water for irrigation of 267 acres of pasture for cattle grazing.” In addition to the basic objectives of the proposed project, Water Right Application No. 30166 identifies a condition of under-irrigation that has occurred under historical applications. To correct this condition, the Applicant seeks to acquire the right to divert and apply water in quantities that slightly exceed historic rates of diversion. The intent of the increase is to improve forage quality and production on the POU.

Under the CDFG Alternative, diversions and irrigation on the project site would not continue consistent with historical practices within the POU. Under the terms and conditions of the CDFG Alternative, sufficient irrigation would not be allowed during the dry season because flows at the USGS gauge would typically be less than 40 cfs requiring cessation of all irrigation diversions. Using the baseline period of record to identify how often the CDFG Alternative would allow irrigation diversions, flow at the USGS gauge exceeded 40 cfs only 7 out of 20 years in June, 4 out of 20 years in July, 1 out of 20 years in August, 0 out of 20 years in September, and 6 out of 20 years in October. During October, only one year would have allowed diversions for more than 7 days. During May, flow at the USGS gauge exceeded 132 cfs (allowing for irrigation diversions) only 4 of 20 years and only 2 years would have allowed diversions for more than 7 days. Overall, from May through October, when irrigation would be critical to support forage production, diversions would have been allowed only 9 percent of the time. This analysis does not take into account the water temperature threshold. The threshold may be routinely exceeded in early spring thereby preventing pumping until the water temperatures drop in the fall regardless of streamflow. The CDFG Alternative would also not allow irrigation of the 19 acres of Swiss Canyon indirectly irrigated by seepage from the upper fields. The CDFG Alternative would allow for some irrigation during from December through April (about one third of the time), however, irrigation is not as critical during this season because precipitation would typically provide sufficient moisture for forage production.

The CDFG Alternative would impede the attainment of the proposed project’s basic objectives. Forage production on irrigated pasture would be severely reduced relative to what might be achieved under the proposed project or baseline conditions. This reduction would substantially affect the economic use or viability of the irrigated agricultural operations on the project site because, as noted in NRCE (2007), pasture requirements for optimum growth are about 1,200 AFY on an annual basis. The CDFG Alternative maximum diversion of 557.5 AFY would result in an annual average irrigation deficit of 893 AF (see Appendix 2 of this Final EIR: Table A5-3 CDFG Alternative Irrigation Compared to Irrigation Requirements). Additionally, the July to October seasonal irrigation deficit would average 420 AF, with a May deficit of 182 AF.

Page 6-24. Immediately following the second paragraph under the heading “Environmentally Superior Alternative, the following paragraph is added:”

As with the No Project/No Permit Alternative, Alternative 5 (the CDFG Alternative) would result in substantial reductions in historical diversions for irrigating pasture on El Sur Ranch. This would, in some circumstances, improve fish passage in the lower Big Sur River relative to existing environmental baseline conditions. This would not, however, result in the elimination or significant reduction in any of the impacts identified for the proposed project.

though it would reduce the need for mitigation required to ensure no significant impact relative to the environmental baseline. As noted above, however, Alternative 5 would substantially reduce the ability of the project applicant to irrigate and, therefore, would preclude the applicant from fully achieving the basic objectives of the proposed project.

REVISED SUMMARY TABLE 3-1 FROM THE DEIR

Summary Table 3-1 from the DEIR has been revised to reflect changes in impact statements and mitigation measures made in response to public comment on the DEIR and at the discretion of the Lead Agency. The revised final version of the table is presented below in its entirety as Table 2-1 of the Final EIR. All changes are shown in strike-out/underline.

TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
PROJECT IMPACTS			
4.2 Hydrology, Geohydrology, and Water Quality (Project Impacts)			
4.2-1 Implementation of the proposed project would result in a direct reduction in local groundwater levels but would not substantially deplete groundwater supplies or interfere with existing or pending water rights.	LS	None required.	LS
4.2-2 Implementation of the proposed project would alter the groundwater-to-surface-water gradient and substantially reduce flow within the Big Sur River and may alter the natural channel forming flow regime.	PS	<p>4.2-2 Extreme Critical Dry and Critical Dry Flow Rate Limitations on Project Diversions. Extreme Critical Dry and Critical Dry flows could result in significant aquatic habitat and water quality constraints. The Applicant shall immediately develop and implement an Irrigation Water Management Plan (IWMP) incorporating protocols and operator training to ensure that Project diversions do not cause or contribute to Extreme Critical Dry flows (less than the 10th percentile flow rate) or Critical Dry flows (less than the 20th percentile flow rate) greater than under Baseline rates as follows:</p> <ul style="list-style-type: none"> • For July through October, May, and December, when mean daily flow at the USGS gage is below the 20th 40th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 20th percentile mean daily flow rate (see also Mitigation Measures MM #4.3-1 and MM #4.3-2). • For January through April, when mean daily flow at the USGS gage is below the 10th 5th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 10th percentile mean daily flow rate (see also Mitigation Measure MM #4.3-1). 	LS

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • For June and November, when flow at the USGS gage is below the 10th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 10th percentile mean daily flow rate. • Table A lists the USGS Limiting Flow Rates (10th percentile or 20th percentile, as required, above), for each month. If flow at the USGS gage is less than the USGS Limiting Flow Rate, the Project diversions cannot exceed Baseline (Allowable) Diversion Rates until flow at the USGS gage is equal to or above the USGS Limiting Flow Rate. <p><u>The Applicant shall submit the IWMP to the SWRCB for review and approval and incorporate any additional requirements identified by the SWRCB into the IWMP.</u> Any modification to the IWMP by the Applicant shall require the Applicant to incorporate and implement a monitoring program in the IWMP to field verify that Project diversion protocols and operations do not reduce flows within Zone 4 through Zone 2 such that the Extreme Critical Dry or Critical Dry flow rate conditions, as appropriate, critical passage conditions, and critical dissolved oxygen (DO) conditions are not violated. Diversions for the purpose of making flow rate measurements, pursuant to this mitigation measure or subsequent mitigation measures, are exempt from the diversion limitations imposed by this mitigation measure if notification of testing is provided to the SWRCB prior to the beginning of testing. Modifications to the IWMP shall be submitted to the SWRCB for review and approval prior to implementation of the modified IWMP.</p>	

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.2-3 Implementation of the proposed project could alter the groundwater-to-surface-water gradient and reduce the water surface elevation within the lagoon.	LS	None required.	LS
4.2-4 Implementation of the proposed project could substantially alter the existing drainage pattern of the POU through increased irrigation rates that could result in substantial erosion or siltation on- or off-site.	PS	<p>4.2-4 The Applicant shall prepare an Erosion Control and Operations Management Plan (ECOMP) and submit it to the SWRCB for review and approval. This ECOMP shall incorporate the IWMP and operations and management protocols to minimize surface runoff and erosion potential arising from the Project.</p> <p>The Applicant shall incorporate protocols for excess irrigation applications and to prevent on- and off-site erosion because of increased application rates or volumes, intensification of grazing, or other conditions attributable to the proposed project. The IWMP shall include management practices to avoid bare soil conditions and to limit grazing intensification over pre-project levels on land with less than 50-percent ground cover. Areas disturbed by grazing or other operational activities attributable to the proposed project shall be re-vegetated. Vegetation shall be maintained on areas adjacent to drainage ways. Erosion and sediment transport BMPs shall be implemented as necessary.</p>	LS

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>The ECOMP shall also include a site inspection and maintenance program. Site inspection shall occur at the beginning of each irrigation season to evaluate erosion and runoff control devices (e.g., embankments, flow control structures, vegetated ground cover, and others). Project-related erosion or erosion hazards conditions shall be repaired prior to the beginning of the irrigation season. Monthly inspections shall be performed during the irrigation season and repair and maintenance of any runoff or erosion control structures shall be performed as necessary. A final inspection and maintenance of structures shall occur at the end of the irrigation season or by no later than October 15.</p> <p>Inspection and maintenance reports shall be kept on file by the Applicant or their operations manager and be made available to the SWRCB upon request. The ECOMP shall designate the responsible party(s) for completing inspections, maintenance, and training.</p> <p>Operations and management protocols shall be incorporated into the IWMP to minimize the potential for excessive project irrigation and irrigation runoff. Operator training on effective irrigation and irrigation management shall also be incorporated into the associated IWMP. The IWMP shall designate the responsible party(s) for ensuring compliance with the IWMP.</p>	
<p>4.2-5 Implementation of the proposed project could substantially alter the existing drainage pattern of the POU by increasing the amount of irrigation that could substantially increase the rate or amount of surface runoff in a manner that would result in on-or off-site flooding.</p>	LS	None required.	LS

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.2-6 Implementation of the proposed project could increase surface runoff from the POU that could contribute additional sources of polluted runoff to Swiss Canyon, the tailwater pond, and/or the Pacific Ocean.	PS	4.2-6 Implement Mitigation Measure 4.2-4.	LS
4.2-7 Implementation of the proposed project could alter the local groundwater gradient and cause or contribute to seawater intrusion and aquifer salinity.	LS	None required.	LS
4.2-8 Implementation of the proposed project would result in an alteration in the local groundwater to surface water gradients and surface water flow regime with concurrent effects on surface water quality.	PS	4.2-8 Implement Mitigation Measure 4.3-4.	LS
4.3 Biological Resources (Project Impacts)			
4.3-1 The proposed project could reduce water depths to a level that would impair passage of adult steelhead between November 1 and May 31.	PS	4.3-1 a) In extreme critical dry conditions, when the mean daily flow at the USGS gage is below the 10th-percentile value between December 1 and May 21, pumping shall be reduced to Baseline rates until stream flows exceed the 10th-percentile values for the months of January through April, and the 20th-percentile values for the months of December and May. This measure shall remain in effect until replaced by the flow monitoring and operations plan discussed below (Mitigation Measure 4.3-1(b)). Table A lists the Baseline (Allowable) Diversion Rate pumping rates to be used for Extreme Critical Dry and Critical Dry conditions when mean daily flow at the USGS gage is less than the 10th- and 20th-percentile flow, as described above.	LS

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>b) The Applicant shall prepare a detailed flow monitoring and operations plan, for review and approval by the SWRCB, that provides a structured feedback process whereby streamflows during the adult migration period (between November 1 and May 31) are monitored, passage restrictions evaluated, and changes in Project pumping are made to reduce the effect of Project irrigation on adult steelhead movement. The plan shall be prepared in consultation with NMFS and CDFG. Elements to include within this plan are: real-time monitoring protocols (including protocols established pursuant to Mitigation Measure 4.2-2), the flow thresholds established in the FEIR, pump change requirements, recordkeeping, reporting, and an adaptive management feedback system. Following approval by the SWRCB, this plan shall be incorporated into the IWMP and put into effect.</p>	
<p>4.3-2 The proposed project would reduce water depths to a level that would impair passage of juvenile steelhead between June 1 and October 31.</p>	<p>PS</p>	<p>4.3-2 a) In critical dry conditions, when the mean daily flow at the USGS gage is below the 20th percentile value between July 1 and October 31, project pumping shall be reduced to Baseline (Allowable) Diversion Rates, as specified in Table A (see Mitigation Measure 4.2-2), until streamflows exceed the 20th percentile values for the months of July through October. This measure shall remain in effect until replaced by the flow monitoring plan discussed below (Mitigation Measure 4.3-2(b)). This measure does not limit diversions required to make measurements specified in Mitigation Measure 4.3-2(b), if notification of testing is provided to the SWRCB prior to the test period.</p>	<p>LS</p>

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		b) The Applicant shall prepare a detailed flow monitoring and operations plan in consultation with NMFS and CDFG, for review and approval by the SWRCB, that provides a structured feedback process whereby streamflows during the months of June and October are monitored, passage restrictions evaluated, and changes in project pumping are made to reduce the effect of project irrigation on juvenile steelhead movement. Elements to include within this plan are: real-time monitoring protocols (including protocols established pursuant to Mitigation Measure 4.2-2), the flow thresholds established in the FEIR, pump change requirements, recordkeeping, reporting, and an adaptive management feedback system. Following approval by the SWRCB, this plan shall be incorporated into the IWMP and put into effect.	
4.3-3 The proposed project would not increase mean daily water temperatures above 20°C or hourly water temperatures over 24°C.	LS	None required.	LS

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p>4.3-4 The proposed project would contribute to the reduction of dissolved oxygen (DO) levels in the lower Big Sur River below 7.0 mg/L.</p>	<p>S</p>	<p>4.3-4 a) Reductions in dissolved oxygen (DO) are most problematic during periods of extremely low flow when pumping causes or contributes to stagnant water conditions in the lower river. When mean daily flow at the USGS gage in the Big Sur River is below 10 cfs and mean daily water temperature is above 18°C, the Applicant shall reduce project pumping to Baseline (Allowable) Diversion Rates (see Table A, Mitigation Measure 4.2-2), except as provided in Mitigation Measure 4.3-4(b). Project pumping shall not resume until the mean daily flow is above 10 cfs, regardless of water temperature changes, or until the Applicant can demonstrate to the satisfaction of the SWRCB that DO levels are consistently above those considered stressful to steelhead (6 mg/L). This Mitigation Measure shall remain in force unless the Applicant implements Mitigation Measure 4.3-4(b) in its entirety. This measure does not limit diversions required for making measurements, as specified in Mitigation Measure 4.2-2.</p> <p>b) If the Applicant elects to make project diversions when flow at the USGS gage is below 10 cfs and mean daily water temperature is above 18°C, then the Applicant must install a seasonal aeration system in the lower river. The goal of such a system would be to provide DO to aquatic species when project pumping may cause or contribute to stagnant conditions. The system shall consist of an electric compressor located near the New Well, temporary piping laid on the surface of the ground to the river bank, and a distribution system of perforated pipe laid on the bottom of the Big Sur</p>	<p>LS</p>

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>River. The in-stream portion of the distribution system shall, at a minimum, result in average river DO level of six (6) mg/l at each passage transect from transect 2 through and including transect 8. The network on the stream bottom shall be painted black or brown to minimize visual disruption for park users. All equipment shall be removed from the active channel by November 1.</p> <p>The overall feasibility of such a system is unclear. Aeration systems have been installed on ponds and lakes, but in-stream systems are extremely rare. A feasibility study shall be prepared and all required permits obtained before this measure is implemented in lieu of Mitigation Measure 4.3-4(a). This feasibility study shall include an evaluation of potential impacts associated with implementation of the Mitigation Measure including potential impacts on noise and visual quality, construction impacts associated with installation of the compressor and utility lines, equipment maintenance and operations, and other considerations, as required by the SWRCB. It is expected that the required permits would include specific requirements to minimize potential impacts to aquatic habitat, such as erosion and siltation, from implementation of this Mitigation Measure.</p>	
<p>4.3-5 The proposed project would not result in sedimentation, or other changes in water quality, of habitat used by sensitive amphibians such that the habitat would become unusable for any life stage.</p>	LS	None required.	LS

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TABLE 2-1			
FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES			
Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.3-6 The proposed project would not result in flow alterations such that amphibian breeding habitat in Swiss Canyon or the Big Sur River becomes unsuitable.	LS	None required.	LS
4.3-7 The proposed project would not result in flow alterations that would create unsuitable habitat for aquatic reptiles.	LS	None required.	LS
4.3-8 The proposed project would not result in degradation of sensitive vegetation communities.	LS	None required.	LS
CUMULATIVE IMPACTS			
4.2 Hydrology, Geohydrology, and Water Quality (Cumulative Impacts)			
4.2-9 The proposed project could contribute to reductions in local groundwater levels but would not substantially reduce groundwater supplies.	LS	None required.	LS
4.2-10 The proposed project could contribute to reductions in the groundwater to surface water gradient and reductions in flow within the Big Sur River, which, in turn, may alter the natural channel forming flow regime.	PS	4.2-10 Implement Mitigation Measure 4.2-2.	LS
4.2-11 The proposed increase in pasture irrigation in combination with past practices on the project site could contribute to substantial alterations in the drainage pattern of the POU and increased erosion or siltation on- or off-site.	PS	4.2-11 Implement Mitigation Measure 4.2-4.	LS
4.3 Biological Resources (Cumulative Impacts)			
4.3-9 The proposed project could contribute to cumulative reductions in water depths to a level that would impair passage of adult steelhead between November 1 and May 31.	PS	4.3-9 Implement Mitigation Measures 4.3-1(a) and 4.3-1(b).	LS

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.3-10 The proposed project could contribute to cumulative reductions in water depths to a level that would impair passage of juvenile steelhead between June 1 and October 31.	PS	4.3-10 Implement Mitigation Measures 4.3-2(a) and 4.3-2(b).	LS
4.3-11 The proposed project would not increase mean daily water temperatures above 20°C or hourly water temperatures over 24°C.	LS	None required.	LS
4.3-12 The proposed project would contribute to the cumulative reduction of dissolved oxygen (DO) levels in the lower Big Sur River below 7.0 mg/L.	PS	4.3-12 Implement Mitigation Measures 4.3-4(a) and 4.3-4(b).	LS
4.3-13 The proposed project would not result in sedimentation, changes in water quality, or alteration in flow, such that the habitat used by sensitive reptiles or amphibians would become unusable for any life stage.	LS	None required.	LS
4.3-14 The proposed project would not contribute to the cumulative degradation of sensitive vegetation communities along the Big Sur River or on the El Sur Ranch site.	LS	None required.	LS
Climate Change (Cumulative Impacts)			
5-1 Implementation of the proposed project, in combination with past, ongoing, and future diversions could alter the groundwater-to-surface water gradient and reduce the water surface elevation within the lagoon.	LS	None required.	LS
5-2 Implementation of the proposed project, in combination with past and ongoing diversions, could alter the local groundwater gradient and cause or contribute to cumulative seawater intrusion and aquifer salinity changes associated with global climate change.	LS	None required.	LS

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TABLE 2-1

FINAL EIR SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p>5-3 Implementation of the proposed project, in combination with past and ongoing diversions and development in the watershed, would result in an alteration in the local groundwater-to-surface water gradients and surface water flow regime with concurrent effects on surface water quality. This could incrementally contribute to global climate change-related changes in surface water quality in the Big Sur River.</p>	LS	None required.	LS
<p>5-4 Implementation of the proposed project, with past and ongoing diversions and development in the watershed, would contribute to cumulative climate change-related impacts on upstream migrating adult steelhead and rearing juvenile steelhead because of expected increased frequency and duration of low flows in the Big Sur River and low-DO conditions.</p>	PS	5-4 Implement Mitigation Measures 4.3-1, 4.3-2, and 4.3-4.	LS
<p>5-5 Proposed project energy use associated with operation of the groundwater wells, in combination with past and ongoing energy use and air emissions in the watershed, would contribute to greenhouse gas emissions.</p>	LS	None required.	LS

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3.0 COMMENT LETTERS AND RESPONSES

3.0 COMMENT LETTERS AND WRITTEN RESPONSES

The following chapter presents all comment letters on the El Sur Ranch Water Right Application No. 30166 Draft EIR received during the public review period and one letter (Comment Letter 14) that was received after the close of the public review period. The letters contained herein include:

- Letter 1: National Marine Fisheries Service (Dick Butler)
- Letter 2: California Department of Fish and Game (Jeffrey R. Single Ph.D.)
- Letter 3: California Department of Fish and Game (Kit Custis)
- Letter 4: California Coastal Commission (Katie Morange)
- Letter 5: Kronick, Moskovitz, Tiedemann and Girard (Janet K. Goldsmith)
- Letter 6: Center for Biological Diversity et. al. (Adam Lazar and Tom Hopkins)
- Letter 7: Monterey Coastkeeper (Steve Shimek)
- Letter 8: Carmel River Steelhead Association (Brian LeNeve)
- Letter 9: Carmel River Steelhead Association (Hank Smith)
- Letter 10: Helping Our Peninsula's Environment (David Dilworth)
- Letter 11: California Native Plant Society (Mary Ann Mathews)
- Letter 12: L. Lockwood
- Letter 13: Robert William Lockwood
- Letter 14: Shute Mihaly & Weinberger (Amanda Garcia)

All substantive comments within each letter have been bracketed and numbered consecutively. Written responses corresponding to each numbered comment are presented after the letters beginning on page 3-1 of this chapter.

RESPONSES TO COMMENT LETTER 1: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION – NATIONAL MARINE FISHERIES SERVICE

Response to Comment (RTC) 1-1:

Comment 1-1 provides background information on the proposed project that was presented in the October 2009 Draft Environmental Impact Report on the El Sur Ranch Water Right Application (DEIR). Further, the comment notes that the focus of Comment Letter No. 1 will be, 1) the legal status of South-Central California Coast (S-CCC) Distinct Population Segment (DPS) steelhead (*Oncorhynchus mykiss*) and implications of unauthorized take, 2) the ecological context of the Big Sur steelhead population and the importance of lagoon habitats, 3) juvenile steelhead passage, and 4) the rationale used to establish baseline conditions in the DEIR.

This comment is noted and hereby forwarded to the project decision-makers for consideration.

Comment 1-1 also states:

The current water right application seeks to increase the amount of water diverted from the Big Sur River with a maximum direct diversion of 1,615 acre feet per annum (AFA) with a 20-year rolling average not to exceed 1,200 AFA.

While this is not specifically a comment on the DEIR requiring a response, the above statement presents a description of the project that is not entirely accurate and merits some clarification here in order to help readers better understand that nature and impact of the proposed project addressed in the DEIR.

The above reference to the “direct diversion from the Big Sur River” may be interpreted as the diversion of surface flow from the river channel. In fact, the proposed project would establish a water right to continue ongoing operation of groundwater wells that are used to support irrigated pasture on El Sur Ranch. These wells extract water from Big Sur River subterranean flow through the alluvial aquifer and do not divert water directly from the river channel surface expression (the surface water flows). Therefore, it is evident that the entire Big Sur River flow includes both the subterranean flow and the surface expression flow. Although a surface water diversion right is required, the points of diversion (PODs) are not directly within the surface expression portion of the river (what is termed the ‘river channel’ in the DEIR). Because the subterranean river flows are hydrologically connected to the river, diversions from subterranean flows do result in reductions in stream flow. Figures 4.2-1, 4.2-2a, and 4.2-2b in the DEIR show the subterranean stream channel as the Recent Alluvium (Qal) area bounded by the Franciscan Bedrock (Kjr) on the bottom and sides, and by the Older Alluvium (Qt) on the side. As such, the subterranean stream channel is over 800 feet wide and 40 feet deep in the lower reaches of the Big Sur River near the project site. The estimated natural flow rate within this aquifer averages 3.16 to 3.81 cfs (DEIR page 4.2-21, last sentence of the third full paragraph). Therefore the effect of diverting water from subterranean flows on surface water flow and surface water elevation in the Big Sur River channel would be substantially less than would be expected if diversions occurred directly from the river channel because effects are spread out over the entire subterranean flow and surface expression flow areas.

At the risk of oversimplifying the exceptionally complicated hydrological processes involved with the diversion of subterranean flows from the Big Sur River, we reiterate that diversions to serve El Sur Ranch irrigated pasture are made through two wells that draw water from subterranean flows beneath the Big Sur River channel. Only a fraction of subterranean flows appear as surface water flow in the Big Sur river channel that runs through the affected aquifer. Water for El Sur Ranch

irrigated pasture is not drawn “directly” from the Big Sur River channel. This process is explained in detail in Section 4.2 (Hydrology, Geohydrology, and Water Quality) of the DEIR and related technical appendices. Additional information on this process is provided in other responses to comments presented in this Final EIR, particularly in responses to Comment Letter 3, below. We note that while the description of the project presented in Comment 1-1 seems to imply that the diversion of 1,615 AFA would result in a direct reduction 1,615 AFA of Big Sur River channel surface flow, this is not the case for the reasons presented above and in Chapter 4.2 of the DEIR (DEIR pages 4.2-56, 4.2-58, 4.2-62, and 4.2-64).

RTC 1-2

Comment 1-2 provides background information on the federal Endangered Species Act of 1973 (ESA) and discusses the definition of “take” and the legal status of S-CCC. Comment 1-2 states in part:

“Even though the SWRCB may issue a diversion permit to the El Sur Ranch for this proposed action and has evaluated the impacts pursuant to the CEQA with proposed mitigation measures, NMFS believes this project may take listed S-CCC steelhead. Authorization for take of federally listed species cannot be achieved through CEQA mitigation measures.”

In response to Comment 1-2, we (“we” being the CEQA Lead Agency and the EIR preparer) concur with the comment’s contention that there is a distinction between project impacts that may be found to be significant or less than significant under the California Environmental Quality Act (CEQA), and actions that may or may not constitute a “take” under the ESA. We acknowledge that while an impact on S-CCC may be found to be mitigable to a level that is considered less than significant under CEQA, the National Marine Fisheries Service (NMFS) may assess the project effect on S-CCC steelhead differently relative to what constitutes a “take” and, as a result, determine that the project constitutes a taking of S-CCC steelhead and that the project may require authorization for that take from the NMFS. We agree with the commenter that such authorization cannot be achieved through CEQA mitigation measures, alone, as it is a separate process administered by federal agencies, not the CEQA lead agency, which, for this project is the State Water Resources Control Board (SWRCB). This, however, does not affect the DEIR’s determination of impact on S-CCC presented in Section 4.3 of the DEIR.

CEQA case law provides guidance in addressing the issue raised in Comment 1-2. In the case *Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, concerning an EIR prepared for a proposed dairy operation in Madera County, the US Fish and Wildlife Service (USFWS) submitted comments on the DEIR stating that the dairy would result in the take of 158 acres of kit fox habitat. Kit fox is a federally-listed threatened species. In their decision on this case, the Fifth District Court of Appeal directly addresses the issue whether CEQA review provides the proper forum for determining whether or not a “take” permit is required for a proposed project. Specifically, the decision states, “CEQA neither requires a lead agency to reach a legal conclusion regarding ‘take’ of an endangered species nor compels an agency to demand an applicant to obtain an incidental take permit from another agency.” (*Id.*, at p. 1397.) The decision also states the EIR’s finding that the dairy would not significantly impact biological resources did not limit the federal government’s jurisdiction under the ESA or limit its ability to enforce provisions of the statute. (*Ibid.*)

RTC 1-3

Comment 1-3 discusses the ecological context for S-CCC steelhead DPS and notes that, “One of best remaining streams for the S-CCC steelhead is the Big Sur River which is considered to maintain important refugia habitat important for the long term persistence of the species. “ Further, Comment 1-3 states, “Ensuring all components of this species habitat, including the lagoon, in the

Big Sur River are at a properly functioning condition is essential to the long term persistence of steelhead in the Big Sur biogeographic region. “

In response to Comment 1-3, we note the information contained in Comment 1-3 and hereby forward it to the project decision-makers. We acknowledge the statement that the Big Sur River is currently considered one of the best remaining streams for S-CCC steelhead. Lastly, we acknowledge the importance of maintaining the “properly functioning condition” of the river and lagoon for the long term persistence of S-CCC steelhead. This is consistent with the information and conclusions presented in the DEIR.

RTC 1-4

Comment 1-4 cites documentation addressing the role of central coast lagoons and estuaries in the growth and survival of steelhead. The comment notes that given the high importance of this habitat, the NMFS is “...concerned that the DEIR does not provide sufficient information regarding the effects of increased water extraction on the lagoons’ steelhead habitat.” Further, the comment states, that, “... by reducing freshwater inflow into the lagoon, there is a direct decrease in lagoon habitat quality and function, such as reduced thermal mass leading to increased water temperatures, greater diurnal sways in dissolved oxygen (DO), and greater interaction with the anoxic environment” resulting in adverse effects on steelhead rearing success. The comment disagrees with the DEIR’s rationale for concluding no significant impact based on the explanation regarding low DO as presented in the DEIR.

In response to Comment 1-4, two things must be made clear. First, the DEIR indicates that low levels of DO are present within the river (page 4.3-33). Second, pumping reduces the amount of mixing that occurs and water input to the areas of low DO. However, the areas with DO levels potentially lethal to steelhead are upstream of the lagoon, located near piezometer station P2R where it is suspected that low DO groundwater is infiltrating into the river. The lagoon represents a relatively large volume of water in the context of the local habitat available to steelhead. Water depths range from up to several feet and depths clearly fluctuate in response to tidal cycles and backwatering of the river at least up to passage transect 3; muted response in depths was apparent above passage transect 3 (Hanson 2008). Temperature data collected within the lagoon in 2004 indicated that temperatures were near 20°C on one survey event in 2004 (Hanson 2005). Similarly, spot DO data (i.e., not continuously collected) collected within the lagoon were never below 6 mg/L and only below 7 mg/L on one survey event in late fall 2004 (Hanson 2005). The existing data do not indicate that pumping caused DO levels in the lagoon to drop below the established threshold. Additionally, temperatures monitoring indicated water temperatures in the lagoon were generally acceptable for steelhead rearing and growth (in fact, they may be optimal for growth ranging between 15-18°C) regardless of pumping cycles. Snorkel surveys in 2004 and 2007 documented use of the lagoon by steelhead; in 2004 fish moved out of the river and into the lagoon to escape areas of low DO in the river (Hanson 2005). For these reasons and because the data do not indicate a substantial change in water surface elevation for deepwater habitat like the lagoon, project-related impacts to the lagoon were considered to be less than significant.

RTC 1-5

Comment 1-5 suggests further analysis be done of the interaction of lagoon habitat quality and freshwater inflow and discusses the adverse effects on reduced freshwater flow on water quality conditions pertaining to temperature stratification and DO levels. The comment notes that, “the combined effects of the proposed project, impeding passage of juveniles from July to October and decreased water quality in the form of DO, juvenile steelhead would be exposed to greater stresses from the proposed project than historic conditions.” Comment 1-5 concludes, “We do not believe there are any minimization measures that could be employed to offset the reduction in the productive

value of the lagoon to threatened S-CCC steelhead, other than maintaining greater inflow during summer months.”

In response to Comment 1-5, we note that while additional study is desirable, the analysis presented in the DEIR makes use of the best available information at the time DEIR was prepared, and we believe that information provides adequate technical support for the conclusions concerning potential impacts on water quality and, subsequently, lagoon habitat quality. This includes extensive analysis conducted specifically for this project by Hanson Environmental (2005)¹; Hanson Environmental (2008)²; and SGI (2008)³ as presented in the 2007 Addendum to Hydrologic Investigation and Conceptual Site Model Within the Lower Reach of the Big Sur River. In addition, it is our understanding that the California Department of Fish and Game is currently undertaking the preparation of an Instream Flow Study on the affected reach of the Big Sur River. As noted in the Department’s comment letter on the DEIR (see Comment Letter 2, Comment 2-27), “The Department’s Instream flow study is anticipated to be completed in 2011.” We anticipate this study could provide additional information concerning the interaction of freshwater inflow and lagoon habitat function. As addressed in responses to Comment Letter 2 (California Department of Fish and Game (CDFG)) under Response to Comment 2-26, the results of the CDFG study will be reviewed when complete and, based on the results of that study, the SWRCB will consider modifications to permit conditions for the proposed water right, should results of the study warrant such modifications.

In the context of the impact analysis presented in the DEIR, however, we consider it highly unlikely that such modifications will be warranted for the following reason. Based on extensive hydrological information presented in the DEIR, we conclude that the operation of El Sur Ranch irrigation pumps (Old Well and New Well) at maximum capacity, historically, has a very slight influence on subterranean flow rates in the area of influence of the wells and, subsequently, a very slight influence on surface water elevation and stream flow in the Big Sur River. As presented in the DEIR, surface water elevation in the river could be reduced by as much as 0.17 feet under worst-case conditions (see page 4.3-33 of the DEIR). From a CEQA standpoint, the impact of the project is not defined by the effect of historic pumping levels. As explained in the DEIR, conditions associated with historic pumping levels are part of the environmental baseline conditions. The direct and cumulative impacts of the project, under CEQA, are defined by the physical change in environmental baseline conditions that would occur as a result of the proposed project. As explained in detail in the DEIR, the rate of diversion would not increase under the proposed project as the capacity of the existing pumps would not change relative to current conditions. The requested water right however, would allow for the diversion of more water (343 AF for average annual diversions and 479 AF for maximum annual diversions) on an annual basis (under certain conditions) than has been diverted historically. This would result in a slight increase in the duration of pumping under certain conditions, as described in detail in the DEIR.

While the potential reduction in Big Sur River streamflow caused by the proposed project during the summer is quite small (i.e., 1.4 cfs), given the river and lagoon’s key role in the support of S-CCC steelhead, the DEIR concludes that even this small reduction is considered to be a potentially significant impact under CEQA during certain times of year and under low flow conditions. Based on

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- 1 Hanson Environmental, Inc. (Hanson), 2005. Assessment of habitat quality and availability within the lower Big Sur River: April through October. Prepared for the Project Applicant.
 - 2 Hanson (2008). Assessment of the potential effects of El Sur Ranch well operations on aquatic habitat within the Big Sur River and Swiss Canyon during late summer and early fall – 2007. Prepared for the Project Applicant.
 - 3 Source Group, Inc. (SGI 2008). 2007 Addendum to hydrogeologic investigation and conceptual site model within the lower reach of the Big Sur River. Prepared for El Sur Ranch.

this determination, mitigation measures are presented in the DEIR to reduce the impact to a level considered to be less than significant.

In light of the above information, it is highly unlikely that the results of additional studies addressing the relationship of lagoon habitat value and freshwater inflow would result in a substantive change to the conclusions presented in the DEIR, because the physical effect of the relatively slight increase in diversions is already mitigated by measures presented in the DEIR.

It is important to note, however, that the effect of historical pumping for El Sur Ranch on lagoon habitat quality and the survivability and passage of S-CCC steelhead is a separate issue. This distinction is referenced by the commenter in the last paragraph of Comment 1-2 above, and we concur with this distinction. While historical pumping may have resulted in a reduction in habitat value for steelhead trout, the evaluation presented in the DEIR focuses on the potential degradation of existing conditions, not degradation of pristine or pre-diversion conditions in the river and lagoon.

The appellate courts have upheld an agency's discretion to use existing conditions, including illegal operations, as the baseline conditions that existed at the time of NOP. In *Fat v. County of Sacramento (Fat)* (2002) 97 Cal.App. 4th 1270,⁴ California's Third District Court of Appeal considered a case involving operations at an unpermitted private airport. A negative declaration was adopted for a proposed Conditional Use Permit to operate and expand operations at the airport using existing unpermitted airport operations to define the CEQA environmental baseline. In that case, the court found it appropriate to use existing operations at the airport to define the environmental baseline as opposed to an earlier baseline which preceded those operations.

While the examination of the effect of irrigation diversions on pre-diversion conditions in the river may be inappropriate under CEQA, we acknowledge that the NMFS may find it appropriate to consider pre-diversion conditions in its determination of whether the project would constitute a "take" as defined under the federal ESA. As noted above in RTC 1-2, however, CEQA neither requires a lead agency to reach a legal conclusion regarding 'take' or an endangered species nor compels an agency to demand an applicant obtain an incidental take permit from another agency.

CEQA case law and the CEQA Guidelines also provide guidance relative to the need for additional studies to adequately assess potential project impact. In the case *Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, discussed in RTC 1-2 above, the Fifth District Court of Appeal found that the County was not required to conduct a protocol level study for a dairy project EIR merely because it was requested in a comment. The court stated that, "CEQA does not require every recommended test and perform all recommended research to evaluate the impacts of a proposed project. The fact that additional studies might be helpful does not mean that they are required. . . . The [CEQA lead] agency has discretion to reject a proposal for additional testing or experimentation." (Id., at p. 1396, citations omitted; Cal. Code Regs. tit. 14, § 15204, subd. (a).) As noted above, DEIR is based on the best available information at the time of preparing the DEIR, including substantial technical studies addressing proposed project impact on hydrology, geohydrology, water quality, and terrestrial and aquatic biological resources including fisheries.

RTC 1-6

Comment 1-6 concerns potential project effects on the passage of juvenile steelhead through the reach of river potentially affected by the diversion of subterranean flows for use on El Sur Ranch irrigated pasture. The comment suggests that further research be done, reiterates information and conclusions presented in the DEIR regarding project effects on steelhead passage conditions, and notes that "...the reduction in water quantity will have a direct correlation to water quality; which

⁴ http://ceres.ca.gov/ceqa/cases/2002/Fat_v_Sacramento.html

already exceeds criteria” and suggests that this reductions in water quality will compound the adverse effect of reduced passage. The comment concludes by stating, “NMFS does not believe the proposed mitigation measures in the DEIR are suitable to avoid ‘take’ or ‘harm’ to steelhead.”

In response to Comment 1-6, we first refer the reader to RTC 1-5 above, which addresses the distinction between what constitutes a significant impact under CEQA and what constitutes a “take” as defined under the federal ESA. Speaking specifically to the issue of the project’s effect on juvenile steelhead passage, we refer the reader to Section 4.3 of the DEIR, page 4.3-39. As noted in the DEIR, passage criteria for juvenile steelhead were not met at transects 4, 10, and 11 in 2007. Passage criteria at were violated at passage transects 4 and 10 when the pumps were operating and at transect 11 regardless of pumping. The analyses in the DEIR focused on passage transect 4 because this was the location with the greatest amount of documented drawdown associated with pumping. Using the drawdown data presented by SGI (2008) and accounting for the portion of the extraction attributable to the proposed project, reductions in depth of 0.05 feet (approximately 0.6 inches) were applied to the transect 4 data for August 31, 2007 and compared to the passage criteria. The analysis indicated that a drawdown of 0.05 feet resulted in violation of the passage criteria at this location. The conclusion of this analysis was that although passage for juvenile steelhead is impaired under existing baseline conditions, it was made worse by the extraction of water associated with the proposed project. Mitigation for reduced passage of juvenile steelhead would be to reduce pumping to baseline under certain hydrologic conditions (DEIR page 4.3-42). Discussions of the appropriateness of the baseline as used in this DEIR are presented in response to Comment 1-7.

The comment indicates that the removal of water would have direct impacts on water quality. The DEIR acknowledges this fact especially as it pertains to temperature and DO (page 4.3-42 and 43). The data indicate that while there is a statistically valid relationship between temperature and pumping, this relationship is within the error range of the data collection equipment and temperatures did not exceed the impact thresholds established for the DEIR (DEIR page 4.3-42 to 4.3-43). The impact from potential degradation in water quality associated with the proposed project is characterized as significant in relation to DO levels. As the comment indicates, DO levels were below the threshold when monitoring started in 2007. The extraction of water contributes to the reduction in flow and mixing in the zone of influence (ZOI) as discussed in the DEIR (page 4.3-44).

RTC 1-7

Comment 1-7 reiterates text in the DEIR related to the determination of the environmental baseline used in the DEIR to determine the extent of changes to the physical environment that would occur as a result of the proposed project. The comment states in part:

The SWRCB has interpreted the CEQA baseline for the DEIR as the environmental setting as [sic] June 2, 2006, against which impacts of the proposed action will be evaluated even though water was illegally diverted from the analysis area at this time. The SWRCB asserted that as part of identifying baseline conditions, they had to consider the Ranch’s historical water diversions (both legal and illegal), which are part of the existing environment. The SWRCB provides no further information regarding this assumption and leaves the reader to speculate as to their rationale for including a long history of unauthorized diversion in the baseline. “

The comment further notes that NMFS strongly disagrees with the SWRCB’s interpretation of the environmental baseline used. The comment concludes by stating, “NMFS reminds the SWRCB that the entire purpose of producing an EIR is to fully disclose – not obfuscate – potentially significant environmental effects of a proposed project in order to clearly evaluate the impacts of a proposed

project.” In essence, Comment 1-7 states that it is inappropriate to include the El Sur Ranch diversions in the environmental baseline conditions because the diversions are “illegal.”

In addition to the legal basis explained in response to Comment 1-5, we also refer the commenter to the response to CDFG Comment 2-19, which explains the legal basis for an agency’s discretion to use existing conditions as the baseline even in cases where the project already has been constructed and is operating illegally. The cases noted in that comment are also described in detail below. First, however, we will elaborate on the general concept of the environmental baseline as it is applied under CEQA.

The CEQA Guidelines state that the physical environmental conditions as they exist at the time the notice of preparation (NOP) is published normally will constitute the baseline. (Cal. Code Regs., tit. 14, § 15125, subd. (a).) As noted by the commenter, “an EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the Notice of Preparation was published (June 2, 2006).” With discrete, relatively static resources such as geological resources, the notion of environmental baseline is relatively straightforward, i.e., whatever geological and soils conditions existed on the site on June 2, 2006 constitutes the baseline. Establishing the environmental baseline for more dynamic resources such as hydrology, however, is more complicated. This is because streamflow in the Big Sur River varies on a seasonal, monthly, even hourly basis. Defining baseline hydrological conditions using a single point in time (i.e., the date when the NOP was circulated for example) is not useful in determining potential project impacts concerning hydrology. Therefore, the DEIR uses hydrological conditions that occur over a period of time to define the river’s hydrological baseline conditions in an attempt to accurately characterize typical hydrological conditions that occur in the Big Sur River at the time the NOP was circulated. An integral part of these conditions are diversions of streamflow that occur upstream of the project site. These conditions also include diversions that have occurred historically on El Sur Ranch, were occurring at the time the NOP was circulated, and that continue to occur at present.

As noted in RTC 1-5 above, the appellate courts have upheld an agency’s discretion to use existing conditions, including illegal operations, as the baseline conditions that existed at the time of NOP. In *Fat v. County of Sacramento (Fat)* (2002) 97 Cal.App. 4th 1270,⁵ California’s Third District Court of Appeal considered a case involving operations at an unpermitted private airport. A negative declaration was adopted for a proposed Conditional Use Permit to operate and expand operations at the airport using existing unpermitted airport operations to define the CEQA environmental baseline. In that case, the court found it appropriate to use existing operations at the airport to define the environmental baseline as opposed to an earlier baseline which preceded those operations.

In the *Fat* decision the court cited another case, *Riverwatch v. County of San Diego (Riverwatch)* (1999) 76 Cal.App.4th 1428, in support of its conclusion regarding the baseline. The *Riverwatch* case addressed the question of whether a prior illegal expansion of a rock quarry should be considered as part of the environmental baseline for a proposed permit application for the quarry. The court found that the EIR was correct in using existing conditions at the time of the NOP to define the environmental baseline conditions even though those conditions included the effects of prior illegal activities, namely the illegal expansion of the quarry pit onto an adjacent property that was not part of the approved project. The court noted that “in general, preparation of an EIR is not the appropriate forum for determining the nature and consequences of prior conduct of a project applicant.” (*Id.* at p. 1452.) The court cited Section 15125(a) of the State CEQA Guidelines in support of the general rule that “environmental impacts should be examined in light of the environment as it exists when a project is approved.” (*Id.* at p. 1453.) In the *Riverwatch* case, the court identified potential problems that could arise from mixing enforcement with environmental

⁵ http://ceres.ca.gov/ceqa/cases/2002/Fat_v_Sacramento.html

analysis under CEQA, upholding the County's decision to select a baseline that included the prior illegal activity.

For purposes of this EIR, the SWRCB determined that the applicant's historic diversions to nonriparian lands were diversions of subterranean flow requiring an appropriative water right. Nonetheless, for the reasons identified herein and in the DEIR, the SWRCB selected that the 2006 baseline authorized under the CEQA Guidelines and by case law. We note, however, the NMFS's strong disagreement with the use of this baseline. Regarding the commenter's contention that the environmental baseline was used to "obfuscate" potential environmental impacts, we strongly disagree. In fact, as discussed in the response to CDFG Comment 2-19, the selected baseline has allowed the SWRCB to evaluate a wider range of impacts, over a variety of hydrologic conditions, which is in keeping with CEQA's mandate of environmental protection and full disclosure of environmental impacts.

RTC 1-8

Comment 1-8 states that:

NMFS recommends that SWRCB to effectively evaluate the impacts of this project to rearing steelhead in the Big Sur River Lagoon (such as conducting a Public Trust Analysis). The analysis should evaluate impacts to steelhead rearing conditions and anticipated population response in the Big Sur Lagoon through two simple scenarios: project approval and project denial. Unless this type of evaluation is conducted, the full impacts of the proposed action cannot be determined.

In response to Comment 1-8, we first refer the reader to responses to Comments 1-5, 1-6 and 1-7 presented above. These responses address the DEIR's description and use of the environmental baseline to assess the proposed project impact as defined by CEQA. We understand Comment 1-8 to imply that the "full impact" of the project should be defined by the difference between the "project approval" and "project denial" scenarios. For reasons presented in the responses to comments noted above, this is not consistent with CEQA Guidelines or case law.

The comparison of the project approval and project denial scenarios however, does provide valuable information for consideration by project decision-makers relative to future anticipated effects of their ultimate decision to either approve or deny the project. This comparison is presented in the DEIR in Chapter 6 (Project Alternatives) beginning on page 6-2 under the heading "Alternative 1: No Project/No Permit Alternative." We refer the reader to Section 15126.6(e)(1) of the State CEQA Guidelines which states:

(1) The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125).

As noted, the Guidelines make a distinction between the "environmental baseline" and the "no project alternative" used in an EIR. For reasons presented in the responses to comments above, the no project alternative was not considered an appropriate baseline under CEQA for use in the El Sur Ranch Water Right EIR. Further, Section 15126.6(e)(1)(C) states:

After defining the no project alternative using one of these approaches, the lead agency should proceed to analyze the impacts of the no project alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

The No Project/No Permit Alternative description in Chapter 6 is consistent with the “project denial” scenario referred to in Comment 1-8. A comparative assessment of the impacts of the project denial scenario with the proposed project is presented in the DEIR beginning on page 6-2.

Comment 1-8 also suggests that the proposed project’s impact on steelhead trout rearing in the Big Sur River lagoon be conducted through the use of a “Public Trust Analysis.” Without more detail, it appears that Commenter means to suggest that the SWRCB evaluate the impacts of the full amount of proposed diversion on public trust resources in the Big Sur River watershed without regard to the CEQA baseline. For the reasons discussed above such an analysis is not required under CEQA. Independent of CEQA, however, the State Water Board has an affirmative duty to take the public trust into account in the planning and allocation of water resources. The purpose of the public trust is to protect navigation, fishing, recreation, environmental values, and fish and wildlife habitat. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 434-435.) Thus, before the State Water Board approves an appropriative water right diversion, it must consider the effect of such diversions on public trust resources and avoid or minimize any harm to those resources where feasible. (*Id.* at 426.) Again, however, this responsibility is independent of any responsibilities under CEQA.

RTC 1-9

Comment 1-9 states in part:

Based on information provided in the DEIR, NMFS concludes removing 1,615 AFA of water from the lower Big Sur River will likely result in adverse impacts to steelhead rearing conditions in the Big Sur River lagoon and juvenile passage in the lower river in most water years. These impacts will reduce steelhead abundance and impair the survival advantage afforded to steelhead juveniles that rear in the Big Sur lagoon. Periods of high water diversion would likely occur in dry water years with subsequent significant impacts to steelhead rearing habitat in the lagoon. The DEIR fails to adequately analyze these impacts due to its reliance of a faulty interpretation of baseline conditions.

In response, we first refer the reader to RTC 1-1 above, which addresses the diversion of 1,615. As noted in RTC 1-1. RTC 1-1 clarifies that the proposed diversion would not occur directly from the Big Sur River, but from subterranean flows that are hydrologically connected to the river. As noted in RTC 1-1, the maximum diversion of 1,615 AFA from subterranean flows would not result in an identical reduction in Big Sur River flows. In fact, the reduction in Big Sur River flow totals would be substantially less than 1,615. We also refer the reader to RTC 1-7, which addresses the validity of the environmental baseline used in the DEIR. In keeping with the requirements of CEQA, the environmental baseline conditions described in the DEIR include historical diversion practices at El Sur Ranch. Comment 1-9 refers to the “adverse impacts to steelhead” resulting from the removal of up to 1,615 AFA from the Big Sur River. As addressed in RTC 1-7, above, the impact of the proposed project is defined by the difference between environmental baseline conditions and conditions that can be expected after implementation of the proposed project. Please refer to RTC 1-7 in its entirety for a more complete discussion of this issue.

Comment 1-9 further states:

Based on the project description provided, and NMFS' administrative record, it is likely the SWRCB's issuance of a permit for the proposed action will adversely affect S-CCC steelhead, the El Sur Ranch will need ESA take exemption or risk being in violation of ESA section 4(d). The mechanism to obtain an exemption for an otherwise legal activity would be through either ESA section 7 or section 10(a)(1)(B) (development of a habitat conservation plan (HCP)).

This information is noted and hereby forwarded to the project decision-makers for their consideration. In addition, please refer to RTC 1-2.

RESPONSES TO COMMENT LETTER 2: STATE DEPARTMENT OF FISH AND GAME. DECEMBER 14, 2009

Response to Comment (RTC) 2-1

Comment 2-1 restates basic project information presented in the DEIR. The comment also notes that the comment letter provides comments on, “the project itself as well as the project description utilized in the DEIR; compliance with California Environmental Quality Act (CEQA), and use of an appropriate CEQA baseline; the State Water Resources Control Board’s (SWRCB) responsibilities to address public trust resources associated with the water sought to be appropriated, as distinct from responsibilities under CEQA; identification of information needed for the Board to make an informed decision on the application, which would protect public trust resources; and suggests alternatives and conditions which we recommend the SCWRB consider and adopt.

In response to Comment 2-1, the information provided is noted and hereby forwarded to the project decision-makers for their consideration.

RTC 2-2

Comment 2-2 provides information regarding the authority of the California Department of Fish and Game (CDFG) as a Trustee Agency under CEQA and CDFG’s authority in relation to project compliance with the California Endangered Species Act (CSEA). The comment also notes that CDFG has regulatory authority over projects that could result in a “take” of any species listed by the State as threatened or endangered under the state’s Fish and Game Code, section 2081 and that an Incidental Take Permit is required for any project that could result in a take. Further, Comment 2-2 notes that CEQA requires a mandatory finding of significance if a project is likely to substantially impact threatened or endangered species. If a project is found to have a significant impact on a listed species that cannot be minimized and fully mitigated, the Statement of Overriding Considerations that would be required under CEQA, would not obviate the project applicant’s obligation under Section 2081 of the Fish and Game Code.

In response, the information provide in Comment 2-2 is noted and hereby forwarded to the project decision-makers for their consideration.

RTC 2-3

Comment 2-3 presents information regarding CDFG’s authority regarding the incidental take of plant and animal species listed under CSEA and notes that plants listed as threatened or endangered under CSEA “cannot be addressed by methods described in the Native Plant Protection Act. The comment provides information on the handling of fully protected species and notes that fully protected species have the potential to occur on the project site. The comment recommends the project and SWRCB work with the CDFG to identify measures to be implemented to preclude “take” from occurring. The comment states:

The Department recommends that such measures be identified prior to certification of the EIR, required as Project conditions, and included in a Memorandum of Understanding between the applicant and the Department.

In response to Comment 2-3, the information provided regarding take of species listed in the CSEA is noted and hereby forwarded to the project decision-makers for their review. With one exception, none of the state-listed species of plants or animals have been documented on the site. The state endangered Brown pelican (*Pelicanus occidentalis*) has been observed flying over the ocean

adjacent to the site. The proposed project would not alter habitat used by this species which does not nest or roost in the project area. Regarding the statement that there is potential for fully protected species to occur on the project site, we refer the reader to Table 4.3-4 in the DEIR beginning on page 4.3-15 (List Of Sensitive Flora And Fauna Reported From The General Area By The CNDDDB, CNPS, and USFWS Including Habitat Information and Likelihood Of Occurrence Within The Actual Project Area). The only species identified in that table with the designation of "California Fully Protected Species" is the southern sea otter (*Enhydra lutris nereis*). This species was not observed during onsite surveys and the likelihood of this species occurring in the vicinity of the project site is listed as moderate. The habitat for this species, however, is offshore kelp beds, and this habitat type would not be adversely affected by proposed project activities associated with increased diversions or disturbance to pastures related to irrigation facilities improvements.

RTC 2-4

Comment 2-4 provides information on CDFG's authority with regard to stream alteration and diversion activities that could adversely affect any fish or wildlife resource. The comment notes that, "For any activity that will divert or obstruct the natural flow of a river or stream, the Department may require a Stream Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code." Further, the comment notes that the diversion of natural stream flow and activities associated with installing any new or repairing existing pipelines across Swiss Canyon requires Es Sur Ranch to submit a notification pursuant to Fish and Game Code 1602 for review by CDFG to determine whether a SAA is required.

In response to Comment 2-4 we note that the comment provides information that is hereby forwarded to the project decision-makers for their consideration. The comment is not specific to any content of the DEIR requiring further response. It is expected that the applicant would comply with appropriate state laws.

RTC 2-5

Comment 2-5 addresses the issue of water rights and CDFG's responsibilities as a trustee and responsible agency in the review of the El Sur water right application. Further, the comment notes:

CDFG protested El Sur Ranch's Water Right Application 30166. As noted, CDFG is concerned that the diversion will result in direct and cumulative adverse impacts to the resources of the river by reducing instream flow and water availability needed to maintain fish and wildlife habitat within an adjacent to the river.

CDFG withheld protest dismissal language pending preparation of an EIR. As noted in the comment, "Specific protest dismissal terms will be provided following review of an environmental document acceptable to the Department. "

In response, the information contained in Comment 2-5 is noted and hereby forwarded to the project decision-makers for their consideration. The comment does not address content of the DEIR that require further analysis.

RTC 2-6

Comment 2-6 refers to several correspondences submitted by CDFG to SWRCB regarding the EIR Notice of Preparation (NOP) dated June 30, 2004, a previous NOP, and a Technical Memorandum prepared by the project applicant's consultants dated August 24, 2007. The comment notes that these correspondences are incorporated by reference. The comment also notes, "It does not appear that many of the Department's comments, which were provided to guide development of this DEIR,

have been incorporated into the current CEQA document.” The comment further states that, “This letter may reiterate some of the major comments from the previous letters, but the letters are included in their entirety so that they are recognized as part of the record for this project, and so the State Board can answer the previously unaddressed comments.”

In response to Comment 2-6, the information presented in the comment is hereby noted. Each of the correspondences referenced in the above comment are included with this Final EIR as Appendix 3 for easy reference by the reader. In addition, we note that each of the correspondences referred to in the comment were reviewed by SWRCB staff and by staff of the EIR preparer in advance of initiating DEIR preparation. The correspondences were used to develop and refine technical studies, refine the environmental baseline used in the DEIR, and to guide the development of the environmental setting, impact analyses, and mitigation measures presented in the DEIR. Given the lack of specificity in this comment, we cannot speculate on what specific elements of the prior correspondences the commenter has concluded were not adequately addressed in the DEIR, and no such attempt is made in this Final EIR. As stated in the comment, the major areas of concern are specified in later comments by CDFG on the DEIR. Responses to these specific comments are provided below and in responses to Comment Letter 3 submitted by Mr. Kit Custis of CDFG.

RTC 2-7

Comment 2-7 expresses concern that extensive comments provided by CDFG on project-applicant technical reports were not adequately considered in preparing the DEIR, which, in part, used these reports to assess potential project impact.

In response to Comment 2-7, we note that in response to CDFG comments on previous technical studies prepared by specialists under contract to the project applicant, those studies were revised and supplemented. These reports were, in turn, incorporated by reference in the DEIR. Each of these reports was subjected to a thorough peer review by the DEIR preparer. In conducting this peer review, the DEIR preparer’s technical staff members responsible for that review read each of the CDFG comment letters addressing prior versions of the applicant-funded technical reports. In keeping with the requirements of CEQA, the DEIR preparer used the best available information and studies at the time of DEIR preparation. The comment asserts that the conclusions presented in the applicant-prepared technical reports contain unsupported conclusions and interpretive errors. Most of the impact analysis conducted as part of the DEIR relied on the base data provided by the applicant, not the conclusions presented in the technical reports. There are of course exceptions, but when at all possible, the underlying data was either used directly or the analysis was reviewed and verified before a conclusion was presented in the DEIR.

RTC 2-8

Comment 2-8 reiterates comments made in Comment 2-7 that CDFG submitted comments on technical studies prepared for the El Sur Water Right Application in 2005. These comments were contained in four memoranda which, the comment states should have been included with the water right application in keeping with Section 1260 of the State Water Code (j). The comment concludes by stating it is not clear why this information was not included in the DEIR.

In response to comment 2-8, we note that the four memoranda referenced in Comment 2-8 were submitted on earlier versions of technical studies prepared for the El Sur Ranch Water Right Application. Subsequent to those memoranda, and, in large part as a direct result of the recommendations presented in those memoranda, the applicant-funded technical studies were revised and supplemented. Those memoranda were reviewed by the DEIR preparer in advance of preparing technical sections of the DEIR. The incorporation of these memoranda into the water right application would be the responsibility of the applicant. Because these documents were reviewed in

preparation of the DEIR, whether they were included in the application or not does not influence the analysis or results contained in the DEIR. Also, please refer to RTC 2-7 above.

RTC 2-9

The first paragraph of Comment 2-9 reiterates information presented in the DEIR describing water application in irrigated pasture that would occur under the proposed project. The second paragraph cites an April 12, 1992 letter to the applicant from SWRCB referring to an area of 90 acres of pasture that could be accommodated by the ranch's existing riparian right. The comment further states that, "this document [DEIR] indicates that the SWRCB may have accepted the applicant's assertion that the area subject to riparian right is 25 acres." The comment suggests this is a large discrepancy and has implication for the nature and amount of the appropriative right that is being sought. The comment concludes that the SWRCB should definitively determine the actual acreage of the applicant's riparian right.

In response to Comment 2-9, the water right applicant claims a riparian right to be 25 acres: consistent with the description provided in the DEIR. In a memo dated April 12, 1992, SWRCB staff concluded that approximately 90 acres of El Sur Ranch property are riparian to the Big Sur River. That conclusion was based on observations of the terrain and from the USGS topographic map of the area. On October 17, 2006, El Sur Ranch amended Water Right Application 30166 to include a claim of riparian right to use a portion of the water diverted for irrigation of approximately 25 acres of riparian land. There was no discussion in the 2006 application amendment of how the applicant estimated the amount of riparian land. The State Water Board issues Permit Term 300A for all projects where the State Water Board has determined that riparian water has been used on the proposed place of use. Permit Term 300A states that the permittee shall not use more water under the basis of riparian right on the place of use authorized by the permit than the permittee would have used absent the appropriation authorized by the permit. Whether the riparian acreage is 90 acres or 25 acres, is not relevant to the proposed water right application because under either scenario it is clear the applicant would not be able to use the existing riparian right to divert more water than the amount requested in the application in keeping with Permit Term 300A. Further, the determination of riparian acreage would in no way affect the maximum allowable diversion in any given year under the requested appropriative water right application.

RTC 2-10

Comment 2-10, in part, notes that the DEIR does not identify how diverted flows from the Big Sur River are allocated into a "riparian" portion and an "appropriated" portion that is subject to the terms and conditions of the permit granted by SWRCB.

In response to this comment, we note that DEIR does not distinguish between a "riparian" and "appropriate" portion of the project site because such a distinction is irrelevant to the determination of project impact. As noted in the DEIR and addressed further in RTC 1-7 above, project impact is determined by comparing existing baseline conditions (i.e., conditions associated with historic diversion practices) and conditions anticipated to occur as a result of project implementation. There is no distinction between riparian and appropriative use related to diversion or application of Big Sur River underflow related to either the environmental baseline conditions or the proposed project. As presented in Chapter 2 of the DEIR, proposed permit conditions that would be implemented make no distinction between riparian and appropriative rights relative to diversion amounts. The conditions also do not distinguish between the application of irrigation water on riparian or appropriative portions of the place of use (POU).

Where the distinction between the project applicant's appropriative right request and the applicant's existing riparian right is relevant under CEQA is in the evaluation of the No Project Alternative

presented in Chapter 6 of the DEIR. As noted on page 6-2 of the DEIR, the No Project Alternative presents a scenario that assumes the El Sur Water Right Application 30166 is denied. With denial of the Application 30166, the project applicant is still entitled to riparian water rights to serve the portion of the project site that is considered to be within the Big Sur River watershed. This area has been determined to be the roughly 25 acres of pasture nearest the river. As explained in detail in Chapter 6, under the No Project Alternative, it is assumed for purposes of the impact evaluation that historic irrigation practices on the 25 acres of pasture subject to the applicant's riparian water right would continue. On the remaining acreage within the proposed POU, irrigation supplied by diversions from the Big Sur River would cease.

Comment 2-10 further states:

Additionally, there is no discussion regarding how diversions exercised under the applicant's riparian right would be addressed (either included or excluded within the terms and conditions of limits on the requested diversions under the appropriative right.

In response to this statement, we note that the proposed water right application diversion conditions do not distinguish between appropriative or riparian water rights. The diversion conditions apply to combined appropriative and riparian water. As noted above, both an appropriative right and a riparian right can cover the same parcel of land, however, the applicant would not be able to use more water than the amount requested in the application.

RTC 2-11

Comment 2-11 states:

In addition to the difficulties inherent in trying to distinguish those impacts which are attributable to the appropriated water (which is the proposed action that qualifies this as a CEQA "project"), there are difficulties with other aspects of the project and project description that have resulted in the analysis of impacts being incomplete, inaccurate and inappropriate. The Department recommends that the SWRCB more clearly identify the project which is the subject of the SWRCB's action, and analyze the proposed project, and any alternatives, in consideration of the applicable statutes, regulation, policy and case law."

In response to Comment 2-11, we cannot fully ascertain the source of the commenter's confusion about the proposed project description from the information presented in the comment, but based on this comment and the commenter's previous comments we surmise that much of this confusion stems from the commenter's contention that the environmental baseline and the "no project conditions" are identical. If this contention were valid from a CEQA standpoint, the issue of distinguishing the applicant's existing "riparian rights" from the proposed "appropriative rights" would, indeed, be a crucial element of determining potential project impact. This contention, however, is not accurate from a CEQA perspective, so additional description and analysis in the DEIR is not required in order to determine project impact.

As discussed in responses to Comments 1-5 through 1-9, and 2-10, above, environmental baseline conditions used in this EIR are defined by historical and ongoing diversions to serve irrigated pasture on El Sur Ranch. These diversions have occurred historically without any distinction being made between which portion of the diversions consisted of water diverted under the applicant's existing riparian right and which portion is water that requires an appropriative right. Similarly, the proposed water right application and, more importantly, proposed permit conditions under which the permit would be implemented, specify diversion practices and limitations, irrespective of which portions of

the diversions are appropriative and which are riparian. Therefore, for purposes of evaluating the potential impact of project diversions on hydrological and biological resources, the distinction between appropriative and riparian rights is not relevant.

In evaluating the comparative impacts of proposed project alternatives, however, the distinction between riparian and appropriative rights is a key factor. This is primarily true for the evaluation of the No Project Alternative, which begins on page 6-2 of the DEIR. This issue is discussed in RTC 2-10 above. As discussed in RTC 2-10, the No Project Alternative presents a scenario that assumes the El Sur Water Right Application 30166 is denied. With denial of the Application 30166, the project applicant is still entitled to riparian water rights to serve the portion of the project site that is considered to be within the Big Sur River watershed. This area has been determined to be the roughly 25 acres of pasture nearest the river. As explained in detail in Chapter 6, under the No Project Alternative, it is assumed for purposes of the impact evaluation that historic irrigation practices on the 25 acres of pasture subject to the applicant's riparian water right would continue. On the remaining acreage within the proposed POU, irrigation supplied by diversions from the Big Sur River would cease.

As discussed in RTC 1-8 above, Section 15126.6(e)(1) of the State CEQA Guidelines discusses the distinction between the no project alternative and the environmental baseline and states:

(1) The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125).

In addition, several examples of CEQA case law exist that help to define what does and what does not constitute a valid legally-defensible environmental baseline. These are discussed above. Please refer to RTC 1-7, above, and 2-19, below.

RTC 2-12

Comment 2-12 states:

Many of the shortcomings of the DEIR lie with the failure of the document to identify those aspects of the proposed project which are not consistent with Water Code and regulations and/or would not result in protection of public trust resources; and proceeding with the analysis of a project which could not be permitted.

In response to Comment 2-12, we note that the purpose of this EIR is to provide the SWRCB with information on the potential environmental impact of the project. This information is but a part of the overall body of documentation that will be used by the SWRCB to determine if the proposed water right application should be approved or denied in accordance with the Water Code and the SWRCB's regulations.

Relative to the responsibility of the EIR to address the lead agency's responsibility to protect public trust resources, and the extent to which the EIR is required to address this issue, we refer the reader to RTC 1-8.

RTC 2-13

Comment 2-13 addresses the DEIR's evaluation of project alternatives. Specifically, the comment states that CDFG does not believe the alternatives presented in the DEIR serve to reduce the potential proposed project impacts on "public trust resources" in accordance with California Code of Regulations, title 14, section 15126.6(b).

In response to the comment, we note that Section 15126.6(b) referenced above states:

b) Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

In keeping with section 15126.6(b), the SWRCB considered a reasonable range of feasible project alternatives that are capable of avoiding or substantially lessening any impacts found to be significant relative to environmental baseline conditions. We assume that, based on previous comments, Comment 2-13 is based on CDFG's contention that the environmental baseline used in the DEIR is inappropriate and, therefore, the determination of impact of the project and project alternatives is incorrect. In response to this, we refer the reader to RTC 1-8 which addresses the appropriateness of the environmental baseline used in this EIR to assess the impact of project alternatives relative to the proposed project.

Moreover, the EIR has been revised to include an alternative that incorporates CDFG's proposed terms and conditions for dismissing its protest of the Water Right Application No. 30166, which were submitted by CDFG in a letter to Ms. Victoria Whitney of the SWRCB Division of Water Rights dated July 23, 2010. Although these protest terms and conditions were not submitted as CEQA comments (and would have been submitted late if they were), the SWRCB has included an analysis of these terms and conditions in revisions to Chapter 6.0 of the DEIR. These revisions to DEIR are presented in Chapter 2 of this Final EIR beginning on page 2-15.

RTC 2-14

Comment 2-14 addresses the EIR's role and responsibility in addressing public trust resources. The comment contends it is the responsibility of the DEIR to address the potential project impact on public trust resources that could occur "below the 'baseline' established in the DEIR. The comment concludes by stating, "The Department recommends that the SWRCB clearly identify what impacts have resulted from historic pumping, including that which is not permitted, in order to identify specific limits that would protect public trust resources."

In response to Comment 2-14, we refer the reader to RTC 1-5 through 1-9, which address the determination of impact under CEQA in relation to the environmental baseline. The comment's reference to "impact on public trust resources **below** [emphasis added] the baseline" is not an impact as defined by CEQA. Effects on the public trust resources referred to in Comment 2-14 are, however, addressed in the DEIR under the analysis of cumulative impact presented in Chapter 5 (CEQA Consideration) beginning on page 5-1 under the subheading "Cumulative Effects."

Specifically, the DEIR states that Under CEQA, an EIR must analyze the "cumulative impacts" of a proposed project. A cumulative impact refers to individual effects that, when considered together, are considerable or compound other environmental impacts. The individual effects may be changes resulting from a single project or multiple separate projects. CEQA requires a finding that the project

may have a significant effect on the environment if the possible effects of a project are individually limited, but cumulatively considerable when viewed in connection with the effects of past, current, and probable future projects.

The proposed project involves the continued diversion of subterranean flow from the Big Sur River at increased rates of diversion. The project will not require new construction, and will involve only minor modifications to operations that currently exist as part of the environmental baseline. To address the potential cumulative impacts, Chapter 5 of the DEIR presents a listing of existing and pending water rights and diversions within the Big Sur River watershed in order to frame the cumulative context for this discussion. It is important to note that, because historic diversions from the subterranean flow for irrigation of El Sur Ranch are considered part of the environmental baseline for this DEIR, these diversions are necessarily considered part of the cumulative context in determining the potential cumulative impact of the water right Application No. 30166.

The cumulative impacts of the proposed project on biological resources, including but not limited to public trust resources, are addressed under impacts 4.3-9 through 4.3-14. Also, please refer to RTC 1-8, above.

RTC 2-15

Comment 2-15 notes information contained in the DEIR project description, and describes information required for inclusion in the water right application needed to comply with Section 1260 et seq of the California Water Code. In response to Comment 2-15, the comment is noted and the information contained in the comment is hereby forwarded to the project decision-makers for their consideration. No further response is required because the comment does not address significant environmental issues.

RTC 2-16

Comment 2-16, in part, describes information required for inclusion in the water right application needed to comply with Section 1260 et seq of the Water Code. This includes the requirement that “all data and information reasonably available to applicant or that can be obtained from the Department of Fish and Game concerning the extent, if any, to which fish and wildlife would be affected by the appropriation, and a statement of any measures proposed to be taken for the protection of fish and wildlife in connection with the appropriation.” The comment further states that, while the applicant-suggested limitations on diversion amounts and rates could be regarded as the applicant’s protection measures, the applicant “did not incorporate the Department’s recommendations regarding the need for instream flow requirements and details of studies which would quantify instream flow requirements for the protection of fish and wildlife in connection with the appropriation.”

In response to Comment 2-16, we refer the reader to RTC 1-5, above, which addresses the request for additional studies. In specific reference to the comment that all data and information reasonably available to the applicant or that can be obtained from the Department,” we note that an instream flow study for the Big Sur River was not available at the time of DEIR preparation.

RTC 2-17

Comment 2-17 states that, “...the SWRCB has not included in the DEIR the numerous comments from the Department regarding the reliability and value of the information which was provided by the applicant in support of the application.”

In response, we note that all comment letters from the CDFG were reviewed by SWRCB staff and the DEIR preparer prior to preparation of the DEIR and were taken into consideration in developing the scope and content of the DEIR impact analyses. It is also important to note that comments received from CDFG in 2005 and 2006 on the initial and subsequent Notices of Preparation, respectively, served in part as the basis for subsequent and substantial revisions to the hydrological and fisheries technical reports prepared by the project applicant's consultants.

The letters received from CDFG in response to the NOPs are contained in Appendix B (Comment on the Initial Study and Notice of Preparation) of the DEIR and included letters from:

Robert W. Floerke, Regional Manager, Central Coast Region: June 30, 2006 (with attachments)

Robert W. Floerke, Regional Manager, Central Coast Region: July 9, 2004

Kris Vyverberg and Robert Hughes, Fisheries Engineering Team: Sept. 7, 2005

Robert W. Floerke, Regional Manager, Central Coast Region: Sept. 16, 2005

Kit H. Custis, Department of Conservation, Letter to Linda Hanson Department of Fish and Game: June 28, 2006.

Technical reports that were, in part, revised or prepared in response to agency comments on the El Sur Ranch Water Right Application EIR Notice of Preparation, as referenced in the DEIR include:

Hanson Environmental, Inc. (Hanson), 2005. Assessment of habitat quality and availability within the lower Big Sur River: April through October. Prepared for El Sur Ranch.

- 2006a. Erosion Monitoring from Rainfall Runoff and Surface Irrigation Excess Overflow on Coastal Bluffs Bordering El Sur Ranch Pastures 7 and 8 in Late Summer and Early Fall, 2006. Prepared for Applicant El Sur Ranch, Monterey, CA.
- 2006b. Water Level and Habitat Monitoring from Rainfall Runoff and Surface Irrigation Excess Overflow Changes within Swiss Canyon, El Sur Ranch, in Late Summer and Early Fall.
- 2006, Table 3. Prepared for Applicant El Sur Ranch Monterey, CA 2006.
- 2007a. Evaluation of the potential relationship between El Sur Ranch well operations and aquatic habitat associated with the Big Sur River during late summer and early fall – 2006. Prepared for El Sur Ranch.
- 2007b. Water Level and Habitat Monitoring from Rainfall Runoff and Surface Irrigation Excess Overflow Changes within Swiss Canyon, El Sur Ranch, in Late Summer and Early Fall, 2006. Prepared for Applicant El Sur Ranch Monterey, California. 2007.
- 2008. Assessment of the potential effects of El Sur Ranch well operations on aquatic habitat within the Big Sur River and Swiss Canyon during late summer and early fall – 2007. Prepared for El Sur Ranch.

- The Source Group Inc. (SGI), 2005. Hydrogeologic investigation and conceptual site model within the lower reach of the Big Sur River. Prepared for El Sur Ranch.
- 2007. Addendum to hydrogeologic investigation and conceptual site model within the lower reach of the Big Sur River. Prepared for El Sur Ranch.
 - 2008. 2007 Addendum to hydrogeologic investigation and conceptual site model within the lower reach of the Big Sur River. Prepared for El Sur Ranch.

RTC 2-18

Comment 2-18 states:

The Department does not believe that the applicant's suggested limits would result in meaningful protection of fish and wildlife resources. These measures are typically terms and conditions which the SWRCB determines in consultation with the Department, and requires as enforceable conditions of the permit. The Department recommends that, should a permit be issued for this application, the SWRCB adopt limits on amount and rates of diversion, based on facts related to the size of the POU and reasonable use of the water for irrigated pasture; incorporate specific terms and conditions, including required bypass flows, which work protect public trust resources; and identify specific thresholds meaningful for public trust resources which can be reasonably monitored and enforced.

In response to Comment 2-18, we note the comment's recommendations for permit conditions that CDFG believes should be adopted in the event that the SWRCB grants Water Right Application 30166 and forward these recommendations the project decision-makers for their consideration. Further, we refer the reader to Comments 2-30 through 2-37. These comments (and responses to comments) address the preparation of an alternative to the proposed project containing elements described in Comment 2-18, above.

RTC 2-19

The Department comments that the baseline used in the DEIR should not include the unpermitted diversion and use of water by the applicant, but should instead be set at pre-project conditions. Other commenters raise similar arguments. In essence, these comments address the issue of a lead agency's discretion to consider prior illegal or unpermitted activities in setting the baseline under CEQA. In addition to case law cited in RTCs 1-5 and 1-7, and as explained below, the appellate courts have upheld an agency's discretion to use existing conditions as the baseline even in cases where the project already has been constructed and is operating illegally. Independent of CEQA, the State Water Board's water rights authority may be used to analyze the effects of illegal diversions or uses of water.

CEQA requires the State Water Board to identify the environmental setting, or baseline physical conditions, by which it can determine whether a project's impacts are significant. (Cal. Code Regs., tit. 14, § 15125, subd. (a).) Until 1998, former CEQA Guidelines section 15125, subdivision (a) required an EIR to include a description of the environment as it existed before the project commenced. (*Fat v. County of Sacramento (Fat)* (2002) 97 Cal.App.4th 1270, 1277.) As amended in 1998, CEQA Guidelines section 15125, subdivision (a) provides that the physical environmental conditions as they exist at the time the notice of preparation (NOP) is published "will *normally* constitute the baseline physical conditions by which a lead agency determines whether an impact is significant." (Cal. Code Regs., tit. 14, § 15125, subd. (a), italics added.)

Several appellate courts have squarely addressed the baseline issue for projects involving prior illegal or unpermitted activities. Contrary to one commenter's suggestion, these decisions have not expressly turned on the issue of whether there has been a permanent alteration of the environmental setting. For example, in *Riverwatch v. County of San Diego (Riverwatch)* (1999) 76 Cal.App.4th 1428, the lead agency prepared an EIR that used a current conditions baseline that did not account for prior illegal activity at the site. The project, which involved an application for a major use permit for a rock quarry, had also been the site of illegal sand mining. The trial court held that the EIR was inadequate because it did not consider the impact of prior illegal activity. The appellate court, citing the general rule in CEQA Guidelines section 15125, subdivision (a), reversed the trial court in this regard, stating that the general rule is that "environmental impacts should be examined in light of the environment as it exists when a project is approved." (*Riverwatch, supra*, 76 Cal.App.4th at p. 1453.) The appellate court stated, "in general preparation of an EIR is not the appropriate forum for determining the nature and consequences of prior conduct of a project applicant." (*Id.* at p. 1452; see also *Eureka Citizens for Responsible Government v. City of Eureka* (2007) 147 Cal.App.4th 357, 371 [noting that while prior alleged illegal activities may have been relevant to the lead agency's consideration of the approval requested, they were not a CEQA consideration].)

Subsequent to *Riverwatch*, another appellate court affirmed an agency's discretion either to use existing conditions as the baseline or to deviate from that baseline. (*Fat, supra*, at 97 Cal.App.4th 1270.) In *Fat*, the County of Sacramento prepared a negative declaration for a private owned public airport using the 1997 conditions when the airport owners and operators filed an application for a conditional use permit, even though the airport had operated since before 1970 and had a history of illegal expansion. The trial court ruled that the baseline should have been the 1970 conditions. The sole issue before the appellate court was whether the County abused its discretion in using the physical conditions that existed in 1997 as the baseline. The appellate court reversed the trial court, supporting the general rule that the baseline is derived from conditions that exist at the time the agency's environmental assessment commences. In reaching its conclusion, the appellate court noted, in part, that the County could reasonably view the application as an opportunity to bring the airport development under some level of County supervision for the first time. (*Id.*, at p. 1281.) Even though environmental damage had occurred during the period of unauthorized airport development, the appellate court found that substantial evidence supported the County's decision to use the 1997 baseline under the general rule set forth in CEQA Guidelines section 15125, subdivision (a).

Thus, an agency has the discretion to choose between different methodologies in determining a baseline condition as long as the decision is an informed one. (*Save Our Peninsula v. Monterey County Board of Supervisors* (2001) 87 Cal.App.4th 99, 120; *Fat, supra*, 97 Cal.App.4th 1270.) In keeping with the *Riverwatch* and *Fat* cases, and as provided in section 15125, the State Water Board exercised its discretion in establishing the baseline as the environmental setting at the time it issued the June 2006 NOP. As explained in detail in the discussion of "CEQA Requirements Pertaining to Baseline Conditions" in chapter 4.1 (beginning on page 4.1-4) of the DEIR, the SWRCB considered several options to account for the El Sur Ranch's historic diversions as part of the existing environment. It determined that selecting a single year of water use would misrepresent historic conditions because there have been, and will continue to be, significant variations in weather conditions and associated irrigation demands from year to year. Instead, averaging water use over a 20-year period provides a reasonable assessment of the Ranch's historic water use over a range of water year types under present conditions with both wells operating. The Ranch seeks a maximum direct diversion amount of 1,615 AFA. Consequently, the State Water Board evaluated the environmental effects of authorizing an increase in diversion from the average existing use over the period of 1985-2004 of 857 AFA, with a maximum historic use of 1,136 AFA and a maximum historic seasonal use of 701 AFA. This baseline provides an informed basis for the State Water Board to examine the full impacts of the proposed project on the environment and require any necessary mitigation measures.

The Department asserts that the baseline should be set at the point that the State Water Board determined the applicability of CEQA to the project. The Department cites the State Water Board's 1999 determination in Decision 1639 (In the Matter of Application 29664 of Garrapata Water Company), which involved the applicability of a CEQA exemption, in support of its position that the CEQA baseline should be set at pre-project conditions. No such exemption, however, is at issue here.

Moreover, it merits noting that the pre-project baseline advocated by the Department would result in a less comprehensive analysis than the one the State Water Board undertook in the DEIR. The Department states that the State Water Board should establish the baseline as the point that the State Water Board determined the applicability of CEQA to the project. In 1992 the State Water Board determined that the Ranch was diverting water from a subterranean stream subject to the board's water right authority and the Ranch filed its water right application; thus, 1992 arguably establishes the baseline that Department advocates. According to Table 2-1 (page 2-15) of the DEIR, which identifies the Ranch's historical diversions, in 1992 the Ranch diverted 1,099 afa. Using this amount as the baseline would narrow or minimize the effects that the State Water Board is analyzing under CEQA and fails to recognize that high use years may potentially have greater environmental impacts. By establishing a lower baseline threshold, the State Water Board has examined a wider range of impacts, which is in keeping with CEQA's mandate of environmental protection and full disclosure of environmental impacts.

RTC 2-20

Comment 2-20 describes the No Project Alternative as presented in the DEIR and states that it is "not clear to the Department why the SWRCB has not exercised its enforcement capabilities to require that the El Sur Ranch not divert water to which it does not currently have a valid water right, but has instead deferred action until such time as the application is denied."

In response to Comment 2-20, we note the comment's description of the No Project Alternative but, for clarification purposes, we reiterate that the acreage of land that would be served by the applicant's existing riparian water right under the No Project Alternative is 25 acres, and not 90 acres as cited in the comment. This is consistent with the applicant's current application. Please refer to page 2-17 of the DEIR and the discussion provided under the subheading "Riparian Right."

In response to the commenter's concern about SWRCB's allowing ongoing diversions until such time as the application is approved or denied, the concern is noted and has been forwarded to the Board for their consideration. The SWRCB has broad discretion over whether to take enforcement action against unauthorized diversions. The SWRCB exercises that discretion when it prioritizes enforcement actions and it may exercise its discretion to waive or defer enforcement action while a diverter is working to get a water right permit.

RTC 2-21

Comment 2-21 suggests the DEIR should use an environmental baseline the accounts for diversions that are limited to the existing riparian water right held by the project applicant. The comment suggests that to use another baseline, "which includes the unpermitted historic use does not allow the SWRCB to accurately evaluate the effects of the proposed project, and undermines the policies and intent of both CEQA and Water Code."

In response to Comment 2-21, please refer to RTC 1-7.

RTC 2-22

Comment 2-22 references detailed comments prepared by Mr. Kit Custis and provided as an attachment to this comment letter. The second part of this comment relates to the treatment of steelhead in the DEIR. The comment indicates that CDFG believes the low flow months should be extended to include June and November and states that “the measures proposed by the applicant are not sufficient to support instream flows sufficient to protect steelhead...” and other resources. The letter indicates that CDFG disagrees with the standards of significance relating to depth required for passage, temperature, and DO levels. Additionally, the comment indicates that there is insufficient information presented to determine if flows from December through May are “protective” of steelhead.

In response to Comment 2-22, we note that the detailed comments to which Comment 2-22 refers are included herein as Comment Letter 3: Kit Custis, Department of Fish and Game. All substantive comments contained in that letter are bracketed and written responses to each comment in Letter 3 are provided.

In response to the second part of comment 2-22, we first note that the standards of significance are based on scientific literature sources as discussed in the DEIR (page 4.3-35). The passage criteria used for evaluation of potential project-generated impacts are those set forth by Bjorn and Reiser (1991). This is a relatively standard set of values often used to evaluate passage conditions in relation to streamflow. The temperature values are taken from Moyle (2002) as temperatures stressful and lethal to steelhead. The DO threshold is from the Basin Plan for the Central Coast (CCRWQCB 1994). The comment does not provide any reason for the disagreement nor does it suggest alternate thresholds.

Review of historic flow data from the USGS gage indicates that flows in June and November can be very low under certain conditions. It would appear reasonable to extend the summer low-flow evaluation and discussion into these months. The DEIR has been revised accordingly, but the impacts to juvenile steelhead habitat do not change because of this revision. The comment requests information on flows from December through May so that it can be determined if the flows in these months are “protective” of steelhead. As can be seen in DEIR Table 4.2-4 (page 4.2-26), average flows at the USGS gage range from 66 to 267 cfs between December and May. Because of accretion, flows within the project area are slightly higher than at the USGS gage. Given the relatively small amount of water removed by the proposed project during the winter time when irrigation requirements are minimal (Table 4.2-2, DEIR page 4.2-24), these flows are not substantially affected by the proposed project and therefore not analyzed. The mitigation measures proposed in the DEIR were not proposed by the applicant. Most of these focus on bringing pumping back to baseline levels during extremely dry low-flow conditions. Because the proposed project is the incremental increase in pumping, requiring the return to baseline reduces the impact to pre-project levels and removes the impact of the proposed project on the species.

RTC 2-23

Comment 2-23 questions the validity of the analysis of potential project impacts on steelhead that relies on average flows and average diversion rates instead of instantaneous flow, instantaneous amount of diversion and/or instantaneous rate of diversion.

In response to Comment 2-23, we note that while the DEIR relies on average river flow rates because this represents the best data available. Relative to proposed diversion amounts and diversion rates, the rates of diversion are dictated by pump capacity and therefore are, in fact, instantaneous. However, instantaneous flow data for the Big Sur River are not available because the USGS only releases approved mean daily values to the public. We recognize that fish in the river

are reacting to the conditions present at any given point in time. However, under low-flow conditions typically found in late summer and early fall, there is minimal daily variation in the overall flow rate. The analysis focuses on this time of year because it is also the most stressful for juvenile steelhead. The conclusions reached using mean daily flows and average pumping values would not be expected to change.

Use of averages for the mitigation measures rather than instantaneous flow values is appropriate because it reflects information that would be readily available to the applicant through the USGS (i.e., mean daily values). This would allow not only the applicant to feasibly implement the mitigation measure (an important CEQA requirement), but it would allow the oversight agencies to easily assess compliance with the mitigation measure. Most of the flow-based mitigation measures in the DEIR are presented as interim measures designed to specifically reduce the magnitude of an impact until a detailed flow monitoring and operations plan can be developed and implemented. The flow monitoring plan is to incorporate real-time monitoring and compliance measures.

RTC 2-24

Comment 2-24 cites the case of *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, to support Comment 2-23's contention that the DEIR's use of average monthly river flows is inadequate to define environmental baseline conditions.

In response to Comment 2-24, we note that exceedance flows presented in the DEIR were based on the USGS-approved mean daily discharge (page 4.2-4 and 4.3-42). Mean-daily data is the only approved publically available dataset upon which an analysis can be based. Creation of exceedance thresholds is a statistically valid procedure that uses this daily data to determine the reoccurrence frequency for a specific value. These numbers are not monthly averages as presented in the comment, and the DEIR on page 4.3-42 states this. The impacts analysis in Section 4.3 uses the exceedance values of spot data collected during specific site measurements in the impact analysis. The DEIR explains the natural hydrology of the Big Sur River and, while monthly averages are presented in the DEIR (Table 4.2-4; page 4.2-26), they are used in the concept of a total water budget for comparison with average measurements at Andrew Molera State Park. Available data was insufficient to determine exceedance values.

Please see the RTCs 1-7 and 2-19 for a detailed discussion regarding the adequacy of the baseline used for the DEIR.

RCT 2-25

Comment 2-25 indicates that the CDFG recommended that an IFIM study be prepared for the project area in 2002 and that the applicant did not conduct such a study. The comment further states that the applicant-supplied information that was used in the impact analysis does not include data on all required parameters to conduct an evaluation of passage according to the Thompson method.

In response to comment 2-25, we first refer the reader to response to comment 2-27 for a discussion of the IFIM study that CDFG is conducting. In relation to the lack of data required to conduct an analysis to passage according to the Thompson criteria it is unclear what CDFG believes to be missing. There were transects taken at limiting riffles within the ZOI. Depths and flows were calculated for these locations under a variety of hydrologic and pumping regimes. The passage criteria were taken from an accepted source (Bjorn and Reiser 1991). Because of a variety of factors affecting depths during the data collection, the passage analysis prepared by the applicant was not used in favor of using just the channel profiles themselves were used in conjunction with the drawdown produced by pumping as reported by SGI (2008). Detailed review of Bjorn and Reiser (1991) does not reveal any missing parameters as suggested in the comment.

RTC 2-26

Comment 2-26 begins by stating, “The Department’s review has concluded this work is not adequate to address instream flow needs. As a result, the Department is taking the lead for field investigations related to the lower Big Sur River, and work is currently underway.” The comment goes on to explain that CDFG is implementing an instream flow study to evaluate the relationships between flow and habitat pertaining to critical life stages of steelhead including spawning, rearing and migration. The comment concludes by stating the study is “consistent with, and undertaken to be in compliance with, requirements of Public Resources Code (PRC) sections 10000-10006. Provisions of PRC section 10002 require that the SWRCB consider streamflow requirements when acting on a water right application, per Water Code section 1257.5, once they have been submitted by the Department.”

In response to Comment 2-25, we note CDFG’s opinion that the DEIR’s impact analysis does not adequately address instream flow needs. While the comment is not specific in terms of what criteria CDFG is using for its determination of inadequacy, from this and other comments, we assume the comment refers to the DEIR’s lack of a comprehensive evaluation of the relationship of Big Sur River streamflow conditions and to habitat value relative to various key steelhead life stages including spawning, rearing, and migration. While such a study could be valuable and aid the understanding of relationship between streamflow and steelhead habitat in the Big Sur River, if it is the contention that such a study is required to ensure the proposed project’s compliance with CEQA, we disagree.

We refer the reader to RTC 1-5, which addresses the issue of need for additional studies under CEQA. We also note the preparation of a substantial body of technical documentation for purposes of assessing existing hydrological conditions in the Big Sur River and lagoon, fishery resources and the potential effect of project diversions on hydrologic and aquatic resources. This, in combination with substantial input provided by CDFG, information developed by the DEIR preparer, and information culled from other resources cited in the DEIR, comprise the best information available at the time of DEIR preparation, in keeping with the requirements of CEQA.

We note the comment’s citation of PRC sections 10000-10006. Sections 10000-10005 address CDFG responsibilities in regard to establishing streamflow standards. As noted in the DEIR (page 4.2-38), such standards do not currently exist for the Big Sur River. As noted in Comment 2-25, the SWRCB must consider such standards when acting on a water right application. In the absence of such standards, however, it is not clear how this comment is relevant to the adequacy of the DEIR, or even SWRCB consideration of the proposed water right application.

The Thompson criteria (as cited in Bjornn and Reiser 1991) relate simply to minimum depths, percent of a riffle deeper than that minimum, and percent of contiguous depth at specific transects that are adequate to allow upstream passage of fish. The depths used in the DEIR are the standard for adult and juvenile salmonids. The analysis in the DEIR used the transect data collected in 2007 and applied the calculated change in depth attributable to the proposed project.

RTC 2-27

Comment 2-27 states, “The Department’s instream flow study is anticipated to be completed in 2011. The Department recommends interim instream flows be implemented until the study is complete, and more specific flows can be recommended.”

In response to Comment 2-27, we acknowledge the projected schedule for completing the IFIM. It is unclear, however, which entity CDFG would have implement interim instream flows. As noted in Comment 2-26 above, Section 10002 of the PRC requires that, “the SWRCB consider streamflow requirements when acting on a water right application, per Water Code section 1257.5, once they

have been submitted by the Department.” The mitigation measures in the DEIR recommend reduction in pumping to baseline levels under specific conditions to minimize adverse impacts to steelhead. Because CDFG has not submitted streamflow requirement recommendations, it is unclear on what basis SWRCB should consider instream flow requirements.

RTC 2-28

Comment 2-28 presents the opinion that three mitigation measures contained in the DEIR represent “deferred mitigation” because they call for the future development of plans to address potential project impacts. These include Mitigation Measures 4.2-2, 4.3-1 and 4.3-2. Further, the comment suggests that MM 4.2-2 does not contain sufficient detail to allow full understanding precisely how the measure would be implemented or its effectiveness at protecting public trust resources. The comment states, “The Department believes these limits [proposed limits on pumping rates] are unnecessarily complicated and insufficient to protect public trust resources.”

In response to Comment 2-28, we disagree with the comment’s contention that Mitigation Measures 4.2-2, 4.3-1 and 4.3-2 represent a deferral of mitigation for the following reasons. In the case of *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, the court specifically addressed the issue of deferred mitigation in the area of biological resources and provided guidance as to what does and does not constitute an inappropriate deferral. The court invalidated the EIR because it used the future development of resource management plans as mitigation: plans that would be subject to resource agency approval. While pointing out that the EIR’s reliance on yet undeveloped plans to manage affected resources represented an inappropriate deferral of mitigation, the court also stated that use of such plans would be appropriate if the EIR set forth the rationale for why the plans were not developed as part of the EIR and provided performance standards to ensure that implementation of the any plans would be held to standards that would avoid potential impact. (*Id.*, at p. 684.) The CEQA Guidelines provide that while the formulation of mitigation measures should not be deferred, mitigation measures “may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.” (Cal. Code Regs., tit. 14, § 15126.4 (a)(1)(B).) As explained below, the DEIR does not improperly defer formulation of mitigation measures. Rather, in keeping with section 15126.4 of the CEQA Guidelines and case law, the mitigation measures have been formulated to include performance standards that will avoid or mitigate the project’s significant effects. While the mitigation measures require future preparation of a management plan that will inform compliance with the performance standards, the performance standards to which the project applicant will be held are contained in the DEIR and, therefore, mitigation of the potential impact will not be deferred.

Specifically, Mitigation Measure 4.2-2 contains performance criteria to be employed during future irrigation diversions necessary to avoid potentially significant impact on Big Sur River stream flow. The measure also requires preparation of a proposed management plan, which would consist of Irrigation Water Management Plan (IWMP) that will specify protocols and operator training to ensure that the performance standards are met. The specific criteria to guide future diversions are clearly stated in measure. The future plan referred to in the measure would simply specify the mechanics of implementing the measure such as the type of instruments used, worker training, instrument location(s), frequency of data collection, irrigation application decision protocols (e.g., when, where, how much to apply), and other factors. The advantage of developing this plan after approval of the water right application is that the plan can take into account all conditions of approval and requirements of the approved right.

As with Mitigation Measure 4.2-2, Mitigation 4.3-1 presents specific, discrete performance criteria to avoid potentially significant impacts. The only element of the measure that requires future development is the preparation of a detailed flow monitoring and operations plan. That plan will

provide a structured feedback process whereby streamflows during the adult migration period (between November 1 and May 31) are monitored, passage restrictions evaluated, and changes in project pumping are made to reduce the effect of project irrigation on adult steelhead movement. The plan will include real-time monitoring protocols (including protocols established pursuant to Mitigation Measure 4.2-2), the flow thresholds established in the EIR, pump change requirements, recordkeeping, reporting, and an adaptive management feedback system. As discussed above regarding Mitigation Measure 4.2-2, the advantage of developing such a plan after approval of the water right application is that the plan can take into account all conditions of approval and requirements of the approved right. Again, however, the specific performance criteria are contained within Mitigation 4.3-1 itself.

As with Mitigation Measures 4.2-2 and 4.3-1 described above, Mitigation Measure 4.3-2(a) presents specific performance criteria designed to avoid significant project impacts. The measure requires that, “in critical dry conditions, when the mean daily flow at the USGS gage is below the 20th percentile value between July 1 and October 31, project pumping shall be reduced to Baseline (Allowable) Diversion Rates.” These rates are specified in Table “A” on page 4.3-38 of the DEIR. As noted in the DEIR, this measure shall remain in effect until replaced by the flow monitoring plan presented in Mitigation Measure 4.3-2(b). Measure 4.3-2(a) does not limit diversions required to make measurements specified in Mitigation Measure 4.3-2(b) if notification of testing is provided to the SWRCB prior to the test period.

As required under Mitigation Measure 4.3-2(b), the project applicant is required to prepare a detailed flow monitoring and operations plan in consultation with NMFS and CDFG, for review and approval by the SWRCB, that provides a structured feedback process whereby stream flow during the months of June and October are monitored, passage restrictions evaluated, and changes in project pumping are made to reduce the effect of project irrigation on juvenile steelhead movement. Elements to include within this plan are: real-time monitoring protocols (including protocols established pursuant to Mitigation Measure 4.2-2), the flow thresholds established in the FEIR, pump change requirements, recordkeeping, reporting, and an adaptive management feedback system. Following approval by the SWRCB, this plan shall be incorporated into the IWMP and put into effect. Again, the key element of this plan is the flow thresholds designed to avoid significant impact, and these thresholds are specified in the mitigation measures in the EIR and are not deferred to the future plan. Development of this plan after project approval will allow the plan to take into account all conditions of approval and other permit conditions associated with the approved water right. It also allows for direct involvement of CDFG in the development and refinement of any adaptive management elements that may be contained in that plan. Such measures would be subject to SWRCB approval, as specified in Measure 4.3-2.

RTC 2-29

Comment 2-29 notes that, “CEQA Guidelines (Section 15126.4(a)(1)(B)) stipulate it is not appropriate to defer feasible mitigation measures to a future date.” Further, Comment 2-29 questions how the SWRCB “can make findings that all potential impacts to biological resources would be mitigated to a level of less-than-significant when the actual mitigation measures have yet to be developed and/or determined feasible and capable of successful implementation. The DEIR does not demonstrate that the Project’s potential impacts to sensitive plants and animals can be mitigated to less than significant levels, given the absence of measures which would need to be subsequently deemed feasible.”

In response to Comment 2-29, we refer the reader to RTC 2-28 which addresses the issue of deferral of mitigation. For reasons presented in that response, the mitigation measures presented in the DEIR are consistent with CEQA Guidelines and do not represent an inappropriate deferral of mitigation. Mitigation Measures 4.2-2, 4.3-1 and 4.3-2, which address potential project impacts on

biological resources, contain performance standards to ensure that the proposed mitigation is effective, and they provide feasible means to achieve those standards. As appropriate under CEQA, the measures also provide means to refine and modify those measures in the future to make them more effective and efficient as more information becomes available. Even without these future refinements and modifications, however, the DEIR still contains feasible and effective measures to adequately reduce potentially significant impacts on biological resources to insignificant levels in accordance with CEQA.

Section 15126.4(a)(1)(B) of the State CEQA Guidelines cited above states in its entirety:

Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. ***However,*** [emphasis added] measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specific way.

As explained in RTC 2-28, all mitigation measures presented in the DEIR were formulated to mitigate potentially significant impacts in accordance with specific performance criteria contained in those measures. In keeping with Section 15126.4, above, the DEIR also presents alternative measures to mitigate or avoid significant impacts. Mitigation Measure 4.3-4(b), for example, allows for the development of an instream aeration system as mitigation, if such a system is found to be feasible. In the event that such a system is found to be infeasible, however, implementation of Mitigation Measure 4.3-4(a) would be an adequate and effective means to achieve the identified performance standards and, thus, to avoid or mitigate any potentially significant impacts.

Without analysis to support its position, Comment 2-29 cites three CEQA cases, presumably to support the commenter's argument that the DEIR inappropriately defers mitigation. Again, we disagree that the DEIR inappropriately defers mitigation. Potential project impacts are clearly defined in the DEIR based on best available information, and the proposed mitigation measures provide specific performance criteria to effectively mitigate or avoid potentially significant impacts and feasible means to achieve those criteria. None of the mitigation measures in the DEIR rely on preparation of a future study to identify impacts or mitigate those impacts. As explained above in this response and RTC 2-28, the mitigation measures include performance standards to mitigate or avoid any significant effects, feasible means to achieve those standards, and possible alternative approaches to mitigation, which, if found to be effective and feasible, could be used as alternative mitigation.

RTC 2-30

Comment 2-30 suggests the DEIR acknowledge the proposed water right would allow diversion of groundwater from a subterranean stream flowing through a known and definite channel.

In response to Comment 2-30, we refer the reader to page 1-1 of the DEIR which states, "The SWRCB has determined that water pumped from these wells is groundwater flowing in a subterranean stream, rather than from percolating groundwater. As a result, the appropriation of this water comes under the jurisdiction of the SWRCB's Division of Water Rights (Division)." As noted in the DEIR, the SWRCB initially found that water diverted to serve El Sur Ranch came from the "underflow" of the Big Sur River. At the time of the SWRCB's determination, the term "underflow" was commonly used in referring to a subterranean stream subject to the SWRCB's permitting authority. Although El Sur Ranch is diverting from the subterranean stream portion of the Big Sur River, subsequent discussions in the DEIR refer simply to diversion from the Big Sur River.

RTC 2-31

Comment 2-31 states that if the environmental baseline used in the DEIR did not include unpermitted diversions for El Sur Ranch, CDFG believes that all of the proposed alternatives, with the possible exception of the No Project/No Permit Alternative, would result in significant and potentially unmitigable impacts to the Big Sur River including associated species and habitats, and potentially to the POU.

In response to Comment 2-31, we refer the reader to previous RTCs, which address the appropriateness of using the environmental baseline described in the DEIR, particularly RTCs 1-7, 1-8, 1-9, 2-10, 2-19. We acknowledge CDFG's opinion that use of an alternative baseline may result in different findings than those presented in the DEIR concerning impacts on the Big Sur River and associated species and habitats and the POU, but for reasons presented in prior RTCs, use of an alternative baseline is inconsistent with the CEQA Guidelines and CEQA case law.

RTC 2-32

Comment 2-32 states, "Irrespective of the standards utilized to evaluate the potential effects of the project pursuant to CEQA, the Department does not believe that any of the proposed alternatives, possibly including the No Project/No Permit Alternative, will adequately protect public trust resources."

In response to Comment 2-32, we refer the reader to RTCs 1-7, 1-8, 1-9, 2-10, 2-11, and 2-19 which address the consistency of the DEIR's environmental baseline with the State CEQA Guidelines and CEQA case law. We also refer the reader to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of adequate protection of public trust resources.

RTC 2-33

Comment 2-33 states a project alternative can be identified which, in the opinion of CDFG, would allow for the reasonable and beneficial use of water on irrigated pasture, if specific terms and conditions were applied to protect public trust resources, meaningful monitoring was required; and the project objectives were met, as identified in the DEIR. The comment reiterates objectives of the proposed project that were presented on page 2-19 of the DEIR. The comment is noted and hereby forwarded to the project decision-makers for their consideration.

As presented in RTC 2-13 above, the EIR has been revised to include an alternative that incorporates proposed terms and conditions for dismissing its protest of the Water Right Application No. 30166, which were submitted by CDFG in a letter to Ms. Victoria Whitney of the SWRCB Division of Water Rights dated July 23, 2010. The SWRCB has included an analysis of these terms and conditions in revisions to Chapter 6.0 of the DEIR. These revisions to DEIR are presented Chapter 2 of this Final EIR beginning on page 2-15.

RTC 2-34

Comment 2-34 states:

The water right, in particular the allowable annual diversion and the rate of diversion, as well as terms and conditions which would limit the amount and rate of diversion, should be predicated on several assumptions, primarily (1) the verification of the acreage which is currently irrigated pasture, not including those areas which are not suitable, including but not limited to: dunes, Tailwater pond, outfall, access roads, irrigation canals and Swiss Canyon; (2) verification of what portion of the irrigated

pasture is within the Big Sur River watershed, and therefore riparian and not a part of an appropriation; (3) verification that the water duty identified in regulations regarding the amount of water considered reasonably necessary is 1 cfs per 80 acres (California Code of Regulations (CCR), Title 23, Section 697(a)(1)); and (4) identification of what would constitute reasonable, useful and beneficial purposes of the diverted water when applied to the uncultivated pasture of the POU, up to a maximum of 2 ½ AFA per year. While that figure (2 ½ AFA) is less than that which has historically been diverted without permits, comparable sites in coastal Monterey County, including strawberries, vegetables and field flowers, use 2-3 AFA.

Comment 2-34 addresses possible components of the water right and does not raise any significant environmental issues. Nonetheless, in response to Comment 2-34, items 1, 2, and 4, we refer the reader to page 2-19 of the DEIR. The proposed water right would allow water diverted from the Big Sur River to be applied on 267 acres of the Ranch's 292 acres for irrigation of pasture crops. The 267 acres consists of non-riparian irrigated pasture, Swiss Canyon, and 25 acres of land that are riparian to the Big Sur River. As noted in the DEIR, recent field topographic survey and stereographic analysis of 1929 aerial photographs were used to delineate that portion of the irrigated pasture that is within the Big Sur Basin. The Irrigated Area, which includes the riparian land, comprises the POU, the boundary of which is shown in Figure 2-2 in the DEIR and reproduced here as Figure 1-2 in Chapter 1 (Introduction) of this Final EIR.

To the extent Comment 2-34 addresses the reasonableness of the proposed water diversion (e.g., items 3 and 4 of the comment), it does not raise significant environmental issues, but instead raises issues that the SWRCB will consider under its statutory and constitutional responsibilities, independent of CEQA, in evaluating whether and how to approve the water right application. The portion of the comment that addresses the water duty (item 3), however, is further addressed in the response to Comment 2-97.

RTC 2-35

Comment 2-35 states:

The Department recommends that the annual diversion be based on a formula which would multiply the acres of irrigated pasture subject to the appropriated water right, multiplied by the AFA appropriate to local conditions, not to exceed 2½ AFA, as specified in Water Code section 1004. The Department does not support bifurcation of the allowable diversion into an "average" and a "maximum" amount; nor do we support an "average" amount, based on a 20-year rolling average, be approved for diversion (see discussion above as this applies to impact analysis). The department recommends the SWRCB identify an annual allowable diversion amount, which is not subject to averaging over multiple years, and is the maximum allowable each and every year, subject to such limitations as may be imposed via additional terms and conditions.

Comment 2-35 does not raise significant environmental issues but instead suggests alternate diversion limitations. The comment raises issues that the SWRCB will consider under its statutory and constitutional responsibilities, independent of CEQA, in evaluating whether and how to approve the water right application. In response to Comment 2-35, we note CDFG's recommendation and hereby forward it to the project decision-makers for their consideration. We also refer the reader to RTC 2-13 above which addresses this EIR's evaluation of CDFG's proposed alternative terms for the proposed water right presented in CDFG's letter to Ms. Victoria Whitney of the SWRCB Division of Water Rights dated July 23, 2010.

RTC 2-36

Comment 2-36 states:

The applicant has suggested a maximum allowable rate of diversion (in cfs) and an average rate of diversion (in cfs), which could be limited by a complicated set of criteria in dry and critically dry years. The applicant appears to have assumed a duty of 1 cfs per 50 acres, and included their entire irrigated lands (not just the POU subject to an appropriated right), in requesting 5.34 cfs as the allowable average diversion (267 acres/50 acres X 1 cfs/acre = 5.34 cfs). Regulations were promulgated by SWRCB to clarify information to be submitted with a water right application, including “amounts for which to apply”; the amount of water considered reasonably necessary for most portions of California would be a duty of 1 cfs per 80 acres (CCR, Title 23, section 697(a)(1)).

Comment 2-36 does not raise significant environmental issues but instead appears to suggest that the SWRCB apply a water duty of 1 cfs per 80 acres in accordance with California Code of Regulations, title 23, section 697(a)(1). Section 697(a)(1), which explains how to determine water duties for irrigation use throughout the state, also provides that “[w]here there is a greater abundance of water and a heavy transportation loss, or the land to be irrigated is of a porous, sandy or gravelly character a continuous flow allowance of one cubic foot per second to each 50 acres may be considered reasonable.” It merits noting that the majority of the POU (78 percent) is Santa Ynez soils, which are about 65 percent sand in the surface horizon (to a depth of about 18 inches). As such, the duty factor of 1 cfs per 50 acres may be considered by SWRCB as a reasonable and beneficial use under certain conditions. The SWRCB, however, will consider these and other issues under its regulatory, statutory, and constitutional responsibilities, independent of CEQA, in evaluating whether and how to approve the water right application.

We also refer the reader to RTC 2-13 above, which addresses this EIR’s evaluation of CDFG’s proposed alternative terms for the proposed water right presented in CDFG’s letter to Ms. Victoria Whitney of the SWRCB Division of Water Rights dated July 23, 2010. In addition, RTC 2-97 addresses the comment about the water duty of 1 cfs per 80 acres as applied in accordance with California Code of Regulations, title 23, section 697(a)(1).

RTC 2-37

Comment 2-37 states:

We believe the duty of 1 cfs per 80 acres is more appropriate than that proposed by the applicant. The regulations allow for a greater rate of diversion for a lesser time period for any 30-day period, so long as there is no interference with other users, and it is specified in the permit (CCR, Title 23, section 697(a)(2)). The applicant has requested a maximum rate of diversion of 5.84 cfs; however, the DEIR has indicated that the ESR pumps are capable of pumping at a combined rate of 7.9 cfs. As we have noted above, the instantaneous rate of diversion (as opposed to daily, monthly, annual rate) is critical to maintaining sufficient flows; and, it is important to note, it is difficult to determine the instantaneous rate of diversion, let alone regulate it. The Department recommends that the SWRCB identify an bypass average rate of diversion which is consistent with the duty recommended in 697(a)(1) of 1 cfs per 80 acres; additionally, that the SWRCB require a meter be installed on both wells which would measure and record for both wells, the time of day of pumping, and the instantaneous and cumulative diversion rates, to determine if the diversion rate(s) specified in the permit were being observed. Additionally, whatever rate is permitted

(including any specified maximum rate), the Department recommends that terms and conditions be applied to require the applicant to maintain sufficient bypass flows which would be biologically meaningful to the public trust resources of the Big Sur River.

In response, the commenter incorrectly implies that the pumps are capable of a combined rate of diversion equal to 7.9 cfs. While the individual maximum pumping rates may sum to 7.9 cfs, when pumps are operated jointly the combined maximum pumping rate is not equivalent to the sum of individual maximum pumping rates. The wells are in close enough proximity that drawdown in each well affects the adjacent well. The maximum pumping rate is affected by potential cavitation (sucking in air) and the maximum pumping rate is affected by the physical constraints of the distribution system the pump is supporting (e.g., which lateral line is being used for irrigation). Although the maximum reported pumping rates from the old well is reported at 4.46 cfs, when the lowest pastures are irrigated, the maximum pumping rate for the old well was measured at 2.69 cfs during the 2004 pumping test, when both pumps were pumping (NRCE 2007, Table 7-12). The maximum rate of pumping from the new well was measured as 3.49 cfs (NRCE 2007, Table 7-12), for a combined maximum pumping rate of 6.18 cfs at the pump house. As noted in SGI reports, the maximum pumping rates of both pumps combined was effectively 6.05 cfs (2005, Table 2-2) and 5.93 cfs (2007, Table 3-1).

In response to Comment 2-37, we acknowledge the value of installation of flow meters at both wells. RTC 2-36 addresses Comment 2-37 concerns regarding use of an appropriate duty factor. We note CDFG's other recommendation and hereby forward it to the project decision-makers for their consideration.

RTC 2-38

Comment 2-38 states:

The analysis in the DEIR compares effects of the applicant's proposed project to that which has been occurring on an unpermitted basis; the terms and conditions identified in Mitigation Measure 4.2-2 proposed to reduce diversion rates (not amounts) to address potentially significant effects. This would not address the protection of public trust resources; in fact, no information has been provided that previous, unpermitted diversions were not having a significant adverse effect on public trust resources, and the limitations which are recommended in MM 4.2-4 would not require bypass flows, or otherwise insure maintenance of steelhead habitat. Additionally, the thresholds identified in MM 4.2-2 are based on an unnecessarily complicated set of criteria related to percentile of dry and critically dry flow rate percentiles; again according to an unnecessarily complicated sliding scale of allowable diversion rates.

In response to Comment 2-38, we first address the issue of the DEIR's comparison of proposed project effects to effects caused by ongoing unpermitted diversions. This issue is addressed in responses to previous comments that question the validity of using the environmental baseline conditions (conditions that include historic diversions) described in the DEIR as a basis for determining project impact. In response to this part of Comment 2-28, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19. Regarding the comment about protection of public trust resources, we refer the reader to RTC 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28.

The comment correctly states that MM 4.2-4 would not require bypass flows. The DEIR does not recommend bypass flows because they are not required to adequately mitigate the impact of the project relative to the environmental baseline, or to maintain steelhead habitat that currently exists in

the Big Sur River. It is important to note that MM 4.2-4 is designed to avoid any significant change to steelhead habitat that may be caused by the proposed project relative to conditions that currently exist in the Big Sur River. If it is the contention of this comment that the DEIR should have provided mitigation measures to restore habitat conditions that existed prior to the commencement of irrigation diversions in the early 1980's, we respond by reiterating that this is inconsistent with the State CEQA Guidelines and existing CEQA case law. In response, we also refer the reader to RTCs 1-7 and 2-19, above.

In response to the last sentence of Comment 2-38, we note that the complexity of MM 4.2-4 is due to the DEIR's objective of focusing on mitigating for only those changes to the physical environment that would be caused by the proposed project. If the measure's objective was to simply maintain optimum conditions for steelhead survival, movement, and productivity, simpler conditions could be derived that would simply maintain bypass flows. For reasons discussed in RTCs 1-7, 1-8, and 2-19, however, this is not consistent with the CEQA Guidelines or existing CEQA case law.

RTC 2-39

Comment 2-40 provides CDFG's specific recommendations for correcting the limitations of MM 4.2-4 to protect public trust resources, which CDFG contends exist as discussed in Comment 2-38, above. The comment states:

The Department recommends a more direct approach than is identified in the DEIR; specifically, that the allowable annual diversion (in AF), as well as, the average and maximum rate of pumping (in cfs), be conditioned by criteria which would maintain bypass flows sufficient to protect fish, wildlife, and public trust resources. The specific terms the Department recommends would assume that the rate of diversion is the maximum permitted rate, and implement limitations on pumping (i.e. cessation of pumping, not just modification of the pumping rate) when the gauge indicates that habitat requirements for steelhead and other public trust resources would be impaired. The water rights permit should require cessation of diversion whenever the flows drop below the bypass requirement. The pumps would be either on or off, which can be easily monitored, rather than allowing varying rates of diversion, which could be impossible to monitor or enforce.

The thresholds for turning the pumps off would be based on maintaining flows, which would protect habitat for steelhead and other public trust resources.

In response to Comment 2-39, we acknowledge the comment's recommendations and hereby forward them to the project decision-makers for their consideration. We also refer the reader to RTC 2-38, above, which addresses the commenter's contention that MM 4.2-4 is inadequate to protect public trust resources. In reference to "varying rates of diversion" in Comment 2-40, we note the under the proposed project, instantaneous rates of diversion that would be allowed under the proposed water right would be relatively constant, as has been the case for historic diversions, and dependent upon the maximum capacity of both pumps. Diversion limits contained within the conditions of the proposed water right application would be complied with by "turning the pumps on and off" and not by moderating the instantaneous rate of diversion of the pumps.

RTC 2-40

As noted in Comment 2-40:

Ideally, a stream gauge would be located in the vicinity of the project, and IFIM or similar methodology would have determined in-stream flows sufficient to maintain

habitat, which would be tied to flows as measured at the gauge. The Department recommends that the SWRCB require installation and maintenance of such a gauge, to be located above the diversion, but below the other numerous diverters in the watershed. The Department is pursuing funding for purchase and installation of a gauge to facilitate ongoing studies; but would like the applicant to maintain the gauge, and should funding not be available to the department, provide the funds for purchase and installation. While the Department is engaged in completing studies to determine in-stream flow requirements, it is recommended that interim thresholds be tied to the existing USGS gauge. Once more specific recommendations can be made; those recommendations should be tied to flows as measured at the new gauge, and those in-stream flow requirements adopted by the SWRCB for this permit.

In response to Comment 2-40, we acknowledge the value of installation of stream gauge in the vicinity of the proposed project. However, installation of a permanent stream gauge would require concurrence by CDFG (Streambed Alteration Agreement) and potentially NMFS. Installation of a permanent stream gauge would also require a fairly stable site to locate the gauge (flow measurements will be affected by changes in channel configurations), must not present a barrier to fish passage, must be recalibrated at least on a yearly basis, must be able to measure and withstand high flows (more than 100 cfs), and must have the flow relationships established for high flow periods as well as low flow periods. Based on discussions between the EIR preparer and SGI staff, it was determined that no site near the ZOI currently provides safe access for determining high flow relationships. As such, use of a stream gauge for this purpose is not likely to be feasible.

We acknowledge that CDFG is currently engaged in conducting an IFIM study to determine instream flow requirements for steelhead. In the event that these studies result in new information and recommendations pertinent to project diversions in the event that the proposed water right is approved, and this new information calls into question the impact evaluation and mitigation measures contained in the DEIR, the SWRCB is obligated under Sections 15162 through 15164 of the State CEQA Guidelines to prepare an addendum to the EIR or subsequent documentation. The impact analysis and mitigation measures presented in the DEIR, however, are based on the best available information at the time of DEIR preparation and focuses on project impact relative to the environmental baseline conditions in accordance with CEQA requirements and existing case law. We refer the reader to RTCs 1-5, 2-11, 2-16, and 2-26 which address the issue of need for additional studies in greater detail.

We acknowledge CDFG's recommendation for the establishment of interim thresholds that would be tied to the existing USGS gauge, but note that this recommendation would be tied to the establishment of thresholds that are not derived based on the change in the physical environment that would be caused by the proposed project. Based on previous comments, we assume the thresholds would be tied to maintaining pre-diversion conditions. While this is pertinent to the issue of avoiding potential impact to public trust resources, it is not required to mitigation potential project impact as defined in the DEIR. We refer the reader to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of adequate protection of public trust resources in relation to the proposed project and this EIR.

RTC 2-41

Comment 2-41 states:

Based on existing information provided by the applicant, including use of the applicant-requested maximum rate of diversion (5.84 cfs), an interim bypass flow for low flow months of June through November can be estimated. The calculations could

be modified to accommodate the actual permitted rate in cfs, or the maximum base on actual pump capacity, or whatever rate is determined by the SWRCB to be most protective of resources and practicable given the difficulty of monitoring and enforcing a maximum instantaneous rate of diversion. The DEIR and supporting technical studies don't provide any information on flows needed for maintaining public trust resources during high flow months, December to May. However, an interim high flow bypass requirement can be estimated using the procedures in the December 2007 Draft SWRCB's *Policy for Maintaining Instream Flows in Northern California Coastal Streams*, updated March 14, 2008 (2007 SWRCB Instream Flow Policy). Based on information we have available at this point in time, the Department recommends that the average annual diversion and the maximum annual diversion be conditioned with interim bypass flow requirements of 40 cfs for the months of June through November, as measured at the USGS gauge; and 132 cfs for the months of December through May, as measured at the USGS gauge. Once the Department has completed our studies, we can refine the flow requirements, and calibrate to either a new gauge in the vicinity of the project or if that is not feasible, to the USGS gauge.

In response, there are a few points that merit clarification before responding to Comment 2-41 in detail. First, since the comment was prepared in December 2009, the SWRCB has finalized and adopted the *Policy for Maintaining Instream Flows in Northern California Streams* (Policy) has been adopted (May 4, 2010). The discussion that follows relates to this adopted Policy and not the draft mentioned in the comment letter. Second, the Policy is specific to watersheds north of San Francisco Bay and thus does not apply to the Big Sur River. The Policy, formulas, and analysis processes within it were developed based on climate and hydrology of Northern California streams. This portion of the coast receives less precipitation than most of the entire area discussed in the Policy.

The minimum flows recommended in the comment come from two sources. The low flow value is from CDFG's 2010-20-11 sport fishing regulations and is the flow below which the lower Big Sur River is closed to sport fishing (CDFG 2010). In the 2008-2009 regulations, CDFG indicates that this closure is to allow for passage of adult steelhead (CDFG 2008; Section 8.00c). In the current CDFG sport fishing regulations, there is no mention in Section 8.00c of fish passage in relation to the minimum flows. Regardless, in regulating a sport fishery it is important to manage it responsibly, and conditions that delay movement of adult fish could expose them to angler harvest at increased rates. The passage study conducted for the proposed project indicated that adult steelhead passage could be impaired under extremely dry conditions by the incremental increase in pumping (DEIR page 4.3-37).

The source of the high flow value, 132 cfs, is not clearly identified in the comment letter but appears to be the approximate (estimated) result when applying the SWRCB's formula to the entire Big Sur watershed and use an unimpaired annual mean flow of approximately 99 cfs. There are many problems with this formula, the first of which is the use of an average annual value for unimpaired flows. Using a bypass flow generated from an annual mean via an empirical formula developed for Northern California to evaluate compliance on an instantaneous basis in south-central California does not appear to be a reasonable use of this formula.

One of the actions the Policy allows is the flexibility of the SWRCB to use different thresholds, processes, and criteria when making decisions about how to establish minimum flows. Because the proposed project is the incremental increase in pumping, mitigation measures in the DEIR reduce for the impact of the proposed project by cutting pumping to baseline conditions under specific hydrologic conditions. This is both feasible, reasonable, and in proportion to the level of impact associated with the proposed project.

Diversion pumping during the high flow time of year is not likely to affect aquatic resources simply because the fractional amount of water removed by the proposed project in relation to overall streamflow is very small. Based on the increased amount of water extracted (DEIR Table 4.1-1) of 84 acre-feet, an increase in pumping of 1.4 cfs would be expected. If this were the case, the instream reduction in flow would be about 0.4 cfs. Based on the mean monthly flows for the period of record (DEIR Table 4.2-4), this decrease in flow is less than one percent of the average monthly instream flow for the months of November through May. Because of this, the DEIR analysis focuses on the dry season and dry water year types.

The IFIM study being conducted by CDFG could help refine the understanding of steelhead habitat in the lower Big Sur River (See response to comment 2-27). The recommendation of minimum flow values, including use of any results from the CDFG study, would be a decision to be made by the SWRCB. The DEIR adequately addresses the impacts of the proposed project and presents feasible and proportionate mitigation for those impacts that would reduce them to baseline conditions.

RTC 2-42

Comment 2-42 thanks the lead agency for consideration of the submitted comments, provides the lead agency with CDFG contact information, and lists attachments provided with their letter.

In response to the Comment 2-42, the information provided in the comment is hereby noted and forwarded to the project decision-makers for their consideration. Copies of each of the attachments provided with Letter 2 are included in Appendix 3 of this Final EIR.

RTC 2-43

Comment 2-43 is provided under the subheading “Chapter 2 – Project Description” and addresses the need for the EIR to address potential project impacts on public trust resources. The comment also acknowledges the distinction between the responsibility of the SWRCB to address the public trust in compliance with the Water Code and the need to address potential project impacts on public trust resources as defined by CEQA. Specifically, the comment states, “The responsibility of the SWRCB to address public trust resources and to comply with Water Code is independent of the standards applied to CEQA.

In response to Comment 2-43, we concur with the comment’s acknowledgement of the distinction between the SWRCB’s obligation to protect public trust resources as defined in the Water Code, and requirements under CEQA to evaluate the potential for proposed actions to cause direct, indirect and cumulative impacts on those resources. This EIR is a CEQA document, and focuses on physical changes to the environment that could be caused by the proposed project. As noted by the commenter, the protection of public trust resources is independent of the impact evaluation presented here in compliance with CEQA. We refer the reader to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28 which address the issue of adequate protection of public trust resources in relation to the proposed project and this EIR.

RTC 2-44

Comment 2-44 suggests the project description presented in the DEIR reflects, “numerous departures from typical standards which the SWRCB routinely uses to appropriate water.” Further, the comment recommends several modifications to proposed standards and permit conditions presented in the project description.

In response to Comment 2-44, we acknowledge that the requested diversion conditions are not typical of routine water rights applications. Typical water rights applications consist of only the

maximum annual diversion amount and maximum diversion rate allowed. In order to provide more flexibility in meeting proposed project needs while protecting public trust resources to the maximum extent practicable, the project applicant has elected to request a water right with multiple diversion conditions.

The higher duty factor requested in the water rights application is supported by the Reasonable Beneficial Use – Land Use Study for El Sur Ranch Irrigated Pastures water Rights Application #301666 (NRCE 2007) included in the SGI 2007 report. From page v:

“Considering the leaching requirement, the estimated average on-farm irrigation efficiency for El Sur Ranch is 71% for 1975-2006 and 82% for 1994-2006. This is higher than the accepted range of irrigation efficiencies for surface irrigation that are from 55 to 75 percent. The 1994-2006 period includes several years with high efficiency that are a result of under-irrigation. The irrigation efficiency on El Sur Ranch pasture is very reasonable in light of limitations of the water supply, irrigation system, soils, labor constraints, and imperfect forecast of rainfall events. The 71 percent irrigation efficiency is not the recommended target irrigation efficiency for El Sur Ranch. Based on observation and analysis of the available information, it is our opinion that the irrigation system is well managed and efficient and the pastures are in good health as a result.

The estimated maximum annual irrigation diversion requirement over a 58 year period of record (1949-2006) is 1,433 acre-feet, and the average annual diversion requirement is calculated to be 1,170 acre-feet (average 1,180 acre-feet for 1957-2006). The application includes a maximum yearly diversion not to exceed 1,615 acre feet per any given year; this allows for a margin of uncertainty and safety. This cushion of safety could be needed, for example, in a year where there was a significant soil moisture deficit at the start of the year that needed to be replenished. The 20-year rolling average cap of 1,200 acre-feet per year provided for in the application is based on the annual average diversion requirement. These values are based on irrigation of 267 acres at 65 % irrigation efficiency and 10% leaching requirement.”

It should be noted that while applicant has used historical data from 1975 through 2006 to identify appropriate diversion rates, this should not be confused with the baseline used in the EIR analysis, which extends from 1975 through 2004, for determining potential impacts. The applicant, at their discretion, can choose to justify requests based on available information and projected requirements; the CEQA analysis is limited to an analysis of impacts based on an established and defined baseline condition. We also refer the commenter to RTC 2-36, which addresses beneficial use and duty factors, which notes that a higher duty factor may be warranted under certain considerations. Additionally, as noted in RTC 2-36, the determination of beneficial use is beyond the scope of the CEQA process and this EIR.

The modifications proposed in the comment are hereby noted and forwarded to the project decision-makers for their consideration.

RTC 2-45

Comment 2-45 states that there are a number of conflicting and confusing numbers presented in the DEIR pertaining to: 1) designation of acreage for the place of use (POU); 2) POU acreage that could be served under the applicant’s existing riparian water right; and 3) the maximum monthly seasonal diversion requested under the proposed project. The comment also notes that the DEIR fails to

mention in the discussion regarding the existing points of diversion (POD) that the Old Well was relocated and reconstructed or the dates of the relocation and reconstruction.

In response to Comment 2-45, we refer the reader to page 2-5 of the DEIR which states:

Approximately 25 acres of the 292-acre project site comprise dunes, the tailwater pond, outfall, access roads, and irrigation canals. The remaining 267 irrigated acres is the POU. Of those 267 acres, approximately 25 acres is within the Big Sur River watershed and is, therefore, served by the applicant's existing riparian water right. The location of the riparian area within the POU is shown in Figure 2-2. Under a riparian right, water diverted from the Big Sur River can only be applied to land adjacent to the river and within the watershed. It cannot be diverted to irrigate other pasture land that is non-riparian. The remaining 242 acres of pasture comprise the area for which the proposed appropriative water right is being requested.

As stated above, the POU consists of **267 acres**. The project site is 292 acres. For purposes of evaluating the No Project Alternative in the DEIR, the DEIR recognizes that 25 acres of the 267-acre POU for the proposed project is subject to irrigation under the project applicant's existing riparian water right. The POU for Water Right Application 30166 is 267 acres, which includes acreage that could be irrigated under a riparian water right in the event that Water Right Application 30166 is denied. Both an appropriative right and a riparian right can cover a parcel of riparian land. The request to irrigate 267 acres of land under Application 30166 is unchanged by the amount of land claimed under a riparian right.

In response to this comment's reference to inconsistencies in the DEIR regarding the maximum monthly seasonal diversion for the proposed project, Table 4.1-1 (page 4.1-6) has been updated to correct information presented and accurately reflect the Water Rights Application requests. These revisions to the DEIR are contained in Chapter 2 of this Final EIR (Changes to the Draft EIR). These revisions do not substantively affect the impact determinations or analysis contained in the DEIR.

In response to this comment's reference to the DEIR's lack of reference to the relocation and reconstruction of the Old Well, an inquiry was made of the project applicant to provide that information. In response, the project applicant's legal representative provided a letter to the EIR preparer dated April 1, 2011: Subject – Response to Comments by California Coastal Commission and Department of Parks and Recreation. This letter and attachments are included in their entirety in Appendix 4 of this Final EIR. In regard to the Old Well, the letter states:

El Sur Ranch has pumped groundwater from a well near the Big Sur River since about 1950. The subject well, commonly designated as the "Old Well" was drilled in 1949. The Old Well has never been relocated and remains in production today. Other subsequently drilled wells are discussed and distinguished in Section II below.

Note that the April 1, 2011 letter reference to a comment submitted by the "Department of Parks and Recreation" is in fact in reference to a comment letter submitted by the California Department of Fish and Game from which Comment 2-45 is taken.

RTC 2-46

Comment 2-46 states that the DEIR fails to justify the amount of water proposed to irrigate pasture under Water Right Application 30166.

In response to Comment 2-46, we note that the DEIR is an informational document designed to provide project decision-makers with necessary information to make an informed decision on the

proposed project relative to the project's environmental impact in accordance with the requirements of CEQA. It is not the purpose of, nor is it appropriate for an EIR to "justify" the purpose of the proposed project. We refer the reader to page 2-20 of the DEIR, first paragraph under the heading, "Numerical Diversions and Rate Limit Assumptions." The paragraph states:

El Sur Ranch's water right application is for the irrigation of pasture, which is considered a beneficial use of water. The law also requires that this water be put to reasonable use and that waste or unreasonable use of water be prevented (i.e., the amount required to supplement the water naturally provided by precipitation and other climatic factors should reasonably match the requirements of that use so that the water is not wasted). Because precipitation, climate, and other factors vary, often considerably, from year-to-year, the diversions required for this reasonable and beneficial use will vary, considerably, from year-to-year, month-to-month, or even day-to-day. The rest of this chapter describes the applicant's basis for requesting to appropriate a particular amount of water that the applicant believes can be put to reasonable and beneficial use. This chapter does not reflect the SWRCB's determination or judgment as to whether the proposed diversion and use of water is reasonable and beneficial.

As noted above, the description of the proposed project in the DEIR does not reflect the SWRCB's determination or judgment of whether the proposed diversions constitute a reasonable and beneficial use. This will be a determination made by the SWRCB upon consideration of the water right application, the EIR, and any and all other pertinent information presented as part of the application approval process.

The purpose of the EIR is to identify potential impacts caused by the project and to identify alternatives to the project that may result in a reduction in impact while still achieving most of the basic project objectives. Specific to the evaluation of project alternatives, Section 15126.6(a) of the State CEQA Guidelines states, in part:

a) Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.

In reference to Comment 2-46's contention that the proposed increase in annual diversions is not necessary to support the proposed project objective to support irrigated pasture on the POU, the DEIR addresses three alternatives that would reduce annual diversions relative to the proposed project, while still achieving most of the basic project objectives identified in Chapter 2 of the DEIR. These include Alternatives 2, 3, and 4 (see Chapter 6 of the DEIR beginning on page 6-9). As noted in Chapter 6, starting on page 6-9, Alternative 2 (Historic diversions) would have no impact water or biological resources and maintain pastures at existing production rates. A comparison of Table 2-1 and Table 2-2 shows that operating at historic project diversions could result in under irrigation by 408 AFY, on average, with a maximum under irrigation of 735 AFY and minimum of 124 AFY (assuming a 65 percent irrigation efficiency and 10 percent leaching factor). As noted in NRCE 2006, the historic practices at El Sur Ranch have resulted in under irrigation but the pastures appear to be in good condition (refer to RTC 2-44). However, NRCE 2006 also recommends that the high irrigation efficiency should not be the target for determining potential irrigation requirements.

RTC 2-47

Comment 2-47 cites the last sentence from the first paragraph on page 2-20 of the DEIR, and correctly states that, "...there does not appear to be a recommendation by staff of the SWRCB, and/or preparers of the DEIR (which was ostensibly prepared under the direction of staff of the SWRCB) which would inform the determination by the SWRCB as to whether the proposed diversion and use of water is reasonable and beneficial."

In response to Comment 2-47, we refer the reader to RTC 2-46, above.

RTC 2-48

Comment 2-48 refers to technical studies prepared in order to inform the impact analysis presented in the DEIR. The comment notes that CDFG has provided numerous rounds of comment on the study and designs products of the studies and that "many of our comments indicated that the information was not sufficient to do either an impact analysis or provide the basis for meaningful mitigation measures for steelhead. The preparers of the DEIR have not included any of CDFG comments, or even provided a discussion of the shortcomings of the information." The comment contends that this is not consistent with the responsibility of the SWRCB under the Water Code or with the requirements of CEQA.

In response to Comment 2-48 we refer the reader to RTC 2-7, above, which states that in response to CDFG comments on previous technical studies prepared by specialists under contract to the project applicant, those studies were revised and supplemented. These reports were, in turn, incorporated by reference in the DEIR. Each of these reports was subjected to a thorough peer review by the DEIR preparer. In conducting this peer review, the DEIR preparer's technical staff members responsible for that review read each of the CDFG comment letters addressing prior versions of the applicant-funded technical reports. The shortcomings associated with these studies are addressed in the analysis as the studies are used (see page 4.3-31 for an example relating to steelhead passage). There are numerous occasions where the DEIR indicates that either an assumption has been made or a change in the natural system during the technical study (i.e., closing of the lagoon mouth) confounded the ability to draw specific conclusions related to operation of the pumps. In keeping with the requirements of CEQA, the DEIR preparer used the best information and studies available at the time of DEIR preparation.

Further, as discussed in RTC 2-8 above, four of the memoranda submitted by CDFG on the applicant-prepared technical studies were submitted on earlier versions of technical studies prepared for the proposed water right application. Subsequent to those memoranda, and, in large part as a direct result of the recommendations presented in those memoranda, the applicant-funded technical studies were revised and supplemented. As noted, those memoranda were reviewed by the DEIR preparer in advance of preparing technical sections of the DEIR.

Comment 2-48 contention that the DEIR does not include CDFG-recommended impact threshold standards and the setting of "bypass flows" is largely correct for reasons detailed above in various RTCs. We understand from the review of previous correspondences from CDFG and in CDFG comments on the DEIR that much of the concern regarding the approach to and conclusion of the DEIR impact analysis center on the question of the validity of using the environmental baseline conditions (conditions that include historic diversions) described in the DEIR as a basis for determining project impact. In response to this part of Comment 2-48, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19. CDFG also has questioned the DEIR's assessment of potential project impacts on public trust resources. Regarding this issue, we refer the reader to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, above.

RTC 2-49

Comment 2-49 suggests that the DEIR does not distinguish between water diverted under Water Right Application 30166 and water available under the applicant's riparian water right.

In response to Comment 2-49, the comment is correct in that the impact assessment does not distinguish between the portion of water diverted that would be subject to a riparian right and the portion of diversion that would be solely subject to the appropriative right. As previously noted, both an appropriative right and a riparian right can cover a parcel of riparian land. The request to irrigate 267 acres of land under Application 30166 is unchanged by the amount of land claimed under a riparian right.

RTC 2-50

Comment 2-50 concerns DEIR references to "groundwater wells" and "groundwater pumping." In response to Comment 2-50, we note that the third paragraph on page 2-13 of the DEIR states:

The SWRCB subsequently conducted a field investigation in 1991 to determine whether the Ranch's diversion of water from the Big Sur River was subject to the SWRCB's permitting authority. SWRCB staff determined the Ranch was diverting subterranean streamflow from the alluvium of the Big Sur River and, therefore, the Ranch's diversion was subject to SWRCB permitting authority under the Water Code. As noted above, technical studies supported the SWRCB's conclusion that the Ranch was diverting water from a subterranean stream (Jones & Stokes, 1999).

As indicated in the above paragraph, the DEIR makes a clear reference to the fact that the source of diversions made at each of the project's points of diversion is subterranean flow, requiring an appropriative water right for use on all lands within the POU not covered by the project applicant's existing riparian right.

RTC 2-51

Comment 2-51 notes that the proposed project may require acquisition of a Streambed Alteration Agreement or consultation under the California Endangered Species Act. In response to Comment 2-51, the section under the subheading "Required Permits and Approval" on page 2-28 of the DEIR has been revised accordingly. See Chapter 2, page 2-3, of this Final EIR which contains the revised text.

RTC 2-52

Comment 2-52 provides information concerning its authority in its capacity as a CEQA Responsible Agency with regard to stream diversion activities that could adversely affect any fish or wildlife. In response to Comment 2-52, the information contained in the comment is hereby noted and forwarded to the project decision-makers for their consideration.

RTC 2-53

Comment 2-53 discusses CDFG's responsibilities as a Trustee and Responsible Agency under CEQA. In response to Comment 2-53, the information presented is hereby noted and forwarded to the project decision-makers for their consideration.

RTC 2-54

Comment 2-54 recognizes CDFG's filing of a protest to the filing of Water Right Application 30166. The comment notes further that protest dismissal terms were withheld pending completion of the EIR. The comment concludes that specific protest dismissal terms will be provided following review of an environmental document acceptable to the CDFG.

In response, the comment is hereby noted and forwarded to the project decision-makers for their consideration.

RTC 2-55

Comment 2-55 presents information on CDFG's authority over projects that could result in the "take" of any state-listed species. In response to Comment 2-55, the information presented is hereby noted and forwarded to the project decision-makers for their consideration.

RTC 2-56

Comment 5-56 notes that CEQA requires a mandatory finding of significance if a project is likely to substantially impact threatened or endangered species. If a project is found to have a significant impact on a listed species that cannot be minimized and fully mitigated, the Statement of Overriding Considerations that would be required under CEQA, would not obviate the project applicant's obligation under Section 2081 of the Fish and Game Code.

In response to Comment 2-55, the information presented is hereby noted and forwarded to the project decision-makers for their consideration. Further, we note that a statement of overriding consideration is only required in the event that an EIR has determined an impact to be significant and unavoidable. All potentially significant impacts identified in the DEIR were found to be mitigable to levels considered to be less than significant; therefore, a statement of overriding consideration is not required for certification of the EIR.

RTC 2-57

Comment 2-57 discusses the project applicant's responsibility of obtaining "incidental take authority" prior to the direct or indirect disturbance to State-listed species.

In response to Comment 2-57, the information presented is hereby noted and forwarded to the project decision-makers for their consideration. We note that the DEIR did not identify any instances of potential direct or indirect impact on state-listed species that would require an incidental take permit from CDFG.

RTC 2-58

Comment 2-58 states that three fully protected species have the potential to occur on the proposed project site. These include ringtail (*Bassariscus astutus*), California brown pelican, and California clapper rail (*Rallus longirostris obsoletus*). The comment further recommends that the project applicant and SWRCB work with CDFG to "identify measures to be implemented to preclude "take" from occurring."

In response to Comment 2-58, we note that ringtail could occur, pelicans have been observed over the ocean adjacent to the site, and habitat is not suitable for California clapper rail. Each of these is discussed in more detail below.

Ringtail occurrences have been reported in Andrew Molera State Park and the habitat within Swiss Canyon and the Big Sur River corridor was characterized as suitable (Miriam Green Associates 2007). Because there are no records in the California Natural Diversity Database (CNDDDB) and the only mention in the biology report is in one line of text, this species was apparently omitted from the biological resources section of the DEIR. Regardless of this, the DEIR section has been revised to include ringtail. See Chapter 2, page 2-12, of this Final EIR, which contains the revised text. This species is highly associated with riparian habitat and permanent water features. The proposed project would not impact the riparian corridor along the Big Sur River or in Swiss Canyon and permanent water features would remain essentially unchanged from their baseline condition. Therefore, the proposed project would not impact ringtail.

The occurrence of brown pelicans is limited to the ocean waters adjacent to the project site. Although they may occasionally perch on the beach or be found within the lagoon, no nesting or communal roosting habitat is found within the project area or would be impacted by the proposed project.

Currently, clapper rails are known only to occur within tidal salt marshes of San Francisco Bay. They are none reported in the CNDDDB for the project area, were not reported in the previous biological surveys (Miram Green 2007), and have not been observed onsite. Typically restricted to tidal salt marsh with extensive mud flat habitat and dense stands of pickleweed (*Salicornia virginica*) and cordgras (*Spartina* spp), this species would not likely occur in the rocky narrow intertidal zone associated with the lagoon. This species would not be impacted by the proposed project.

RTC 2-59

Comment 2-59 identifies two federally-listed species that could be affected by the proposed project; steelhead trout (federally listed as threatened in the South Central California Coast Evolutionary Significant Unit (ESU) and California red-legged frog, federally listed as threatened. The comment further asserts that the applicant may need authorization for “take” if take of either species should occur.

In response to Comment 2-59, we refer the reader to responses to Comment Letter 1, specifically Comment 1-2, submitted by the National Marine Fisheries Service, which also addresses project compliance with the federal Endangered Species Act (ESA). The completion and potential certification of this EIR under CEQA would not constitute permit for “take” as defined under the ESA nor would it in any way limit the agencies responsible for implementing the ESA. The potential impacts on both species from the implementation of the proposed project is discussed in detail within the DEIR section for the purpose of allowing the SWRCB to adequately meet the requirements of CEQA when making a determination about the proposed project.

RTC 2-60

Comment 2-60 presents CDFG opposition to using the environmental baseline defined in the DEIR as the basis for determining the environmental impact of the proposed project and recommends an alternative baseline. In response to Comment 2-60, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which explain why the environmental baseline used in the DEIR is considered appropriate and consistent with CEQA Guidelines and existing case law.

RTC 2-61

Comment 2-61 refers to the CDFG submittal of detailed comments submitted by Mr. Kit Custis, dated December 10, 2009.

In response to the comment, we note that, the letter from Mr. Custis was not provided to SWRCB until after the close of the public comment period for the DEIR which occurred on December 14, 2009. Although the SWRCB is not required by CEQA to respond to late comments, the letter from Mr. Custis is included in this Final EIR as Comment Letter No. 3.

RTC 2-62

Comment 2-62 presents an extensive discussion of the requirements of the SWRCB under the California Water Code to "...take into account, whenever it is in the public interest, the amounts of water needed to remain in the source for the protection of beneficial uses, including any uses specified to be protected in any relevant water quality control plan..." The comment then presents a list of designated beneficial uses of the Big Sur River based on the Water Quality Control Plan for the Central Coast Region. The comment indicates that appropriation of water should only occur "...after adequate instream flows are dedicated to support these beneficial uses." The final point of the comment is that the DEIR is based on several sources none of which were made available to CDFG or the public for review. Because of this, CDFG indicates that it is unclear what surveys were done and when and by whom they were conducted. The comment asserts that "...it was difficult or impossible to understand reported survey findings in the absence of the original full report."

In response to comment 2-62, we first refer the reader to the responses to Comments 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28 for a complete discussion of public trust resources. Beneficial uses are discussed extensively in the DEIR in both Section 4.2 and 4.3. It is noted in both sections that at times the Big Sur River is not achieving beneficial use thresholds regardless of El Sur Ranch diversions. In response to the comment that the DEIR is based upon sources that were not made available to CDFG, we reiterate that CDFG has been extensively involved in the review of the study plans that generated these reports and has received and commented on many of the reports used in the preparation of this DEIR. For example, CDFG reviewed technical reports and commented on them in a memorandum to the SWRCB in 2005. There have been numerous other communications between the SWRCB and CDFG; please see RTC 2-17 for a list. All the documentation that is associated with the analysis contained within this DEIR is available in the administrative record.

RTC 2-63

Comment 2-63 asserts that two species of sensitive plants that occur within the project area, Monterey Indian paintbrush (*Castilleja latifolia*) and coast wallflower (*Erysimum ammophilum*), were not included in the list of sensitive species (Table 4.3-4). The comment goes on to provide a list of other species that were not addressed in the DEIR: ringtail, Coast Range newt, California horned lark, and California clapper rail. The comment asserts that clapper rails have been documented from the mouth of the Big Sur River. The reader is referred to comment 2-58 where ringtail and clapper rail are addressed in detail.

Monterey Indian paintbrush is a California Native Plant Society (CNPS) list 4 species. List 4 species are considered to have limited distribution, but are not considered rare throughout their range. Because of this, it does not meet the CEQA requirements to be considered a rare or sensitive species and is, therefore, not included in Table 4.3-4. There would no impacts on Monterey Indian paintbrush. Coast wallflower is a CNPS list 1B species and is associated with chaparral, coastal dunes, and coastal scrub. It has been added to Table 4.3-4 (refer to Chapter 2, Text Changes to the DEIR). However, it is not found within the POU or another area directly impacted by the proposed project. Because of this, there would be no impact on this species. The conclusions in the DEIR regarding sensitive plant species remain valid.

Coast range newt is included in Table 4.3-4 (DEIR page 4.3-18). Although this species has a high probability of occurring within the Big Sur River and Swiss Canyon, the proposed project is not

expected to impact newts or their habitat. Breeding habitat for newts are ponds and slow-moving streams. This would include the tailwater pond and Swiss Canyon. Water velocities in the lower Big Sur River would generally preclude breeding, although some side channel habitat may be available. The lagoon is likely too saline to support newts. Potential impacts on amphibians are evaluated in Impact 4.3-5 (DEIR page 4.3-45) and 4.3-6 (4.3-46), which address potential impacts on Coast Range newts from the proposed project.

California horned lark are reported to breed widely with in Monterey County, but have a patchy distribution on the coast (Roberson 2004)⁶. Suitable habitat exists for this species within the project area, but it has not been observed onsite (Miraim Green Associates 2007), nor has it been reported from the adjacent areas of Andrew Molera State Park where birds routinely monitored (Stock et al 2004)⁷. Because this species uses grasslands, dunes, and other habitats with low-growing vegetation, it would be most likely found within the pastures of the POU or on the coastal dunes adjacent to the POU. The proposed project would not create new facilities or irrigate previously unirrigated pasture; therefore, existing suitable habitat would remain into the future and the proposed project would not impact this species. It has been added to Table 4.3-4.

RTC 2-64

Comment 2-64 presents the opinion that the proposed project would substantially increase allowable diversions from the Big Sur River. Because of this, CDFG "...does not concur with the conclusions reached in the DEIR regarding the potential of the Project to result in impacts to sensitive biological resources." The comment goes on to indicate that there is not sufficient information in the DEIR to logically support the conclusions.

The commenter's conclusion that the proposed project would "substantially increase allowable diversions" is not supported by fact, nor was evidence provided in the comment that supports that conclusion. First, the project simply is an increase in diversion on average of 84 acre-feet over 30 days (1.4 cfs) from the Big Sur River over the existing rate. The DEIR presents the proposed project in extensive detail in Chapter 2. There are no construction elements, changes to irrigation practices, or other upland components that could impact terrestrial species. Because of this, most sensitive species discussed in the DEIR and mentioned in previous comments would not be affected by the proposed project. The connection between groundwater from which the two wells pump and the river is discussed extensively in the DEIR (Section 4.2). It is this connection that creates the potential for the proposed project to affect sensitive aquatic species. The DEIR clearly presents the background information for the species, discusses the connection between groundwater and the surface expression of that groundwater, presents the connection between extraction and reductions in flow, and evaluates the potential for that reduction to affect steelhead, red-legged frogs, and western pond turtles. The impact analysis is broken down by flow and water quality element because each of these relates differently to the species. The impact analysis within the DEIR is based on the best available scientific information. While this information may appear limited in the DEIR, there are extensive background technical reports upon which the analysis is based. All of these reports are part of the administrative record and many have been reviewed by CDFG.

RTC 2-65

Comment 2-65 focuses on the impact analysis for riparian vegetation. The comment questions the DEIR's conclusion that the proposed project would not result in the degradation of the willow riparian

6 Roberson, D. 2004. Annotated checklist for Monterey County. Available at: <http://creagrus.home.montereybay.com/MTYbirdlist07.html>. Accessed 6-9-10.

7 Stock, S.L., N. Thorngate, J. Griffiths, and J.D. Frey. 2004. East molera grassland avian monitoring report, May 2001-January 2004. Prepared for California Department of Parks and Recreation.

area along the Big Sur River. It also states that “It is unclear how this...conclusion can be reached. A one-and-a-half-fold increase in water pumping would represent a change in conditions from the baseline, and the potential impacts on vegetation should not be assumed to be less than significant because baseline conditions do not appear to have a negative effect on the habitat.” The comment requests a discussion of the effect that increased salinity would have on riparian vegetation.

In response to comment 2-65 we would like to address the volume of diversion first and then discuss the impact analysis relating to riparian vegetation. As discussed in the introduction to Chapter 4, the increase in seasonal diversion is 34 acre-feet (DEIR page 4.1-6). The study conducted by Miriam Green and Associates in 2006 that specifically evaluated the condition of riparian vegetation adjacent to the pumps concluded that these plants showed no sign of dieback or physical stress. The measured drawdown of groundwater in the immediate vicinity of the two wells was in the range of 3 to 4 feet during pump tests; however, because the aquifer is extremely porous groundwater levels recover in 24-48 hours once pumping stops (DEIR page 4.3-47; SGI 2007; 2008). Normal irrigation practice is an on and off situation where fields are irrigated on a rotating schedule but not continuously. Because of this, there is no long-term permanent drawdown of the aquifer in association with the proposed project. As presented in the DEIR, potential impacts to the riparian areas are considered less than significant because the cyclical nature of the drawdown.

Salinity intrusion was studied and modeled by SGI (2005). Both the wells operate with salinity thresholds whereby pumping is stopped when conductivity (a surrogate for salinity) reaches 1,000 $\mu\text{S}/\text{cm}$; equivalent to a salinity of less than 1 part per thousand. SGI concluded that the Pacific Ocean acts as a groundwater recharge source and that when combined with high spring tides, the diffusion front of the saline wedge reaches the capture zone of the Old and Navy wells (SGI 2005). This is especially apparent during spring tides that are more pronounced in the summer months. Based on the available data, it appears that saline intrusion is limited both in duration and season. Riparian vegetation such as that found within the riparian corridor of the Big Sur River is relatively intolerant to changes in salinity. The US Department of Agriculture indicates that arroyo willow, western sycamore, and white alder are not at all tolerant and Pacific willow and coast live oak have low salinity tolerances (USDA 2010).⁸ These species occur at varying locations and densities between the Old Well and the lagoon which is the only riparian habitat potentially exposed to increased levels of salinity. Given the low levels of salinity that are used as a threshold for stopping pumping at the Old Well, that salinity intrusion appears to be a seasonal event, and the presence of non-salt tolerant species within the area of saltwater intrusion, the minor increase in pumping associated with the proposed project would not impact riparian vegetation between the Old Well and the lagoon. The conclusion that pumping would have a less-than-significant impact on riparian vegetation remains valid.

RTC 2-66

Comment 2-66 states that the impact analysis in the DEIR does not adequately support the assertion that western pond turtles could occur in areas that were not surveyed, and that it is not known if surveys were adequate to detect turtles should they occur. The comment states that the analysis focuses on “...potential impacts to the Big Sur River that could impact adult turtles and concludes that that a reduction in water levels would not result in increased predation of turtles, but this conclusion is not supported by existing data or research...” Additionally, “the DEIR also does not discuss and potential changes in the condition of the tailwater pond that may impact the species.”

In response to Comment 2-66 we first note that pond turtles are very cryptic, highly mobile animals capable of actively choosing suitable aquatic habitat. Snorkel surveys of the Big Sur River from the

8 USDA (US Department of Agriculture) 2010. PLANTS database. Available online at www.plants.usda.gov. Accessed June 11, 2010.

lagoon upstream for about 1 mile into the part were conducted in 2004 and 2007 (Hanson 2005; 2008). While these surveys focused on fish, the natural escape action of basking pond turtles is to drop into the water, an action that it is reasonable to assume instream observers would notice. No turtles were observed during any of the fish surveys. Other in-channel activities by fisheries biologists included extensive collection of spot water quality data, passage transect measurements, and habitat evaluations (Hanson 2005; 2007; 2008). Many of the sites require staff to walk directly in the channel because the dense riparian vegetation limits access to the river from the trails. No turtles were observed during any of these activities either.

The proposed project has no construction components, changes in ranching operations, or irrigation practices. The only way the proposed project could affect pond turtles would be through a substantial change in water surface elevations either in the Big Sur River or the tailwater pond. The tailwater pond was not addressed because irrigation would continue similar to current operations and, therefore, the hydrology of the pond would not substantially change. The maximum possible change in water surface elevation in the Big Sur River has been documented at 0.17 feet, about 2 inches. For an animal such as the pond turtle that actively basks in the open and can easily moves from pool to pool within the river, even over shallow riffles with ease, this change was not considered to result in a substantial reduction in available habitat or exposure to predation for western pond turtles.

RTC 2-67

Comment 2-67 focuses on surveys conducted for red-legged frogs. The comment indicates that focused surveys do not appear to have been conducted. The comment goes on to indicate that “Instead of performing protocol-level surveys to fully identify occupied areas, the DEIR identifies areas of suitable habitat and attempts to support conclusions that no significant impacts would occur to those areas. The Department does not agree with those conclusions.”

In response to comment 2-67 it is first important to point out that current California red-legged frog survey protocol from the USFWS indicates that no additional surveys for red-legged frogs should be conducted once their presence has been established (USFWS 2005)⁹. Because red-legged frogs are known to move from site to site and they are present in Swiss Canyon and have been reported from the Big Sur River (DEIR page 4.3-25), it is reasonable to assume they can be found in other areas of suitable habitat during the appropriate time of year. For this reason, protocol surveys were not necessary and not conducted. The impact analysis focuses on those areas where frogs could occur and where the project would alter existing conditions. These include Swiss Canyon, the Big Sur River, and the tailwater pond. Each of these areas is discussed in more detail in RTCs 2-68, 2-69, and 2-70.

RTC 2-68

Comment 2-68 focuses on the tailwater pond and states that “the tailwater pond is not included in impacts analysis for RFL...” The comment indicates that a doubling in irrigation water would impact the conditions in the tailwater pond. CDFG states that the status of the frogs within the pond needs to be determined and impacts that could reduce the quality of the pond in terms of frog habitat need to be discussed. The comment recommends that protocol-level surveys be conducted and submitted to CDFG and the USFWS for review.

The response to the comments suggestion that protocol surveys are needed, we refer the reader to RTC 2-67. The tailwater pond is considered suitable habitat for red-legged frogs and is defined as

9 USFWS (US Fish and Wildlife Service) 2005. Revised guidance on site assessments and field surveys for California red-legged frog, August 2005.

such in the DEIR (page 4.3-25). The reason the tailwater pond is not evaluated in detail within the impact analysis is as follows. Historical pumping during the breeding season (December through March) averages from 0 to 3 acre-feet with a maximum historic December pumping of 57 acre-feet, presumably in an extremely dry year (Table 4.2-2). The annual average rainfall for the area is about 40 inches of which approximately 38 inches arrive between November and April (DEIR page 4.2-6). Because irrigation practices would not change as part of the proposed project, operations and water levels in the tailwater pond would also not change. Minimal irrigation would occur during the breeding season because normal precipitation patterns provide adequate water for the pastures. In fact, irrigation during extremely dry December's may help maintain habitat for frogs in the tailwater pond.

RTC 2-69

Comment 2-69 relates to the runoff from the pastures adjacent to Swiss Canyon and cites a report by Miriam Green and Associates that indicates irrigation runoff is important in contributing to red-legged frog habitat. CDFG indicates that this report identifies other degradation to Swiss Canyon that result from ranching operations. The comment states that the DEIR "...claims that irrigation runoff does not seep into Swiss Canyon and that erosion does not occur, and that an increase in irrigation runoff would not result in a change of flow in Swiss Canyon." The comment indicates that CDFG is not able to reach the same conclusion with the information presented in the DEIR because the DEIR "...does not incorporate impacts from existing ranching operations in the discussion of potential Project-related impacts..." The comment concludes with the statement that "...the conclusion that a doubling of applied irrigation water to the pastures would not result in a change in runoff or erosion conditions or any potential associated impacts to breeding RFL is not supported."

In response to comment 2-69, it is important to characterize the reference cited by CDFG in their comment. The comment correctly reports that the study by Miriam Green and Associates (2007) indicates that erosion and habitat degradation are a result of ranch operations. The Miriam Green and Associates report indicates that surface runoff from pasture irrigation does not enter the canyon, but asserts that irrigation seepage does and that the hydrology of the canyon is likely directly linked to the irrigation practices (Miriam Green 2007); however, the Green report contained no actual data to support this assertion. Because of that, additional work was conducted within Swiss Canyon in 2007 (Hanson 2008). Transects in the critically dry summer of 2007 indicated that there was no direct connection between irrigation practices and water levels in Swiss Canyon (Hanson 2008). The upper two transects were always dry regardless of irrigation, and the lowest transect always had water but water depths did not vary according to irrigation (Hanson 2008). As discussed in the DEIR (page 4.3-46), none of these studies have shown a direct overland flow from the POU into Swiss Canyon. Ranching has been occurring on El Sur Ranch for over 150 years (DEIR page 1-1); changes in ranching operations are not proposed and are, therefore, not evaluated in the DEIR.

RTC 2-70

Comment 2-70 focuses on the analysis of potential impacts on red-legged frogs in the Big Sur River from the proposed project. The comment states that a drop of 2 inches in the water surface elevation could expose red-legged frog egg masses to increased rates of predation or desiccation. CDFG disagrees with the conclusion made in the DEIR that these impacts would be less than significant and recommends that the impacts be considered significant and appropriate mitigation measures created to protect habitat during the breeding season.

In response to comment 2-70 it is important to recognize that the breeding season for red-legged frogs occurs between December and March with most eggs laid in March (DEIR page 4.3-24). Also as noted in the DEIR, red-legged frog eggs hatch in 6-14 days depending on water temperature. Flows in the Big Sur River during this period are extremely variable. Most of the precipitation that the

watershed receives in a year comes during this period of time. Review of the flow data for the USGS gage indicates an extreme amount of fluctuation in the system with mean daily discharges sometimes changing thousands of cfs in a 24-hour period. This is the natural fluctuation of the system that will change the water surface elevation in the project area substantially in a short period of time. In comparison, the change generated by the proposed project would amount to a small reduction in flow and a vertical change in water surface elevations of up to 0.17 feet (approximately 2 inches). This is also the time of year when the least amount of water is required for irrigation. Historic pumping data indicates that in most years no pumping occurs during these months (DEIR Table 4.2-2). In summary, because the natural system is highly variable during this period and minimal irrigation is required, the change in available habitat for breeding red-legged frogs potentially created by the proposed project is not considered a substantial change, and the impact is less than significant.

RTC 2-71

Comment 2-71 indicates that riparian habitats associated with the Big Sur River were suitable for ringtail, a fully protected species. The comment indicates that the DEIR should analyze impacts to this species and present specific mitigation measures as required. In response to comment 2-72, we refer the reader to the response to comment 2-58 for a discussion of ringtail and its inclusion in the DEIR.

RTC 2-72

Comment 2-72 indicates that steelhead are present in the Big Sur River and presents life history basics for this federally threatened species, and that flows in the Big Sur River are directly related to fishery habitat, both quantity and quality. The comment indicates that “Public Trust Resources, such as steelhead, native fish assemblages, invertebrates, and other aquatic resources are intricately connected to habitat instream flow and habitat conditions.” The comment relates that impacts to fish passage, DO, and temperature would occur.

In response to Comment 2-72, we acknowledge the information presented in the comment and note that the DEIR discusses impacts to steelhead from changes in passage, DO, and temperature in detail. Public trust resources are addressed in RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28.

RTC 2-73

Comment 2-73 states that “impacts to all important stream components of fishery habitat must be considered significant when the fishery investigation utilizes appropriate sampling methods and actual field conditions, directly related to time and place of impact. Fish and aquatic species respond to daily, instantaneous habitat conditions, not running cumulative means, averages, and percentages as presented in the DEIR. Stream components of fishery habitat include hydrology, geomorphology, biology, water quality, and connectivity.”

In response to Comment 2-73, we refer the reader to the response to comment 2-23 where the issue of instantaneous versus mean daily and exceedance flows is discussed in detail. It is also worth noting that all of the fisheries studies conducted for the proposed project were done to specifically evaluate the response of fish to an increase in pumping along with evaluation of changes in habitat.

RTCs 2-74 and 2-75

There are several points raised in comment 2-74 and 2-75. Comment 2-75 is included in this discussion because it is part of the same discussion. The first point is that the impact analysis for fishery resources must consider all water diversion by the applicant, not the incremental increase

compared to historical diversions. The second point is that the cumulative impact analysis needs to include an assessment of effects at multiple levels including direct, indirect, short-term, long-term, at multiple time scales, and include natural disasters (drought, fire, and flood). The third point is that impacts to public trust resource need to be identified and addressed. The comment goes on to present several reasons why the Big Sur River is an important resource for regional steelhead populations. The final point in this comment is a presentation of avenues of impact through which water diversions can impact aquatic resources. These impact avenues include:

- 1) wetland and riparian areas not maintained;
- 2) lack of water table recharge;
- 3) lack of streambank and channel area inundation and scour;
- 4) changes in the ratio of riffle to pools;
- 5) loss of connectivity between surface and subsurface flow;
- 6) loss of year-class steelhead because juvenile fish cannot move through ZOI; and
- 7) inability to move between the lagoon and river for juvenile steelhead rearing.

In response to Comments 2-74 and 2-75, we first refer the reader to the responses to comments 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28 for a complete discussion of public trust resources. The evaluation of the entire amount of water to be diverted by the applicant is not the proposed project evaluated in the DEIR. The reader is referred to previous responses to comments addressing the project and project description, including 2-9, 2-10, 2-11, 2-15, and 2-16.

In response to the comment that the DEIR needs to include assessment at multiple levels and time scales, we first note that the proposed project would have impacts only to steelhead (passage and water quality), reptiles and amphibians (habitat, water quality, and flows), and riparian vegetation. The cumulative context established in the DEIR for the analysis of cumulative impacts is the Big Sur watershed. The DEIR notes that because of the location of the ZOI at the mouth of the river, any impairment of passage for adult or juvenile steelhead or changes in water quality would be considered cumulatively significant impacts. Because of the project's location, issues relating to the short- versus long-term impacts, direct or indirect, various timescales and so on, became less important. The fact that the proposed project could impair upstream movement of adults is cumulatively considerable because if the fish cannot reach spawning areas upstream, or are substantially delayed, the Big Sur River population of steelhead is at risk. Because of the importance of the lagoon and lower river as rearing habitat for juvenile steelhead, alteration of flow such that juvenile fish cannot move between habitats or water quality is impaired is also considered cumulatively considerable. Because of the high level of connectivity between the river and groundwater and the speed at which the groundwater recharges, there does not appear to be a cumulatively considerable impact on riparian vegetation, even under critically dry conditions. Cumulative impacts on reptiles and amphibians generated by the proposed project are not considerable in the face of other reasonably foreseeable natural events (drought, flood, fire). For example, one period of high flow during the red-legged frog egg laying period could remove an entire year class from the population, because negligible pumping occurs during these conditions, the project contribution is not considerable. Overall, the cumulative impacts are adequately addressed given the localized nature of the proposed project and the watershed context in which effects are analyzed.

The impact avenues presented in the comment are addressed within the DEIR as follows:

- 1) wetland and riparian areas not maintained – DEIR Page 4.3-47;

- 2) lack of water table recharge – DEIR pages 4.2-58 to 4.2-64;
- 3) lack of streambank and channel area inundation and scour – DEIR pages 4.2-58 to 4.2-60, 4.2-65 to 4.2-66 (channel forming factors);
- 4) change in the ratio of riffle to pools [Habitat typing required to discuss the ratio of riffles to pools has not been conducted for the lower Big Sur River. Surveys of the channel by fisheries professionals in multiple years indicated that there was no lack of connectivity between habitat units (Hanson 2005; 2007; 2008)];
- 5) loss of connectivity between surface and subsurface flow - DEIR pages 4.2-60 to 4.2-65 and 4.2-66 to 4.2-67;
- 6) loss of year-class steelhead because juvenile fish cannot move through ZOI – DEIR page 4.3-39; and
- 7) inability to move between the lagoon and river for juvenile steelhead rearing – DEIR page 4.3-39.

RTC 2-76

Comment 2-76 indicates that CDFG has listed the Big Sur River as a priority stream for an instream flow assessment pursuant to PRC 10004.

In response to comment 2-76 we note the information contained in the comment and hereby forward it to the project decision-makers.

RTC 2-77

Comment 2-77 indicates that the “DEIR for water right application lacks the important information required to make a determination of level of impact. The applicant provided inadequate information from an Instream Flow Study and Thompson Method...” The result of this is that CDFG is conducting an instream flow study to be completed in 2011 or 2012 and the comment recommends that interim instream flows be established until that study is complete.

In response to comment 2-77 we note that the comment is directed at the water rights application and not the DEIR itself. As CDFG has noted in other comments, an Instream Flows Study was not conducted in preparation for the DEIR. The riffle profile data collected by the applicant was used in the evaluation of potential changes in passage conditions associated with the proposed project. The analysis presented by the applicant was identified in the DEIR as being of limited use (DEIR page 4.3-31) and another approach was taken using the raw data on depths and widths collected by the applicant. While the comment recommends interim flow, it does not include specific values.

RTC 2-78

Comment 2-78 presents the information to be included in the instream flow study that CDFG is conducting. The comment indicates that CDFG will include areas from the lagoon upstream, that they have identified critical riffles, and will be investigating salinity, depth, and substrate. The end result will be a flow-habitat relationship. The information presented in Comment 2-78 does not require a response but the information is hereby forwarded to the project decision-makers for their consideration.

RTC 2-79

Comment 2-79 indicates that the most critical elements of juvenile steelhead relate to rearing conditions in the river, lagoon, and changes in habitat quality and quantity that reduce growth rates. The comment presents a 1994 CDFG study that shows little to no growth in steelhead during the drier months of late summer to early fall. This has implications for the proposed project "...if the carrying capacity of the river is continued to be reduced by water diversions. Juvenile steelhead, instead of maintaining their weight thru [sic] the summer, in order to smolt and migrate out to the ocean, will losing [sic] weight. This increases the mortality and reduces the percentage of successful recruitment of spawning adults to perpetuate the species through generations."

In response to Comment 2-79 we note that the late summer and fall periods are typically the most stressful for steelhead populations. Flows are naturally low resulting in limited available habitat. Water temperatures are generally as warm as they get all season and result in increased metabolic rates above the point at which growth occurs. Levels of dissolved oxygen are directly related to water temperatures with warmer water less able to contain dissolved oxygen. These conditions all combine to create an annual bottleneck of stressful conditions for steelhead. These conditions naturally occur throughout the watershed. Flows in the Big Sur River are essentially unimpaired. The DEIR discusses the impacts resulting from increased diversion on rearing steelhead; an analysis that utilizes site-specific data collected during late summer and fall months (DEIR page 4.3-32 to 4.3-34). We agree that mortality could reduce the number of returning adults and this is one reason that impacts to juvenile steelhead were considered significant in the DEIR, requiring the implementation of proposed mitigation measures to reduce the impact to a level of insignificance.

RTC 2-80

Comment 2-80 states that "Reductions in water flow reduce the availability and quality of prey available to steelhead for maintenance and growth." "The larger steelhead smolts have a more successful rate of return. Lagoons are well know[n] to provide important rearing habitat for salmonids, showing growth rates in steelhead that are much higher than growth rates in the streams." The comment goes on to present a substantial amount of information about why the steelhead run in the Big Sur River is important to the species as a whole and other local streams.

In response to Comment 2-80, we first point out that the lagoon is on the very fringe of the ZOI (SGI 2008). Temperature monitoring studies have shown that while there is a correlation between pumping and changes in temperature, the change is very small and all temperatures remain below the thresholds defined in the DEIR. The Hanson (2005) study indicated that DO concentrations in the lagoon were above levels considered stressful. Because of this, this area was not included in studies conducted in following years. Lagoon salinity levels were also found to be within acceptable limits in this study (Hanson 2005). Based on the available information, it does not appear that the proposed project is influencing the quality or quantity of rearing habitat available in the lagoon.

RTC 2-81

Comment 2-81 states that "Another critical issue to address is the monitoring of steelhead rearing and utilization of available and suitable habitat to maintain a healthy, productive fish population. This includes a baseline bioassessment in areas affected by diversion, downstream in [the] lagoon, within the area of impact or zone of influence, and upstream of impact. Intensive monitoring for success of the appropriated flow to protect instream resources will be required." The remainder of the comment reiterates earlier comments from CDFG regarding the instream flow study that is being conducted by CDFG and how it is important to incorporate a wide range of ecosystem values in any monitoring study. The final point in this comment states that CDFG is the "...California trustee agency for fish

and wildlife...” and how the SWRCB is required to “...give great weight to the Department’s judgment with respect to fish and wildlife needs.”

In response to Comment 2-81, we note that the focus in the first part of this comment appears to relate to post-decision monitoring. The statement that “Intensive monitoring for success of the appropriated flow to protect instream resources will be required” indicates that this is a comment for the SWRCB to take into consideration when making a decision on the proposed project and compliance conditions. The second part of the comment addresses the instream flow study that CDFG is conducting. It is noted that CDFG is the trustee agency for fish and wildlife and the comment about how the SWRCB must take CDFG’s recommendations into consideration is forwarded to the project decision-makers.

RTC 2-82

Comment 2-82 states that CDFG “...is mandated by the Salmon, steelhead trout, and Anadromous Fisheries Program Act of 1988 to significantly increase the natural production of steelhead in the state. Protecting instream flow on the Big Sur will help us attain our as-yet unmet goal.” In response, we note that CDFG is mandated to increase the production of steelhead and hereby forward this information to the project decision-makers.

RTC 2-83

In Comment 2-83 CDFG “...recommends that protective flows be established if the SWRCB issues a permit for this water right application.” CDFG further states that the SWRCB consider the differences between Beneficial Uses and Essential Uses and recommends that protective instream flows be considered an Essential Use. The comment goes on to list several beneficial uses provided by the protection of instream flows.

In response, we note CDFG’s recommendation that protective flows be established and hereby forward that recommendation to the project decision-makers.

RTC 2-84

Comment 2-84 states that “The existing and proposed diversion may be considered ‘waste and unreasonable use’ based on a request which is not consistent with Water Code and implementing policy.” CDFG states that this “is significant when evaluated in light of the significance of Public Trust Resources, and the continual decline in the salmonid, steelhead fishery.”

In response to Comment 2-84, protection of public trust resources is addressed in RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28. A discussion of the reasonable use of the diverted water is presented in response to comment 2-46.

RTC 2-85

Comment 2-85 discusses the importance of the lagoon and river in the vicinity of the diversion in relation to their ability to support fish passage and rearing. The comment states that “The diversion affects a critical reach in the watershed. It is upstream of the lagoon, and therefore has significant effects on the conversion of the lagoon to excellent rearing conditions. These diversion influences also affect the behavior of the river mouth and therefore, salmonid access, and rate of conversion of the lagoon from saltwater to freshwater, or some stage in-between.” The comment also states that because the diversion is upstream of the lagoon it “...could have profound impacts on the ability of steelhead to move not only upstream to benefit from the resources in the entire watershed above the diversion...” The comment goes on to point out that the SWRCB decision must reflect impacts to

threatened and endangered species and that public trust resources would be protected through implementation of protective instream flows. CDFG recommends in this comment that a water availability analysis for all known and foreseeable diversions be conducted.

In response to Comment 2-85, we agree with CDFG's statement that the ZOI would affect a critical area for steelhead in relation to the overall Big Sur River. The influence of the proposed project on the lagoon habitat quality has already been discussed in response to comment 2-80. The increase in diversion associated with the proposed project would correspond to an instream flow reduction of about 0.4 cfs (based on an instream reduction of 0.3 cfs for each 1 cfs diverted and an incremental increase associated with the proposed project of 1.4 cfs). This change in flow is small enough it would not be expected to substantially alter the connection between the Big Sur River and the ocean as asserted in the comment. The fish passage analysis contained in the DEIR (pages 4.3-36 to 4.3-42) indicates that the proposed project could impair passage under certain conditions. SGI (2007; 2008) has prepared water availability analysis for the river that includes the proposed project (DEIR Appendix A).

RTC 2-86

Comment 2-86 indicates that there are other pertinent sources of data that should have been consulted during preparation of the DEIR. These are the *Big Sur River Protected Waterway Management Plan of 1985* and *The Use of Bioassessment to Determine the Biotic Condition of Two Sites on the Big Sur River, Monterey County, CA* (December 2009 by Jim Harrington)

In response to Comment 2-86, the Big Sur River Protected Waterway Management Plan was used in preparation of the DEIR. The bioassessment paper was not available until December 2009, after the DEIR had been published.

RTC 2-87

Comment 2-86 indicates that the "Anadromous Sport Fish Management and Research Program, Project 55-South Central Salmon and Steelhead Restoration and Enhancement Program is conducting a fish population inventory and habitat assessment project on the Big Sur to provide a basis for improved management of steelhead stocks, and to identify restoration measures and actions." The second study mentioned in this comment is the Coastal Biodiversity Measured through Baseline Assessments of Important Lagoons in Central Coast Bioregion. This is intended to focus on coastal lagoon ecosystems but has not yet been funded. The comment also indicates that CDFG "...has files of stream surveys, creel surveys, reports, and investigations dating back to surveys conducted by Shapovalov and Taft on the Big Sur in 1945."

In response to Comment 2-86, we note that the comment provided no information regarding the Anadromous Sport Fish Management and Research Program, Project 55-South Central Salmon and Steelhead Restoration and Enhancement Program and we have been unable to determine the status of this entire program, as well as the specific project referenced in the comment. The way the comment was written would seem to indicate that this project was underway and therefore not complete or available for use in the DEIR. The second study referenced in the comment is not funded and work has not started, it is therefore not available for use in the DEIR. We appreciate the information that CDFG has on file, but the status of steelhead within the project area was never in question and it is unlikely that historical stream and creel survey data even if available for public review, would add substance to the impact assessment presented in the DEIR or would alter the conclusions of that assessment.

RTC 2-88

Comment 2-88 presents three additional reports from the Department of Parks and Recreation that relate to the project area. These are: *Andrew Molera State Park Cooper Grove Management Plan* (April 2003), *The Big Sur River Steelhead Enhancement Plan* (March 2003), and *The East Molera Grassland Avian Monitoring Report* (May 2001).

In response to Comment 2-88, the Cooper Grove Management Plan addresses monarch butterflies, but monarch butterflies are not considered a sensitive species and therefore are not discussed in the impact analysis of the DEIR. Additionally, the proposed project would not alter conditions within this grove, so the value of the report to the EIR is somewhat questionable. *The Big Sur River Steelhead Enhancement Plan* provides guidance to the State Parks in planning restoration and management activities. This plan specifically addresses the applicant's water right application and the DEIR that would result from that application. It presents an abundance of background information on steelhead resources within the watershed, but there is no new information that would substantively alter the impact analysis or conclusions contained in the DEIR. There is a more recent avian monitoring study than the one referenced by CDFG (2004; available online at: http://www.ventanaws.org/pdf/about_research/EMG%20report%202004.pdf).

The study area in the report does not include any locations to the west of Highway 1. While Plot 1 is near El Sur Ranch, the habitat is very different and the species distribution would be expected to be different as well. A review of this report does not result in the identification of any sensitive species that would be expected to breed within the POU that have not already been discussed.

RTC 2-89

Comment 2-89 indicates that "The California State University, Monterey Bay has been conducting graduate research on the Big Sur River." The most recent is *Post-fire Baseline Monitoring of Big Sur River Lagoon: November/December 2008* (Watershed Institute Publication No WI-22008-7).

In response to Comment 2-89, we acknowledge that this study could have been used in preparation of the setting discussion for the DEIR, most likely in Section 4.2. It contains entirely baseline data collected in order to help future studies understand the effects of fire on the watershed. There is no information in this document that would change any of the conclusions in the DEIR.

RTC 2-90

Comment 2-90 under the heading of "Alternatives" reiterates several comments provided earlier in Comment Letter 2. Paragraph 1 of Comment 2-90 questions the validity of the environmental baseline and contends that, "...all of the proposed alternatives, with the possible exception of the No Project/No Permit Alternative, would result in significant and potentially unmitigable impacts." The comment further contends that each of the alternatives, possibly including the no project alternative, will not adequately protect public trust resources.

In response to Comment 2-90, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 which support the validity of the environmental baseline used in the DEIR. We also refer the reader to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28 which address the issue of public trust resources protection.

RTC 2-91

Comment 2-91 contends that the proposed alternatives presented in the DEIR do not meet CEQA requirements that alternatives must be capable of avoiding or substantially lessening any significant

impacts. The comment also contends that each of the alternatives, possibly including the no project alternative, will not adequately protect public trust resources and/or could not be permitted under existing statutes, regulations, policies and case law.

In response to Comment 2-91, we disagree with the comment's contention that the DEIR alternatives do not meet CEQA requirements. As explained in Chapter 6 of the DEIR, each of the proposed alternatives is designed to reduce potential impact of the proposed project or reduce the need for mitigation in a manner consistent with the State CEQA Guidelines and existing case law. We assume that the comment's contention that the alternatives do not reduce impact is based on the commenter's previously-stated disagreement with the environmental baseline used in the DEIR to determine potential project impact. In response, we refer the reader to RTC 2-31 which states:

In response to Comment 2-31, we refer the reader to previous RTCs which address the appropriateness of using the environmental baseline described in the DEIR, particularly RTCs 1-7, 1-8, 1-9, 2-10, 2-11 and 2-19. We acknowledge CDFG's belief that use of an alternative baseline may result in different findings than those presented in the DEIR concerning impacts on the Big Sur River and associated species and habitats and the POU, but for reasons presented in prior RTCs, use of an alternative baseline is inconsistent with the CEQA Guidelines and CEQA case law.

Regarding the comment's reference to public trust resources, we refer the reader to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28.

RTC 2-92

Comment 2-92 states:

The No Project/No Permit Alternative, was dismissed stating that "most of the basic project objectives, particularly the key objective of authorizing the historical water use on the Ranch's irrigated pasture would not be realized." In fact, most of the project objectives would be met, with the exception of authorizing the historical (and unpermitted) water use. This would meet the standard of CEQA: "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly".

In response to Comment 2-92, the No Project/No Permit Alternative was not "dismissed" in the DEIR. The DEIR evaluates the No Project/No Permit Alternative in keeping with the requirements of Section 15126.6(e) of the State CEQA Guidelines. As noted in Section 15126.6, "the purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The DEIR's evaluation of the No Project Alternative does this.

The DEIR also assesses whether or not the alternative would achieve most of the basic project objectives. As noted in Comment 2-92, the DEIR clearly states the No Project Alternative would not meet the basic project objectives. While the comment disagrees with this conclusion, the comment provides no evidence or explanation to support this position. With the elimination of irrigation diversions on all but 25 acres of the proposed El Sur Ranch POU, as would occur with the No Project Alternative, it is reasonable to conclude that the key project objective of maintaining historical irrigation practices would not be met.

RTC 2-93

Comment 2-93 addresses the No Change in Existing Practices/Historical Diversions Alternative. The comment, in part, states:

...the DEIR concludes “the magnitude of change relative to the proposed project is difficult to predict. Because seasonal maximum volumes are higher than the proposed project, this alternative could still result in significant impacts on steelhead habitat through reductions in flow or DO.” It is not clear that this alternative would meet the intent of CEQA, in requiring that alternatives “are capable of avoiding or substantially lessening any significant effects of the project”.

In response to Comment 2-93, we refer the reader to the complete text of the discussion presented in the DEIR under the subheading “Comparative Analysis of Impact” for the No Change Alternative beginning on page 6-10. For clarification purposes, the Alternative represents a reflection of environmental baseline conditions. As such, Impacts 4.2-2, 4.2-4, 4.2-6, 4.2-8, 4.2-10, 4.2-11, 4.3-1, 4.3-2, 4.3-4, 4.3-9, 4.3-10, and 4.3-12 which were found to be potentially significant in the DEIR would be avoided through implementation of the No Change Alternative, because these impacts are defined by the change to the environmental baseline that would occur under the proposed project. Simply put, if the No Change Alternative would result in no change to the environmental baseline, then no impact would occur. As such, the alternative meets the criteria requiring an alternative to avoid or substantially lessen significant effects of the proposed project.

For purposes of clarification, the statement from the DEIR quoted in Comment 2-93 that, “Because seasonal maximum volumes are higher than the proposed project, this alternative could still result in significant impacts on steelhead habitat through reductions in flow or DO,” refers to the fact the diversion restrictions contained in Water Right Application 30166 would result in reduced seasonal diversions under various flow conditions relative to the historical conditions and the No Change Alternative. Therefore, under some circumstances, benefits of the proposed diversion restrictions in Water Right Application 30166 would not occur under the No Change Alternative. This would result in a “significant impact” *relative to* the proposed project. For reasons discussed above, however, this would not meet the definition of a significant impact under CEQA, i.e., a physical change in the environmental baseline.

RTC 2-94

Comment 2-94 addresses the Alternative Irrigation Efficiency Alternative. The comment notes the alternative does not prescribe “bypass flows” which the comment contends are needed to protect public trust resources. Further, the comment states, “This alternative could have quite a bit of value, if combined with another alternative which would cap diversions at a level prescribed by Water Code and its implementing regulations.”

In response to Comment 2-94, we refer the reader to RTC’s 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address CEQA requirements relative to the issue of public trust resources. Regarding the issue of prescribing bypass flows, we refer the reader to RTCs 2-38, 2-39, 2-41 and 2-48. Regarding Water Code prescriptions for capping project diversions, this issue is addressed in several responses above. In particular, please refer to RTC 2-36.

RTC 2-95

Comment 2-95 addresses the Alternate Limits on Diversions Alternative. The comment contends the alternative would not provide adequate protection for public trust resources. The comment also states, “Additionally, it is not clear why the SWRCB would consider an alternative, which is

suggested by the applicant, instead of consideration of a meaningful alternative, which would actually reduce the effects of the proposed project.”

In response to the comment, we refer the reader to RTC's 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address CEQA requirements relative to the issue of public trust resources. The alternative was developed by the project applicant as a means of achieving the basic project objectives in a way that is operationally manageable yet is designed to reduce diversions during key periods of steelhead movement through the area of the river and lagoon potentially affected by irrigation diversions. For these reasons, the SWRCB found it appropriate to include the alternative for evaluation in the DEIR and has exercised its independent judgment in evaluating the alternative.

RTC 2-96

Comment 2-96 introduces CDFG's recommendation to include the evaluation of a new alternative in the EIR. The comment states:

The Department recommends an alternative which would be consistent with Water Code, regulation, policy and case law; and would require the maintenance of bypass flows which would protect public trust resources. We do not believe any of the other alternatives, except possibly the No Project/No Permit Alternative, would be consistent with Water Code, regulation, policy and case law; and we do not believe that No Project/No Permit Alternative would necessarily protect public trust resources.

In response to Comment 2-96, we first refer the reader to RTC's 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address CEQA requirements relative to the issue of public trust resources. We also note CDFG's recommendation to evaluate a new alternative. This evaluation is included below in responses to comments 2-98 through 104, below.

RTC 2-97

Comment 2-97 states:

The water right, in particular the allowable annual diversion and the rate of diversion, as well as terms and conditions, which would limit the amount and rate of diversion, should be predicated on several assumptions, primarily (1) the verification of the acreage which is currently irrigated pasture, not including those areas which are not suitable, including but not limited to: dunes, Tailwater pond, outfall, access roads, irrigation canals and Swiss Canyon; (2) verification of what portion of the irrigated pasture is within the Big Sur River watershed, and therefore riparian and not a part of an appropriation; (3) verification that the water duty identified in regulations regarding the amount of water considered reasonably necessary is 1 cfs per 80 acres (California Code of Regulations (CCR), Title 23, Section 697(a)(1)); and (4) identification of what would constitute reasonable, useful and beneficial purposes of the diverted water when applied to the uncultivated pasture of the POU, up to a maximum of 2 ½ acre feet per acre (AFA) per year. While that figure (2 ½ AFA) is less than that which has historically been diverted without permits, comparable sites in coastal Monterey typically utilize 2 AFA for irrigate pasture; cultivated crops in coastal Monterey County, including strawberries, vegetables and field flowers, use 2 to 3 AFA.

In response to Comment 2-97, we first acknowledge the comment's recommendation that an Alternative be developed. As presented in RTC 2-13 above, the EIR has been revised to include an

alternative that incorporates proposed terms and conditions for dismissing its protest of the Water Right Application No. 30166, which were submitted by CDFG in a letter to Ms. Victoria Whitney of the SWRCB Division of Water Rights, dated July 23, 2010. The SWRCB has included an analysis of these terms and conditions in revisions to Chapter 6.0 of the DEIR. These revisions to DEIR are presented Chapter 2 of this Final EIR on page 2-15.

Comment 2-97 recommends an alternative with terms and conditions that would be predicated on several assumptions presented in the comment. These assumptions prescribe the “verification” of several elements of the alternative. Because the comment appears to imply that this verification is lacking for the proposed project, we offer the following information:

- 1) The acreage within the POU for Water Right Application that would contain irrigated pasture is detailed on page 2-5 (last paragraph) of the DEIR. As described in the DEIR, the proposed POU consists of 267 acres of irrigated pasture. This acreage includes Swiss Canyon, but does not include dunes, the tailwater pond, outfall, access roads, and irrigation canals.
- 2) The POU includes 25 acres of land that was determined to be, at least historically, within the Big Sur River watershed for purposes of establishing a riparian water right for that portion of El Sur Ranch irrigated pasture. Previous grading of the POU prevents runoff from the POU to drain to the Big Sur River.
- 3) The California Code of Regulations, title 23, section 697(a)(1) states in part, “In most portions of the central valley of California and elsewhere in the State where similar conditions prevail a duty of one cubic foot per second continuous flow to each 80 acres shall be considered a reasonable headgate duty for most crops.” As explained above in RTCs 2-34 through 2-37, the applicable duty in section 697(a)(1) varies depending on conditions throughout the state. We note that the proposed POU consists of 267 acres total, with 242 acres of the site requiring an appropriative right. For purposes of this discussion, we need not decide whether the duty set forth in section 687(a)(1) for most portions of the Central Valley for most crops is applicable to pastureland along the Big Sur River. Even using the guidelines for water application presented in section 697, as the commenter suggests, the proposed Water Right Application 30166 seeks to divert a lesser amount (a maximum annual allowable diversion of be 1,615 acre-feet/year) than would be allowed under section 697, an application of 2,418 acre-feet/year.¹⁰

Approximately 25 acres of the 292-acre project site comprise dunes, the tailwater pond, outfall, access roads, and irrigation canals. The remaining 267 irrigated acres is the POU. Of those 267 acres, approximately 25 acres are within the Big Sur River watershed and are, therefore, served by the applicant’s existing riparian water right. The location of the riparian area within the POU is shown in Figure 2-2. Under a riparian right, water diverted from the Big Sur River can only be applied to land adjacent to the river and within the watershed. It cannot be diverted to irrigate other pasture land that is non-riparian. The remaining 242 acres of pasture comprise the area for which the proposed appropriative water right is being requested. Of these 242 acres, 221 acres are pasture to which irrigation water is directly applied via flood irrigation. According to the project applicant, the additional 19 acres occur in Swiss Canyon and these acres are indirectly ‘irrigated’ by seepage from flood irrigation of adjacent pasture. The 19 acres that occur in Swiss Canyon were included in the water use requirements analysis and in the appropriative water rights prepared by the project applicant. In summary, of the 292 acres comprising the project site, 25 acres are served by the existing riparian water right; 25 acres contain non-irrigated uses such as roads, dunes, and the tailwater pond; 223 acres comprise directly irrigated pasture that require an appropriative water right,

¹⁰ 2,418 acre-feet/year was derived by the following calculations: 1 cfs x 267 acres/80 acres = 3.34 cfs = 0.0000766758483 acre-feet/sec. 0.0000766758483 acre-feet/sec x 31,536,000 sec/yr = 2,418 acre-feet/yr

and 19 acres comprise Swiss Canyon which is indirectly irrigated via subsurface seepage from flood-irrigated pasture.

The comment does not raise significant environmental issues. The SWRCB, however, will consider the issues raised and other issues under its regulatory, statutory, and constitutional responsibilities, independent of CEQA, in evaluating whether and how to approve the water right application.

RTC 2-98

Comment 2-98 states:

The Department recommends that the annual diversion be based on a formula which would multiply the acres of irrigated pasture subject to the appropriated water right, multiplied by the AFA appropriate to local conditions, not to exceed 2½ AFA, as specified in Water Code section 1004. The Department does not support bifurcation of the allowable diversion into an “average” and a “maximum” amount; nor do we support an “average” amount, based on a 20-year rolling average, be approved for diversion (see discussion above as this applies to impact analysis). The Department recommends the SWRCB identify an annual allowable diversion amount, which is not subject to averaging over multiple years, and is the maximum allowable each and every year, subject to such limitations as may be imposed via additional terms and conditions.

In response to Comment 2-98, Section 1004 of the California Water Code states that "useful or beneficial purposes" shall not be construed to mean the use in any one year of more than 2½ acre-feet of water per acre in the irrigation of uncultivated areas of land not devoted to cultivated crops. The comment does not identify any specific environmental issues but instead recommends a limit on the allowable diversion of water. The SWRCB, however, will consider the issues raised and other issues under its regulatory, statutory, and constitutional responsibilities, independent of CEQA, in evaluating whether and how to approve the water right application. The commenter does raise specific environmental issues related to diversion in other comments. These issues are addressed in responses to those comments. We also refer the reader to RTC 2-97, above.

Comment 2-98 recommends that the water right specify an annual diversion limit that would not vary from year to year, as opposed to the proposed water right conditions which would allow for variable annual diversion limits that are contingent on climate conditions and past water use. We note that proposed conditions for Water Right Application 13066 are intended to ensure adequate water applications while taking into account climate. These conditions would further limit annual diversions on the ranch site beyond the “maximum allowable annual diversion” specified in the amended application. Aside from simplifying application conditions, the comment presents no discussion of any potential environmental benefits of such a designation. Please refer to the new alternative presented in Chapter 2 of this Final EIR (beginning on page 2-15) which addresses potential effects of an alternative (Alternative 5: CDFG Alternative) 2.5 acre-feet per acre annual diversion limit with a maximum diversion rate of 2.79 cfs. The 2.5 AFA annual diversion limit for 223 acres, alone, would reduce the amount of irrigation by 54 percent compared to the proposed project 20-year rolling average (557.5 AFY compared to project 1,200 AFY) and 35 percent less than baseline conditions (857 AFY). The project’s requested diversion is based on the NRCE 2007 report calculations of irrigation requirements for optimum forage within the area. NRCE 2007 Calculations were based on local climatic conditions, soils, and irrigation efficiency of 65 percent with 10 percent leaching factor, as recommended by NRCE. Not only is 2.5 AFA less than the 20-year rolling average calculated irrigation requirements, it is less than the calculated maximum seasonal irrigation requirements (735 AF) and maximum baseline seasonal irrigation use (701 AF).

RTC 2-99

Comment 2-99 states:

The applicant has suggested a maximum allowable rate of diversion (in cfs) and an average rate of diversion (in cfs), which could be limited by a complicated set of criteria in dry and critically dry years. The applicant appears to have assumed a duty of 1 cfs per 50 acres, and included their entire irrigated lands (not just the POU subject to an appropriated right) in requesting 5.34 cfs as the allowable average diversion (267 acres/50 acres X 1 cfs/acre – 5.34 cfs). Regulations were promulgated by SWRCB to clarify information to be submitted with a water right application, including “amounts for which to apply”; the amount of water considered reasonably necessary for most portions of California would be a duty of 1 cfs per 80 acres (CCR, Title 23, section 697(a)(1)).

In response to Comment 2-99, please refer to RTC 2-97 above.

RTC 2-100

Comment 2-100 states:

We believe the duty of 1 cfs per 80 acres is more appropriate than that proposed by the applicant. The regulations allow for a greater rate of diversion for a lesser time period for any 30-day period, so long as there is no interference with other users, and it is specified in the permit (CCR, Title 23, section 697(a)(2)). The applicant has requested a maximum rate of diversion of 5.84 cfs; however, the DEIR has indicated that the ESR pumps are capable of pumping at a combined rate of 7.9 cfs. As we have noted above, the instantaneous rate of diversion (as opposed to daily, monthly, annual rate) is critical to maintaining sufficient bypass flows; and, it is important to note, it is difficult to determine the instantaneous rate of diversion, let alone regulate it. The Department recommends that the SWRCB identify an average rate of diversion which is consistent with the duty recommended in 697(a)(f1) of 1 cfs per 80 acres; additionally, that the SWRCB require a meter be installed on both wells which would measure and record for both wells, the time of day of pumping, and the instantaneous and cumulative diversion rates, to determine if the diversion rate(s) specified in the permit were being observed. Additionally, whatever rate is permitted (including any specified maximum rate), the Department recommends that terms and conditions be applied to require the applicant to maintain sufficient bypass flows which would be biologically meaningful to the public trust resources of the Big Sur River.

In response to Comment 2-100's reference to the maximum rate of diversion proposed in the Water Right Application 30166, the maximum instantaneous rate of diversion reflects the current maximum capacity of the both pumps operation simultaneously. As stated in the Application 30166: Third Amendment (page 8, first paragraph), the maximum diversion rate of 5.84 cfs was requested in the 1992 application and was based on the SWRCB's guidance document which set forth the estimated need for 1 cfs per 50 acres. As noted in the application amendment, however, the 5.84 cfs rate was maintained because it is close to the current combined pumping capacity of the two wells. Because the maximum rate of diversion contained in the water right application reflects the maximum physical capacity of the pumps, monitoring and enforcement of this rate is simplified. Relative to the propriety of using the 1 cfs per 50 acres standard to originally determine the proposed diversion rate, we refer the reader to RTC 2-97, above. Concerning the issue of bypass flows, we refer the reader to RTCs 2-38, 2-39, 2-41 and 2-48.

RTC 2-101

Comment 2-101 states:

The analysis in the DEIR compares effects of the applicant's proposed project to that which has been occurring on an unpermitted basis; the terms and conditions identified in Mitigation Measure 4.2-2 proposed to reduce diversion rates (not amounts) to address potentially significant effects. This would not address the protection of public trust resources; in fact, no information has been provided that previous, unpermitted diversions were not having a significant adverse effect on public trust resources, and the limitations which are recommended in MM 4.2-4 would not require bypass flows, or otherwise insure maintenance of steelhead habitat. Additionally, the thresholds identified in MM 4.2-2 are based on an unnecessarily complicated set of criteria related to percentile of dry and critically dry flow rate percentiles; if the ever-changing thresholds were to be exceeded, the diversion rate would be adjusted, again according to an unnecessarily complicated sliding scale of allowable diversion rates.

In response to Comment 101, we refer the reader to RTC's 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address CEQA requirements relative to the issue of public trust resources. With regard to the issue of requiring "bypass flows" we refer the reader to RTCs 2-38, 2-39, 2-41 and 2-48. Regarding to the comment's contention that the thresholds identified in MM 4.2-2 are unnecessarily complicated, we refer the reader to RTC 2-28.

RTC 2-102

Comment 2-102 states:

The Department recommends a more direct approach than is identified in the DEIR; specifically, that the allowable annual diversion (in AF), as well as the average and maximum rate of pumping (in cfs), be conditioned by criteria which would maintain bypass flows sufficient to protect fish, wildlife, and public trust resources. The specific terms the Department recommends would assume that the rate of diversion is the maximum permitted rate, and implement limitations on pumping (i.e. cessation of pumping, not just modification of the pumping rate) when the gauge indicates that habitat requirements for steelhead and other public trust resource would be impaired. The water rights permit should require cessation of diversion whenever the flows drop below the bypass requirement. The pumps would either be on or off, which can be easily monitored, rather than allowing varying rates of diversion, which could be impossible to monitor or enforce.

In response to Comment 2-102, an additional alternative to the proposed project was developed, assessed and included in this EIR. This alternative (Alternative 5: CDFG Alternative) was developed to include recommendations presented by CDFG in various comments including, but not limited to 2-104. The complete text of this evaluation is contained in Chapter 2 of this Final EIR (Changes to the DEIR). As presented in Chapter 2, above, Alternative 5 would eliminate the need for MM 4.2-2 in order to reduce potential project impacts on steelhead to less than significant levels. Alternative 5 would also provide additional beneficial impacts for steelhead by providing for improved water quality and fish passage conditions beyond that which currently exist under environmental baseline conditions. The ultimate determination of potential impact of Alternative 5, from a CEQA standpoint however, is identical to that of the proposed project, i.e., less than significant with the implementation of proposed mitigation measures. Further, as noted in Chapter 2 of this FEIR, Alternative 5 would result in substantial reductions in the ability of the project applicant to achieve the basic project

objective of maintaining irrigated pasture on the proposed POU. As such, Alternative 5 does not meet CEQA criteria for a feasible alternative to the proposed project.

RTC 2-103

Comment 2-103 states:

The thresholds for turning the pumps off would be based on maintaining flows, which would protect habitat for steelhead and other public trust resources. Ideally, a stream gauge would be located in the vicinity of the project, and "IFIM or similar methodology would have determined in-stream flows sufficient to maintain habitat, which would be tied to flows as measured at the gauge. The Department recommends that the SWRCB require installation and maintenance of such a gauge, to be located above the diversion, but below the other numerous diverters in the watershed. DFG is pursuing funding for purchase and installation of a gauge to facilitate ongoing studies; but would like the applicant to maintain the gauge, and should funding not be available to DFG, provide the funds for purchase and installation. While DFG is engaged in completing studies to determine in-stream flow requirements, it is recommended that interim thresholds be tied to the existing USGS gauge. Once more specific recommendations can be made; those recommendations should be tied to flows as measured at the new gauge, and those in-stream flow requirements adopted by the SWRCB for this permit.

In response to Comment 2-103, the conditions presented in Comment 103 were included in the development of Alternative 5: CDFG Alternative evaluated in Chapter 2 of this Final EIR. We refer the reader to that discussion which begins on page 2-15 of this Final EIR.

RTC 2-104

Comment 2-104 states:

Additionally, we suggest that this alternative be combined with the updated infrastructure identified in the Alternative Irrigation Efficiency Alternative. Increased irrigation efficiency would allow the applicant to make better use of the more limited amount and rates of diversion, which are proposed under this new alternative and could allow more optimal forage production. Although there are potentially significant effects of updating the irrigation system, the impacts are primarily related to the construction phase, and could likely be lessened over time to a level of less than significant.

In response to Comment 2-104, the conditions presented in Comment 104 were included in the development of Alternative 5: CDFG Alternative evaluated in Chapter 2 of this Final EIR. We refer the reader to that discussion which begins on page 2-15 of this Final EIR.

RESPONSES TO COMMENT LETTER 3: KIT CUSTIS, SENIOR ENGINEERING GEOLOGIST, CALIFORNIA DEPARTMENT OF FISH AND GAME. DECEMBER 10, 2009

Response to Comment (RTC) 3-1

Comment 3-1 provides background information on the proposed project that was presented in the October 2009 Draft Environmental Impact Report on the El Sur Ranch Water Right Application (DEIR). The comment notes that the physical setting, proposed diversion limits, and mitigation measures are complex. Further, the comment calls the mitigation measure limitations on diversions 'bypass' flows and that they are related to low river flow values as opposed to impacts to fish passage or habitat.

We agree with the commenter that the physical setting is very complex and that the proposed project would include different diversion criteria. We are uncertain as to what the commenter considers a mitigation measure element in determining that there is, "a 23-element mitigation measure for bypass flows needed to protect public trust resources."

In response to Comment 3-1, the mitigation measures are not intended to be 'bypass flows to protect public trust resources'. Determining and defining bypass flow requirements to protect public trust resources is not within the scope of CEQA; under CEQA, mitigation measures are presented to reduce potential project impacts compared to baseline conditions, where feasible. As such, the DEIR considers maintenance of baseline conditions during critical low flow periods as a means of avoiding significant project impact on stream flow and water surface elevation, using the best available information.

To date, there have been no studies determining what minimum bypass flow requirements would be required to protect public trust resources. If and when such determinations are made, the project applicant would be required, by law, to comply with the stated requirements, regardless of the current CEQA analysis. Further, the determination of bypass flows would have to be set to include the Big Sur River reach affected by pumping at the PODs; a bypass flow criteria would have to identify the flow required for passage and habitat within the zone of influence (ZOI). We have selected percentile-based flows because no flow relationship to fish movement criteria has been developed and percentile-based flows allows for a reasonable maintenance of baseline conditions during periods when flows are low enough that losses could be critical for instream conditions. Additionally, because the channel configuration is prone to change, mitigation measures based on bypass flows for fish passage and habitat within the ZOI would have to be updated on a regular basis because the changes in channel configuration would change the flow requirements necessary to support fish passage and habitat.

RTC 3-2

This comment identifies three plans incorporated into mitigation measures, identifies the irrigated lands WDR that may be applicable, and questions whether or not the plans identified in mitigation measures would be made available for public review and comment prior to approval through the CEQA process, incorporated into the water rights permit, or through the approval of another permit or order by the SWRCB.

Regarding the three identified plans, it should be noted that the 'potential third future plan' mentioned in this comment is, indeed, a feasibility study; it is not a plan. The feasibility study would only be required and conducted if the applicant wishes to continue project diversions under flow and temperature limiting conditions specified in Mitigation Measure 4.3-4a. If the applicant elects to not

use an aeration system, the diversion limitations outlined in Mitigation Measure 4.3-4a apply. If the applicant elects to use an aeration system (if it is feasible), then the diversion limitations in Mitigation Measure 4.3-4a do not apply.

Consultation with the Central Coast Regional Water Quality Control Board (RWQCB) confirms that the Irrigated Lands WDR would not apply to the project. The RCWCB's 2010 Conditional Waiver of Waste Discharge Requirements [WDR] for Discharges from Irrigated Lands¹¹ would not apply to the proposed project, nor do any WDRs for irrigated lands apply. It is important to note, however, that the ECOMP and IWMP included in Mitigation Measures 4.2-2 and 4.2-3 will adequately mitigate water quality and erosion effects identified in the DEIR. The Irrigated Lands WDR is discussed on DEIR page 4.2-42 and under Impact 4.2-6 on DEIR pages 4.2-73 to 4.2-74. The DEIR has been updated to remove discussion of this WDR on page 4.2-42, last partial paragraph, and discussion under Impact 4.2-6, on pages 4.2-73 to 4.2-74, because it has been confirmed to be not applicable to the proposed project. These changes are shown in Chapter 2 of this Final EIR on pages 2-7 through 2-12.

Mitigation measures 4.3-1 and 4.3-2 require consultation with NFMS and CDFG and approval of flow monitoring and operations plans by the SWRCB are required prior to implementation. Additionally, these plans must be incorporated into the Integrated Watershed Management Plan (IWMP). Mitigation Measure 4.2-3 requires that the ECOMP be submitted to and approved by the SWRCB. Mitigation Measure 4.2-2 does not, specifically, require approval prior to implementation, however, it does require approval for any modifications. As noted above, the flow monitoring and operations component of Mitigation Measure 4.2-2 (IWMP) requires agency consultation and approval. The DEIR's Mitigation Measure 4.2-2 has been amended to ensure approval of all operations prior to implementation of the IWMP and that appropriate measures are in place to ensure compliance with the water rights permit conditions.

- 4.2-2 *Extreme Critical Dry and Critical Dry Flow Rate Limitations on Project Diversions. Extreme Critical Dry and Critical Dry flows could result in significant aquatic habitat and water quality constraints. The Applicant shall immediately develop and implement an Irrigation Water Management Plan (IWMP) incorporating protocols and operator training to ensure that Project diversions do not cause or contribute to Extreme Critical Dry flows (less than the 10th percentile flow rate) or Critical Dry flows (less than the 20th percentile flow rate) greater than under Baseline rates as follows:*
- *For July through October, May, and December, when mean daily flow at the USGS gage is below the 20th-40th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 20th percentile mean daily flow rate (see also Mitigation Measures MM #4.3-1 and MM #4.3-2).*
 - *For January through April, when mean daily flow at the USGS gage is below the 10th-5th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 10th percentile mean daily flow rate (see also Mitigation Measure MM #4.3-1).*
 - *For June and November, when flow at the USGS gage is below the 10th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 10th percentile mean daily flow rate.*

11 See Order No. R3-2010-0040 at: http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/2010_0040_ag_order.pdf

- Table A lists the USGS Limiting Flow Rates (10th percentile or 20th percentile, as required, above), for each month. If flow at the USGS gage is less than the USGS Limiting Flow Rate, the Project diversions cannot exceed Baseline (Allowable) Diversion Rates until flow at the USGS gage is equal to or above the USGS Limiting Flow Rate.

TABLE A		
EXTREME CRITICAL DRY AND CRITICAL DRY FLOW RATE LIMITATIONS ON PROJECT DIVERSIONS		
Month	USGS Limiting Flow Rate^a cfs (flow rate percentile)^c	Baseline (Allowable) Diversion Rate^b cfs
January	18 (10 th)	0.01
February	23 (10 th)	0.00
March	31 (10 th)	0.00
April	26 (10 th)	0.42
May	22 (20 th)	1.69
June	11 (10 th)	2.89
July	10 (20 th)	2.48
August	8.4 (20 th)	2.32
September	7.7 (20 th)	2.60
October	7.9 (20 th)	1.47
November	9.8 (10 th)	0.20
December	17 (20 th)	0.05

Notes:

a. When flow rates at the USGS gage drop below this value, Project diversions shall not exceed Baseline (Allowable) Diversion Rate

b. The 20-year historic Baseline average diversion rate is the allowable diversion rate when flow at the USGS gage drops below the USGS Limiting Flow Rate

c. These numbers represent the USGS daily flow rate at the with the corresponding 20-year historic flow rate percentile in parenthesis. For example, in January, 18 cfs at the USGS gage station corresponds to the 10th percentile flow rate.

Source: PBS&J 2009.

The Applicant shall submit the IWMP to the SWRCB for review and approval and incorporate any additional requirements identified by the SWRCB into the IWMP. Any modification to the IWMP by the Applicant shall require the Applicant to incorporate and implement a monitoring program in the IWMP to field verify that Project diversion protocols and operations do not reduce flows within Zone 4 through Zone 2 such that the Extreme Critical Dry or Critical Dry flow rate conditions, as appropriate, critical passage conditions, and critical dissolved oxygen (DO) conditions are not violated. Diversions for the purpose of making flow rate measurements, pursuant to this mitigation measure or subsequent mitigation measures, are exempt from the diversion limitations imposed by this mitigation measure if notification of testing is provided to the SWRCB prior to the beginning of testing. Modifications to the IWMP shall be submitted to the SWRCB for review and approval prior to implementation of the modified IWMP.

The SWRCB will require all mitigation measures necessary to minimize any significant adverse environmental impacts. The SWRCB typically will require any necessary mitigation and monitoring as a condition of approval of a water right application.

The proposed incremental increase in irrigation applied would not substantially affect water quality compared to baseline because the same water source would be used. Land management practices identified in the ECOMP (Mitigation Measure 4.2-3) prevent the incremental increase in runoff and

erosion, and therefore pollutant transport, compared to baseline conditions. As such, impacts remain less than significant with mitigation, even though the proposed project would not be subject to conditions of the Irrigated Lands WDR.

RTC 3-3

This comment suggests that the DEIR appears to propose a modification of the SWRCB's Decision 1639 regarding the definition of a subterranean stream.

In response to Comment 3-3, we acknowledge that the DEIR does not comment on the applicability of the SWRCB's Decision 1639. Rather, the DEIR notes that the Applicant is required to obtain an appropriative water right permit because, as stated on page 1-1 of the DEIR, the proposed diversion would, in the SWRCB's determination, constitute a diversion of surface water. It is not within the scope of the CEQA analysis to challenge or support the SWRCB's determination. Furthermore, the DEIR addresses all potential impacts as surface water diversions although, in the context of the analysis, the term 'groundwater' is used to discuss the portion of river flow that is subterranean (within the alluvial aquifer), and 'surface water' is used to discuss the surface expression (what is seen in the river channel) of the river flows. As discussed in the DEIR sections 4.2 and 4.3, monitoring was conducted to measure the effects associated with diversions from the alluvial aquifer (subterranean river flow) on characteristics in the river channel (surface expression) and the impacts analysis was based on a peer review of these reports. Please also refer to RTC 2-30.

RTC 3-4

This comment describes the comment letter outline and content. In response to Comment 3-4, this information is noted and forwarded to the project decision-makers for their consideration.

RTC 3-5

This comment suggests that the requirements of SWRCB's Decision 1639 be acknowledged and that the DEIR demonstrate these requirements are met.

In response to Comment 3-5, as noted in RTC 3-3, the CEQA analysis is not the appropriate vehicle for determining compliance with the legal definition of a subterranean stream (SWRCB's Decision 1639). The SWRCB has already determined that ongoing diversions by El Sur Ranch wells constitute a surface water diversion from the Big Sur River, and the impacts analysis was conducted accordingly.

RTC 3-6

This comment requests clarification of whether riparian lands are included in the request for appropriative rights and notes potential discrepancies between irrigated acreage measurements.

We refer the commenter to page 2-17 of the DEIR, first paragraph under "Riparian Right", where it is noted that the 25 riparian acres are included in the POU and included in the 267 irrigated acres. Additionally, on the bottom of page 2-17, the DEIR states that, "Although the pending application denotes the Ranch's claimed riparian right, the SWRCB's approval authority is limited to the appropriative water right sought in the Ranch's application." Additionally, the 3rd Amendment explicitly states that the Application includes the claimed, existing riparian diversion right. The CEQA analysis was prepared to determine potential project impacts associated with approval of the Ranch's application; it is beyond the scope of the CEQA analysis to approve or deny the water right application or to grant an appropriative water right. In order to determine potential project impacts, however, the entire amount of water that would be diverted from the PODs must be assessed. As

discussed in Chapter 6 of the DEIR, Alternatives Analysis, under the No Project/No Permit Alternative if the appropriative water right is not granted, the Applicant would be limited to riparian rights to irrigate only 25 acres of the El Sur Ranch site.

The potential discrepancies in irrigated acreage measurements are noted. The DEIR project description on page 2-5, last two paragraphs and page 2-1, first paragraph, have been amended to correct this error as follows:

The POU is divided into two functional units for accommodating the Ranch's pumping and irrigation requirements. The POU contains the North Pasture and Pastures 1, 2, 7, and 8, and the South Pasture, Pump House Field Pasture, and Pastures 3, 4, 5, and 6 (Figures 2-2 and 2-3).

Approximately 25 acres of the 292-acre project site comprise dunes, the tailwater pond, outfall, access roads, and irrigation canals. The remaining 267 irrigated acres is the POU. Of those 267 acres, approximately 25 acres is within the Big Sur River watershed and is, therefore, served by the applicant's existing riparian water right. The location of the riparian area within the POU is shown in Figure 2-2. Under a riparian right, water diverted from the Big Sur River can only be applied to land adjacent to the river and within the watershed. It cannot be diverted to irrigate other pasture land that is non-riparian. The remaining 242 acres of irrigated pasture and pasture within Swiss Canyon comprise the area for which the proposed appropriative water right is being requested.

~~Although Swiss Canyon bisects the POU, it is not within and comprises approximately 19 acres of the POU. Although this area is not, and would not be directly irrigated; this area is irrigated by seepage water from the irrigated fields and is therefore, included in the irrigation requirements calculations. and is not part of the irrigated area under existing or proposed conditions.~~

RTC 3-7

This comment requests that the engineering calculations used to convert electrical usage to pumped volume and rate, along with sources and magnitudes of error, be provided in the DEIR.

In response to Comment 3-7, the electrical usage pumping tests along with pump efficiency tests are included in the NRCE 2007 report Table 7-12 and preceding text. The electrical usage and pumping rate is provided for all fields to which each pump can irrigated. No information is available regarding magnitude of potential error or other assumptions used to make the diversion and pump capacity estimates. The electrical usage data constitutes the best data available at the time of DEIR preparation.

RTC 3-8

This comment requests that the mitigation measure includes a discussion of how monitoring of the various diversion volumes and pumping rates would be accomplished. This comment also suggests that the mitigation measure discuss the use of calibrated flow meters on the discharge pipes that measure cumulative and total discharge, and address the issue of monitoring the time and duration of pumping so the instantaneous total diversion can be monitored.

In response to Comment 3-8, Mitigation Measure 4.2-2 requires the Applicant to develop an IWMP in order to define the monitoring protocols used for meeting the diversion limitations and to provide worker training to ensure that correct protocol is used. Mitigation measure 4.2-2, as revised in RTC 3-6, requires approval by the SWRCB. The commenter provides no rationale for the need to

monitor the instantaneous total diversion. As the lead regulatory agency and agency responsible for protecting water resources within the state, the SWRCB has the knowledge to determine whether protocols are sufficient to meet the mitigation objectives and that operations and management can be feasibly implemented. While a cumulative flow meter can be used to determine cumulative flows, other methods (such as recording flow rate and duration) can be used to calculate cumulative flows. Protocols can be embedded in the IWMP to ensure that cumulative diversions are monitored on a timely basis so that total annual or seasonal diversions can be met. Simple charts can be prepared and provided to ensure that total daily volumes are not exceeded. A flow rate meter or monitoring of electrical usage at each field can be used to ensure that instantaneous or sustained diversion rates are not exceeded. Because there are various methods by which the diversion limits of the water right and Mitigation Measure 4.2-2 can be met, and because logistical constraints may indicate that some methods are preferred, the Applicant, together with the SWRCB, can best determine a viable flow monitoring strategy for inclusion in the IWMP. We acknowledge that implementation of calibrated flow meters on the pumps would likely provide for a simpler and more effective flow monitoring program. The commenter's recommendations are hereby forwarded for consideration by the decision-makers.

RTC 3-9

This comment requests that the estimated diversion requirements on in Table 2-3 be updated with data from the 2007 NRCE study. This comment also notes that the historic diversions are not compared with historical regional water used.

We agree that Table 2-3 should be adjusted with data from the 2007 NRCE study. Table 2-3 has been revised as follows:

TABLE 2-3

**ESTIMATED IRRIGATION DIVERSION REQUIREMENTS ON THE EL SUR RANCH
(BASED ON 65 PERCENT IRRIGATION EFFICIENCY AND 10 PERCENT LEACHING FRACTION)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
No Precip	88	98	131	168	166	195	195	169	172	154	112	83	1730
1975	34	0	0	99	152	183	193	147	167	98	92	62	1227
1976	82	0	64	74	159	175	190	126	139	114	76	11	1210
1977	37	63	57	150	120	213	197	177	148	157	111	0	1430
1978	0	0	0	0	152	188	197	177	164	148	49	40	1116
1979	0	0	11	142	171	196	176	170	188	89	11	0	1153
1980	0	0	48	99	151	196	167	170	194	160	109	35	1331
1981	0	40	3	141	147	188	205	153	167	85	0	46	1176
1982	0	28	0	56	159	191	181	157	101	62	0	0	935
1983	0	0	0	25	144	175	182	164	120	136	0	0	946
1984	94	23	90	135	159	191	205	191	202	97	0	24	1409
1985	49	49	14	121	162	171	212	170	204	84	0	25	1262
1986	11	0	0	155	136	213	205	164	131	145	84	30	1274
1987	0	14	54	144	163	204	190	157	155	106	57	0	1242
1988	13	75	132	114	156	186	190	177	167	162	22	0	1394
1989	35	33	43	141	147	196	197	177	124	82	58	74	1307
1990	0	0	78	159	93	204	182	164	155	151	102	34	1323
1991	62	11	0	160	159	204	205	175	174	106	113	0	1369
1992	12	0	0	157	146	174	190	169	161	129	106	0	1244
1993	0	0	38	173	155	178	222	170	174	169	65	11	1355
1994	0	0	130	126	155	221	205	184	161	161	30	9	1382
1995	0	66	0	90	137	133	175	164	174	154	86	4	1183
1996	0	0	43	136	109	196	222	177	174	126	43	0	1226
1997	0	104	136	179	179	188	205	156	161	132	0	0	1441
1998	0	0	7	61	112	183	188	191	187	137	29	25	1120
1999	0	0	0	90	167	184	190	170	161	137	46	63	1207
2000	0	0	33	114	109	172	182	164	145	17	91	76	1104
2001	0	0	41	98	174	204	175	156	178	136	0	0	1163
2002	35	35	78	120	138	203	182	157	155	148	33	0	1282
2003	24	25	76	62	110	172	182	157	167	127	61	0	1164
2004	35	0	103	148	152	195	184	170	178	36	59	0	1260
2005	17	19	43	116	146	189	192	167	163	119	51	19	1240

Source: El-Sur Ranch Water Right Application No.30166, revised October 17, 2006

TABLE 2-3

**ESTIMATED IRRIGATION DIVERSION REQUIREMENTS ON THE EL SUR RANCH
(BASED ON 65 PERCENT IRRIGATION EFFICIENCY AND 10 PERCENT LEACHING FRACTION)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
No Precip ^a	93	101	124	143	172	200	193	164	145	129	101	84	1647
1975	47	0	0	57	165	181	184	142	130	57	74	67	1103
1976	96	4	60	68	172	214	196	134	131	112	93	30	1310
1977	35	80	48	133	113	193	196	171	122	121	90	0	1303
1978	0	0	0	0	187	202	188	165	148	129	24	21	1064
1979	0	0	0	118	169	202	183	164	164	73	12	0	1085
1980	0	0	44	90	136	193	175	152	140	134	107	48	1219
1981	0	40	2	104	159	219	181	148	130	50	0	37	1070
1982	0	29	0	44	157	165	180	158	90	53	0	0	875
1983	0	0	0	4	163	196	204	184	124	127	0	0	1003
1984	90	24	90	100	172	180	212	165	176	51	0	12	1271
1985	46	53	0	118	146	209	203	158	137	69	0	39	1178
1986	41	0	0	124	156	210	188	152	97	121	100	33	1223
1987	0	11	37	139	184	202	188	171	141	99	40	0	1213
1988	23	83	131	85	141	191	196	171	135	114	11	0	1282
1989	33	13	35	129	153	210	181	158	96	72	62	88	1229
1990	0	0	63	119	106	210	204	178	146	126	86	16	1255
1991	63	36	0	116	143	185	188	156	135	84	97	0	1204
1992	27	0	11	179	195	213	220	164	146	121	109	0	1384
1993	0	0	40	118	162	193	204	178	135	141	51	19	1241
1994	8	0	123	97	133	193	173	158	146	118	0	5	1155
1995	0	88	0	70	143	148	220	171	146	139	112	18	1255
1996	0	0	40	131	137	193	204	158	135	91	18	0	1108
1997	0	98	129	138	217	202	196	177	164	113	0	0	1433
1998	0	0	0	31	80	189	180	165	134	97	2	14	892
1999	0	0	0	59	144	166	181	158	130	129	46	83	1095
2000	0	0	45	118	149	210	173	152	137	0	64	82	1130
2001	0	0	43	44	187	210	181	151	128	118	10	0	1072
2002	31	51	63	118	110	176	181	152	141	114	34	0	1171
2003	59	22	82	39	122	202	188	165	152	120	32	0	1182
2004	21	0	121	149	173	188	185	161	175	18	62	0	1253
2005	0	0	122	134	161	206	202	167	150	148	85	0	1375

^aBased on average monthly irrigation requirement from Table 7-8 Monthly Net Irrigation Requirements for El Sur Ranch (inches) and Annual (acre-feet) plus Table 7-7 Estimated Effective Precipitation at El Sur Ranch (inches) (NRCE March 2007) for 267 acres.
Source: NRCE Appendix C, March 2007

The commenter is correct in that the historic diversions are not compared with historical regional water use. For the purposes of a CEQA impacts analysis, impacts are determined based on effects of the project in comparison to environmental baseline conditions. In compliance with CEQA, baseline conditions are defined in this EIR as conditions that exist at the time the Notice of Preparation was circulated. As discussed at length in other responses to comments (see RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19), the environmental baseline includes ongoing diversions, including those for El Sur Ranch and other diverters on the river, over a broad range of hydrological conditions. The DEIR does not include a specific comparison of historical ranch diversions with historical regional water use, as this is not required to assess direct, indirect, or cumulative impacts of the proposed water right.

RTC 3-10

This comment notes that the maximum requested diversion is based on historic diversions that are not within the baseline years used in the CEQA analysis.

In response to Comment 3-10, the maximum project diversion included in the proposed water right is not based solely on historic diversions. As discussed in the DEIR's project description, requested diversion limits under the proposed water right are based on historic crop requirements as defined by the project applicant. In the water rights application, the Applicant can request diversion rate(s)/amount(s) based on whatever information and analysis they choose to justify their request and are not limited to baseline conditions for their analysis. Baseline conditions are pertinent for the CEQA impacts analysis, but the water right application and diversion requests are not limited to using data only from the baseline period of record. When assessing potential impacts for CEQA determination, the proposed project is compared to the defined baseline conditions in order to determine whether or not impacts are significant under CEQA. The baseline condition in this case is defined as the historical diversions from 1985 through 2004. Use of the baseline as an 'existing condition' for determining CEQA impacts and mitigation is only applicable to the CEQA determination of impacts. The applicant may elect to use additional data in determining what irrigation rates and amounts they wish to apply for in its application and for justifying its requested diversion amounts and rates. The data set used by the applicant for determining their request and in support of its request does not have to be confined to the CEQA baseline conditions. Whether or not the proposed diversions are consistent with the Water Code and whether or not the proposed diversions constitute a beneficial use is a separate issue that will be determined by the SWRCB in their consideration of the water right application.

In summary, the use of 1977 data by the project applicant for justifying and defining their water rights request is not inconsistent with any CEQA requirements. The 1977 data is not used as a baseline condition for determining potential impacts; impacts are evaluated based on only the requested amounts compared to the baseline conditions, which is limited to the practices that occurred from 1985 through 2004.

RTC 3-11

This comment requests that the DEIR clarify that the irrigated pastures are considered uncultivated cropland subject to a 2.5 AF per acre annual beneficial use diversion limitation.

In response to the comment, we refer the reader to RTC 2-97. Further, we acknowledge that the USDA definition provided in the comment may indicate that the land use at El Sur Ranch could be considered uncultivated cropland and subject to a 2.5 AF per acre annual beneficial use diversion limitation. As noted in the revised Table 2-3 (refer to RTC 3-9), the net irrigation requirement for optimal pasture growth, during baseline conditions, was as high as 1,433 AFY, or 5.36 AF per acre (1,433 AFY divided by 267 acres) (the original DEIR Table 2-3 suggested higher optimal irrigation

requirements than the revised table). If no precipitation occurred in the year, on an average annual basis, the net irrigation requirement would be 6.17 AF per acre. However, the determination of whether or not the ranch's land use would be considered uncultivated cropland and what constitutes the appropriate beneficial use amount, will be made by the SWRCB in their consideration of the water right application. The EIR is not the appropriate means to make this determination; however, we acknowledge the commenter's suggestion and concerns and hereby forwarded these to the decision-makers for their consideration.

RTC 3-12

This comment suggests that the 1,200 AFY 20-year rolling annual average diversion limitation does little to reduce the number of years the maximum can be diverted and that the request for a diversion limit 40 percent above historic baseline is excessive and suggests unreasonable use.

We concur that the project annual diversions would be higher than the average baseline annual diversions by 40 percent or more. If the maximum annual diversion rate (1,615 AFY) was diverted for 10 years following the baseline period, diversions for the following 10 years could not exceed 785 AFY in order to meet the project diversion limit of 1,200 AFY for a 20-year rolling annual average. However, the maximum annual project diversion would be only 17 percent more $((1,615 - 1,433)/1,433)$ than the maximum baseline irrigation requirement (1997). The 20-year rolling average project diversion (1,200 AFY) would be less than one percent greater than the baseline average annual irrigation requirement (1,198 AFY). Please also refer to RTC 3-11 regarding the calculated irrigation requirement. Also, as stated in RTC 2-12, it is beyond the scope and authority of this EIR to make a determination of whether or not the proposed project is consistent with the Water Code and regulations. As such, it is beyond the scope and authority of this EIR to make a determination regarding whether or not the requested diversion would or would not constitute a beneficial use.

RTC 3-13

Comment 3-13 states that the seasonal maximum diversion is set just below the historic seasonal maximum diversion and exceeds the calculated estimate of the optimum requirements for a year with no precipitation. The comment further states that the project seasonal maximum diversion is 11 percent greater than the historic 1977 diversions in a year with the lowest flows on record and that the diversion limit does not offer much protection of public trust resources.

In response to Comment 3-13, our calculations show that the seasonal maximum project diversion (735 AF) is about 34 AF (5 percent) greater than the baseline seasonal maximum historic diversion of 701 AF (refer to revised Table 2-3 for 1990) and about 59 AF (9 percent) greater than the baseline seasonal maximum irrigation requirement of 676 AF (refer to Table 2-1 for 1992). The estimated optimum diversion requirement in years with no precipitation is based on average climate conditions and does not reflect yearly fluctuations in evaporation and transpiration. It can be expected that, in any given year, climatic conditions would occur resulting in lower or higher irrigation requirements than listed in Table 2-3 for optimal irrigation conditions without any inputs from precipitation. Table 2-3 has been revised as noted in RTC 3-9 to clarify that the optimal irrigation requirement values for the 'no precipitation' condition are based on historic averages from 1975 through 2005. These do not reflect required irrigation for individual years, or a baseline average, and are included only for informational purposes. Comparing this average no-precipitation irrigation requirement with a maximum diversion limit has little value from the standpoint of determining potential project impacts under CEQA.

Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-11 and 2-19, which address the CEQA analysis and use of a defined baseline for determining impacts. Please refer to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address protection of public trust resources.

RTC 3-14

Comment 3-14 suggests that the DEIR should provide an analysis of the relationship between historic diversion and the percentile flows in the river at the time of diversion, and presents the commenter's opinion on whether historical seasonal diversions may have affected public trust resources.

In response to the comment, the DEIR analysis of project impacts on river flows took into account baseline diversions during all baseline years, as well as potential increased project diversion for the same baseline period of time by converting total monthly diversions to cubic feet per second. As noted in Impact 4.2-2 page 4.2-62 of the DEIR, for each cfs diverted at the POD, a corresponding reduction in river flow of 0.24 cfs was measured in 2007. All potential impacts under CEQA, including those on public trust resources, are based on a comparison between the project and baseline conditions. Please refer to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28. However, for informational purposes, the following table summarizes historic baseline seasonal diversions and median seasonal flow measured at the USGS gage.

Table RTC 3-14
Seasonal Historic Diversions and Flow Regime

Year	Median USGS Flow (cfs)	Classification	July 1 to October 31 Diversion (AF)
1985	12	N	567
1986	20	AN	558
1987	11	D	599
1988	8.2	CD	616
1989	6.9	ECD	507
1990	4.8	ECD	654
1991	7.2	ECD	563
1992	9.9	D	651
1993	20	AN	658
1994	7.7	CD	595
1995	27	W	676
1996	21	AN	588
1997	14	N	650
1998	32	W	576
1999	21	AN	598
2000	23	AN	462
2001	13	N	578
2002	13	N	588
2003	17	N	625
2004	13	N	539

Where 'Classification' ECD = extreme critical dry (less than the 10th percentile), CD = critical dry (10th to 20th percentile), D = dry (20th to 40th percentile), N = normal (40th to 60th percentile), AN = above normal (60th to 80th percentile), and W = wet (greater than the 80th percentile).

Historically, the highest diversion occurred during the year with lowest flows in the El Sur River measured at the USGS gage (1990), which corresponded to a less than 10th percentile flow regime. No definitive relationship between amount diverted and flow regime can be discerned from the historical record. However, more than 560 AF (31 percent less than the proposed project seasonal

maximum) was diverted during the irrigation season in most years (80 percent of the time), regardless of river flow.

RTC 3-15

This comment suggests that the DEIR should provide an evaluation to justify the use of “flow percentiles” in the mitigation measures. Additionally, the commenter requests that consideration should be given to additional restrictions on diversions during periods of drought, such as eliminating the 10 percent leaching factor.

In response to Comment 3-15, we are unsure what type of evaluation the commenter is requesting. We assume the comment is referring to an IFIM study to determine instream bypass flow requirements to protect fish passage and habitat. The selection of percentile based mitigation is based on the best available information and is intended to reduce potential project effects when they would be most pronounced and critical to fish passage, aquatic life support, and water quality. The most critical conditions occur during the low flow regime. As noted previously, there are currently no identified bypass flow requirements for this reach of the El Sur River.

It is inappropriate for CEQA mitigation measures to require a reduction in potential project effects to below baseline levels. Because daily baseline diversion rates are not available and baseline diversions have occurred during periods of low flow (dry, critical dry, and extreme critical dry flow conditions), a particular stream flow rate cannot be used to determine when pumping must cease or be reduced to baseline conditions. Additionally, the highest baseline diversion amounts have occurred during some of the lowest flow conditions. The CEQA analysis appropriately evaluates only the potential increase in project diversions above baseline, in these situations.

The exact amount of future diversions under the project cannot be defined because future climate conditions (crop requirements) for any given time period cannot be predicted. As such, potential project effects on the frequency of high diversions during low flow periods cannot be identified, and any analysis to do so would be speculative. Furthermore, the proposed mitigation must be feasible. The use of percentile flows at the USGS gage, to reduce impacts under critical flow conditions when impacts would be greatest (below normal conditions), allows for feasible and effective mitigation. The SWRCB and other decision-makers, at their discretion, can, however, impose additional permit conditions as deemed necessary to protect public trust resources.

RTC 3-16

This comment states that the maximum monthly diversion during the irrigation season is 50 percent greater than the average July diversion.

In response to Comment 3-16, it is inappropriate to compare a maximum monthly project diversion with an average historic monthly diversion; maximum monthly Project diversions must be compared with maximum monthly baseline diversions. During the irrigation season, the maximum monthly baseline July diversion was 264 AF during 1987; the maximum monthly baseline August diversion was 218 AF in 1993; the maximum monthly baseline September diversion was 269 AF in 1990; and, the maximum monthly baseline October diversion was 215 AF in 1988. These equate to a project diversion of about a 15 percent reduction in July, compared to baseline, a 5 percent increase in August, a 17 percent reduction in September, and a 7 percent increase in October. The stated rationale for the 230 AF maximum monthly project diversion was that it was based on historic diversions during July (DEIR page 2-25 to 2-26); however, diversions of about 230 AF also occurred throughout the irrigation season.

RTC 3-17

This comment states that the maximum monthly diversion limit allows for the highest diversions during the lowest flow conditions and conflicts with the goals of protecting public trust resources. This comment also states that the month of June has the highest average historic diversion for June through November, the months with the lowest historic flows.

In response to Comment 3-17, we refer the reader to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection. Further, we note that the median of baseline June flow, measured at the USGS gage, is higher than the median flow during the July through October irrigation season (25 cfs and 14 cfs, respectively). The 10th percentile baseline flow for June is also higher than the 10th percentile irrigation season flow (11 cfs and 6.4 cfs, respectively). Thus, the highest monthly diversions would not occur during the lowest flow month. Additionally, the highest baseline June diversion (331 AF) occurred during an above-normal June flow regime.

RTC 2-12 and RTC 2-14 adequately address the role of the CEQA process in protecting public trust resources. Furthermore, the commenter has not provided any information or analysis that the protection of public trust resources has been compromised by baseline or project diversions. Although an IFIM Study is being conducted by the CDFG, to date, there are no study results to indicate what river flow conditions are required to meet the goal of protection of public trust resources.

RTC 3-18

This comment suggests that the DEIR should be revised to provide a discussion of the project applicant's reasons for the requested 37 AF 'cushion' and the impacts on public trust resources that result from using the month with the second highest average diversion for establishing the dry season diversion limit.

In response to Comment 3-18, the rationale behind the applicant's request for a 37 AF 'cushion' is presented in the March 2007 Natural Resources Consulting Engineer's, Inc. report entitled, *Reasonable Beneficial Use – Land Use Study for El Sur Ranch Irrigated Pastures* (2007 NRCE Report). This report is available for review at:

State Water Resources Control Board
1001 I Street
Sacramento, CA 95814
Contact: Paul Murphey Phone: 916.341.5435

The 37 AF 'cushion' is included to account for natural climatic variability where seasonal soil moisture storage may be lower than anticipated, drought conditions may occur, or other factors may result in greater crop water demands. The impact analyses were conducted using 'worst-case' scenarios, for the most part. For example, in assessing potential annual impacts, maximum average conditions (e.g., maximum July through October seasonal maximum diversion amount; maximum monthly average diversion amounts and rates for non-season months, and overall annual maximum diversion amount) were used. In assessing shorter term impacts (e.g., the number of days where flow would be less than 1 cfs), the maximum monthly average diversion rate was used. These conditions were selected to provide a "worst-case" situation without exceeding the Application diversion limitations and because insufficient diversion data on a smaller time scale (e.g., instantaneous, or daily) is not available for the baseline period of record. The impacts on fish passage and habitat were evaluated for the pertinent critical months using the project diversion limits. The impacts on water resources were evaluated for each month and on a seasonal and

annual basis using baseline period-of-flow data with project diversion limits superimposed on baseline diversions.

RTC 3-19

This comment requests that the DEIR should document the reasoning behind the 5.84 cfs maximum instantaneous diversion rate and should demonstrate why the Ranch fits the conditions specified in CCR Title 23 Section 697(a)(1), use the actual acres being irrigated in calculations, compare instantaneous rate to the baseline condition, then discuss the reasoning for distinguishing between and setting different diversion limits for monthly and 30-day running averages.

In response to Comment 3-19, the 5.84 cfs maximum instantaneous diversion rate was selected based on 1 cfs per 50 acres within the project boundary (292 acres), as stated in the Water Rights Application as amended October 17, 2006, on page 7 of the Memorandum Accompanying Filing of Third Amendment to Water Rights Application of 30166 of James J. Hill III, which is included in Appendix C of the DEIR. The maximum 5.84 cfs diversion rate is also close to the maximum pumping capacity when operating both pumps (about 6.05 cfs). The comment appears to question the applicant's bases for the proposed water right application, rather than identify significant environmental issues. Pursuant to CEQA, the SWRCB will consider the environmental impacts of the proposed project. Independent of CEQA, however, the SWRCB will evaluate whether and how to approve the water right application in accordance with its legal responsibilities, including its regulations. Please refer to RTC 2-12 which addresses the CEQA process and consistency with the CCR.

RTC 3-20

This comment requests that the DEIR should document the reasoning behind the 5.34 cfs maximum 30-day running average diversion rate and should demonstrate why the Ranch fits the conditions specified in CCR Title 23 Section 697(a)(1), use the actual acres being irrigated in calculations, compare the requested 30-day average rate to the baseline condition, then discuss the reasoning for distinguishing between and setting difference diversion limits for monthly and 30-day running averages.

In response to Comment 3-19, the 5.34 cfs maximum 30-day running average diversion rate is based on 1 cfs per 50 acres irrigated for the irrigation of 267 acres of pasture including Swiss Canyon, as stated in the Water Rights Application as amended October 17, 2006, on page 6 of the Memorandum Accompanying Filing of Third Amendment to Water Rights Application of 30166 of James J. Hill III, which is included in Appendix C of the DEIR.

The 30-day running average allows for a sustained maximum pumping rate that is not limited to the calendar month. As discussed in RTC 3-18, the impacts on fish passage and habitat were evaluated for the pertinent critical months using the proposed project diversion limits. The impacts on water resources were evaluated for each month and on a seasonal and annual basis using the baseline period of flow data with project diversion limits superimposed on baseline diversions.

Please refer to RTC 2-12, which addresses the CEQA process and consistency with the California water code.

RTC 3-21

This comment contests the DEIR assumption that the impacts analysis is based on conditions in the river ZOI remaining unchanged. This comment also requests that the DEIR be modified to

document the dynamic nature of the river, to analyze potential impacts associated with changing channel positions, and to provide mitigation monitoring to document channel changes.

In response to comment 3-20, the DEIR discusses changes in channel configuration on page 4.2-22 under the Creamery Meadow discussion, page 4.2-31, third full paragraph, and page 4.2-33, in the discussion concerning the opening and closing of the lagoon. It is acknowledged that changes in channel configuration have occurred and would continue to occur. The DEIR does not assume that changes in channel configuration would not occur. However, the CEQA impacts analysis is based on the best available information regarding baseline conditions and potential project effects on baseline conditions. Potential future changes in channel location and morphology cannot be predicted without substantial speculation. Therefore, the mitigation measures rely on diversion limitations based on percentile flows at the stable, well-maintained, USGS gage. Further, Mitigation Measure 4.3-1 and 4.3-2 do, in fact, include a monitoring and operations plan that provides a structured feedback process whereby stream flows are monitored, passage restrictions evaluated, and changes in project pumping are made to reduce the effect of project irrigation on fish movement, in addition to an adaptive management feedback system, which would ensure impacts are minimized regardless of changes in channel configuration.

RTC 3-22

Comment 3-22 contests the validity of the DEIR assumption that surface flows would be lost at a consistent 0.24 cfs per cfs pumped in perpetuity.

In response to the comment, we refer the reader to RTC 3-20. The DEIR does not assume conditions do not change; Mitigation Measures 4.3-1 and 4.3-2 include monitoring and adaptive management to ensure that project impacts on fish movement are minimized. Additionally, the CEQA impacts analysis is based on the best available information. Potential changes in channel configuration that may affect the relationship between pumping and surface water flow are speculative and cannot be assessed.

RTC 3-23

Comment 3-22 notes that the duration of pumping impacts extends beyond the time listed in the DEIR tables because of the recovery of the cone of depression that should be accounted for in the environmental impacts analysis and diversion limits.

In response to the comment, we acknowledge that recovery from pumping would not be instantaneous. However, we do not see how this relates to impacts extending beyond the time listed in the "DEIR tables" referred to, but not specified, by the commenter. As stated on page 4.2-59 to 4.2-60 of the DEIR, complete recovery occurs within about 4 days following pumping. About 89 percent recovery occurs near the new well, where maximum effects are experienced, within one day after cessation of both pumps pumping (Figure 3-2b. JSA-04 Recovery Curve Post Two Well Pumping Test, SGI 2007). Because river flow conditions cannot be predicted in advance, there will be a lag in recovery of surface water elevation and flow following cessation of project pumping. As noted in RTC 3-1 and RTC 3-21, if bypass flow criteria are applied, changing channel configuration could invalidate the bypass flow criteria and a new bypass flow would have to be identified. The bypass flow criteria would also have to be directly related to required flows within the ZOI because a bypass flow at a location upstream of the ZOI would not be affected by diversions at the POD.

RTC 3-24

This comment suggests that the flow limitations require the cessation of pumping whenever river flow drops below a specified rate(s) as measured at an appropriate river gage, and based on specific

impacts to public trust resources not percentile flows. This comment also notes that reporting of instantaneous flow measurements in the river and at the pumps is required.

In response to comment 3-24, no study has been conducted that supports a definitive relationship between critical criteria for fish movement and specific flow rates within the lower reach of the Big Sur River. Additionally, as noted in Comment 3-21, changing channel configuration precludes determination of a specific relationship that would remain in perpetuity. Furthermore, as noted in Comment 71, reaches along the lower portion of the Big Sur River fluctuate between gaining and losing conditions. For a CEQA analysis, project impacts are related to baseline conditions. Maintenance of baseline conditions during periods of low flow conditions (percentile flows) allows for minimization of project impacts regardless of natural variation in channel configuration and gaining/losing conditions that have and would continue to occur. While daily flow at the USGS gage can be well correlated to flow entering the ZOI during the dry season (flows up to 20 cfs), instantaneous flow records at the USGS gage would not only be provisional, and therefore subject to additional errors, they would not be well correlated to flow entering the ZOI. Additionally, SGI has stated that developing the flow relationship entering the ZOI for higher flows is a safety hazard. In a system such as the Big Sur River, where water surface elevation and flows fluctuate in response to climatic conditions (e.g., evaporation and transpiration, tidal action, and others), instantaneous flow rates provide little value in identifying effective passage and habitat conditions for fish.

Please refer to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address protection of public trust resources.

RTC 3-25

This comment states that the DEIR should be revised to address how the impacts of diversions from the separate sources (surface water and groundwater) would be monitored to ensure that assumptions about conditions in the ZOI remain valid.

In response to Comment 3-24, the DEIR does not assert that diversions come from separate sources (surface water and groundwater). In fact, on page 1-1 and 4.2-17, of the DEIR acknowledges that the PODs in the alluvial aquifer are diverting surface water resources. As discussed in Impact 4.2-2, the diversion from the alluvial aquifer is a diversion from the subterranean portion of the Big Sur River and has a measureable effect on water surface elevations and flow in the Big Sur River. Impacts on groundwater elevations in the alluvial aquifer were addressed in Impact 4.2-1. Impacts on surface water to groundwater gradients were addressed in Impact 4.2-2.

RTC 3-26

This comment notes that the complexity of the six water rights limits will be difficult to monitor, report, and enforce and states that:

“... if the permit assumes that something other than the full rate of diversion impacts the flows in the river, than a bypass flow limitation(s) is a moving target.”

In response to Comment 3-26, we acknowledge that the six water right limits present a complex diversion schedule and the commenter's contention that it would be difficult to monitor, report, and enforce to the decision-makers for their consideration. In keeping with the requirements of CEQA, however, only measures that are feasible and effective are presented in the DEIR.

Comment 3-26 appears to indicate a misunderstanding of the Big Sur River characteristics and suggests that impacts should be assessed based on a direct withdrawal of diversions from the surface expression (surface channel) of the Big Sur River. Pumped groundwater is, as identified on

DEIR page 1-1 and discussed in RTC 1-1, in actuality a diversion of the subterranean portion (underflow) of the Big Sur River, which extends to more than several hundred feet wide in this lower reach of the Big Sur River. There is no direct POD within the channel (surface expression) of the Big Sur River. Because the POD is not directly in the surface channel, the aquifer's hydraulic conductivity through the alluvial aquifer material is not as fast as the flows in the surface channel. Subterranean flow extracted at the POD may, in fact, never be discharged to the surface channel. The maximum measured effect of the ranch PODs on in-channel river flow is about 0.24 cfs for each cfs pumped at the POD. In the absence of such data, it would be reasonable to resort to the highly conservative approach of assessing the worst-case scenario, which would assume that each cfs pumped from the POD would result in a reduction of one cfs in surface water flow. The entire project diversion is a direct withdrawal from the surface expression. However, the data is available and this approach, therefore, is not required.

Additionally, this comment may be asserting that the impacts analysis be conducted based on the baseline rate of diversion plus the Project rate of diversion. Please refer to RTCs 1-7, 1-8, 1-9, 2-10, and 2-19, which address the CEQA impacts analysis process and identification of baseline conditions against which project effects are assessed.

RTC 3-27

This comment suggests that the DEIR should discuss the requirements of SWRCB's Decision 1639 and how they are relevant to the El Sur Ranch well diversion and that there is a conflict with Decision 1639 because the DEIR apportions diversions into a surface water and groundwater component.

In response to this comment and as discussed in RTC 2-19, Decision 1639 (In the Matter of Application 29664 of Garrapata Water Company), involved the applicability of a CEQA exemption to a water right application. Decision 1639 does not apply here because no such exemption is being pursued for Water Right Application 30166.

Further, the comment's suggestion that the DEIR apportions diversions, we note that the DEIR does not separate the sources of diversion into groundwater and surface water components. As noted in RTC 1-1, 3-25, and 3-26, and DEIR pages 1-1 and 4.2-17, the PODs extract water from the alluvial aquifer, which is considered by the SWRCB and DEIR to be subterranean flow of the Big Sur River. As noted in RTC 3-26, there is no direct POD within the surface channel of the river; however, because the surface water and groundwater are interconnected, withdrawals at the PODs have a measurable effect on surface water elevations and flow within the channel. RTC 1-1 explains that the alluvial aquifer is the subterranean portion of the Big Sur River. We acknowledge that in reading the DEIR, there may be some confusion as the terms 'groundwater' and 'river channel' are used to describe the physiogeographic setting of the characteristics and impacts being discussed. However, the DEIR clearly explains, on page 4.2-17, that the 'groundwater' diversion is effectively a 'surface water' diversion. Therefore, in reading the DEIR, the term 'groundwater', when referring to groundwater in the alluvial aquifer, refers to the subterranean portion of the Big Sur River. The terms 'surface water', 'channel', or 'river' refers to the surface expression of the Big Sur River in the visible river channel. The impacts analysis separately discusses effects on these portions of the river, in some cases, because constraints to factors such as fish movement are directly affected only by river conditions in the surface expression. Effects such as the changes in groundwater (alluvial aquifer, or subterranean stream flow) and surface water (surface expression, or visible channel) gradients are identified because this will affect the amount of water that flows into or out of the river channel portion (surface expression).

RTC 3-28

This comment suggests that the DEIR should analyze the environmental impacts assuming all pumped water is diverted from the Big Sur River.

In response to this comment, the DEIR has analyzed the environmental impacts assuming all pumped water is diverted from the Big Sur River. By “river” we refer to both surface and subterranean flows of the river channel. We refer the reader to RTC 3-26, which explains the POD location in the subterranean portion and the surface expression of the Big Sur River.

RTC 3-29

This comment suggests that a minimum instantaneous flow loss of 5 cfs be assumed downstream of the USGS gage when calculating bypass flow requirements and that flow losses may be up to 8.9 cfs.

In response to the comment’s reference to instantaneous flow loss, we disagree that applying an instantaneous flow loss to a daily average flow rate is an appropriate approach to mitigate potential project impact on streamflow. In the absence of any evidence to support this approach, our ability to provide a more detailed response is limited. The measured relationship between the USGS gage and the project zone of influence for dry season flows is listed in the SGI 2007 report and is reported in the footnote on page 4.2-25 of the DEIR. The relationship used in the DEIR analysis is the best available information. Little is understood about the relationship between flow at the USGS gauge and flow entering the ZOI during high flow events (flows greater than about 20 cfs), however, the relationship for dry season flows is not linear. Therefore, the use of a single, linear flow loss from the USGS gauge to estimate flows entering and flowing through the ZOI may not be appropriate. Further analysis and studies may support a higher or lower loss, or fluctuation in losses and gains, depending upon season and flow at the USGS gage. As identified in the SGI 2007 and 2008 reports and DEIR pages 4.2-62 to 4.2-63, portions of the lower reach are typically gaining sections and portions are typically losing sections, which may fluctuate depending upon flow conditions and other factors such as pumping. This DEIR analysis does not set a bypass flow requirement and it is not within the scope of this EIR to set a flow bypass requirements. Nevertheless, the recommendation is noted and, hereby forwarded to the project decision-makers for their consideration.

RTC 3-30

This comment suggests that the DEIR should provide an analysis of the losses and gains, including future riparian diversions, that are likely to occur in the 7 miles between the USGS gage and the POD to determine what values should be used to correct gage readings in setting bypass flow requirements. As an alternative, the commenter suggests that the DEIR should evaluate whether another gage should be installed lower on the river. This comment also notes that a proposal has been submitted for a USGS gage in the Andrew Molera State Park area but long-term funding is questionable.

An analysis of gains was provided in DEIR Table 4.2-3, based on Jones and Stokes 1999 Table 4. An analysis of water use losses was provided in the Water Availability Analysis (WAA) included in Appendix D of the DEIR. It should be noted that the WAA did not incorporate potential river gains in performing the water availability analysis. A dry-season analysis of water losses and gains was incorporated in the measurements used to develop the relationship between the USGS gage flow and flow across Zones 2 through 4 within the ZOI when pumps were not pumping (SGI 2008 Figure 3-35 Big Sur Flows vs. Zone 2-4 Regression Analysis) and as reported in the DEIR page 4.2-56, footnote 25. However, it is acknowledged that the data on flow relationships are limited and additional data during different seasons and flow conditions are merited. In 2007, comparison of

mean daily flow at VT1 (over 2,000 feet upstream), VT3 (middle of ZOI), and VT2 (downstream end of ZOI) with daily USGS flow data shows that an average of 3.18 cfs of flow is lost by VT1, 6.17 cfs is lost by VT3, and 5.69 cfs is lost by VT2 during non-pumping conditions. As noted in the DEIR and SGI studies, the higher flow at VT2 compared to VT3 indicates that the surface channel is gaining water in this section. USGS flows ranged from 6.4 to 12 cfs during this time period and the relationship between flow at the USGS gage and VT1 changed from VT1 flow rate = 1.3352*USGS flow rate – 7.771 (USGS flows from about 2 to 20 cfs) to VT1 flow rate = 1.249*USGS flow rate – 5.285 (USGS flows from 6.4 to 12 cfs), indicating that flow losses between the USGS gage and upstream of the ZOI may be lower when river flows are lower.

In addition, the project applicant, at the request of the SWRCB conducted an evaluation of potential for future intensification of upstream riparian water uses. This analysis was contained in a letter to Rick Hanson (PBS&J) from Mark A. Blum dated May 19, 2010. This analysis was subjected to peer review by the EIR preparer and is contained its entirety in Appendix 5 of this Final EIR. In conducting this analysis, databases for all Monterey County Planning Department development project application files were reviewed for properties within the Big Sur Area Land Use Plan area from 2003 to present. A total of 106 project files were identified and reviewed. Each of these projects and potential projects were assessed for any potential for increasing riparian water use from the Big Sur River. As shown in Appendix 5, of the 106 projects identified, three (3) projects were found to be located within or connected to riparian water supply from the Big Sur River. Two of the projects identified in the study (PLN 090057 and PLN 060356) do not propose a significant change in existing land use and would not require additional riparian diversions. The third project (PLN 080468) would be served by Rancho Chaparral Mutual Water System under an appropriative right to divert and would not require diversion under a riparian right.

Given the variable nature of the river system and the dynamic equilibrium between the alluvial aquifer and surface flows within the channel, the flow gains or losses within the surface expression are a function of the subterranean flows and storage, which complicate the relationship between flows at the ZOI and at the USGS gage. An additional permanent gage located closer to the POD would be useful in determining flow rates and diversion limitations. Given the variable nature of the channel configuration, a permanent gage near close to the ZOI may not be feasible. A permanent gage near the Andrew Molera State Park may be feasible and would be expected to provide more relevant flow information than the current USGS gage. The commenter's suggestion is forwarded to the decision-makers for their consideration.

RTC 3-31

Comment 3-31 addresses the difference between percentile flows in the DEIR compared to the water rights application and the commenter's calculations. The comment requests the correct table be presented in the DEIR.

In response to this comment, the table presented in the DEIR is, in fact, correct. Both the commenter and project applicant used the USGS period of record in determining percentiles. The DEIR used baseline conditions in defining percentiles. Because project effects must be assessed in comparison to baseline conditions, the baseline percentiles are the correct values to use in the impacts analysis as presented in DEIR.

RTC 3-32

Comment 3-32 is not substantively different than Comment 3-24. In response to this comment, please refer to RTC 3-24.

RTC 3-33

Comment 3-33 suggests that the instantaneous maximum diversion rate be used in setting a bypass flow rate and that an interim bypass flow of 40 cfs at the USGS gage be used between June and November, with an interim bypass of 132 cfs being used between December 1 and May 31. The commenter also notes that additional site-specific instream studies are needed to finalize bypass flow rates.

In response to the comment, we refer the reader to RTC 2-23 and 2-41 which address instantaneous flow rates and the establishment of bypass flow rates. In addition, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the DEIR's use of environmental baseline conditions as the basis for impacts assessment and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection. Please also refer to RTC 1-5, which addresses the request for additional studies.

The commenter has not justified the proposed interim bypass flow rates as being more protective of water quality than the mitigation measures proposed in the DEIR. The commenter's proposed interim flow requirements are justified in Comment 3-89, 3-90, and 3-95 and are based on guidelines for northern coastal streams (2007 Draft SWRCB's Policy for Maintaining Instream Flows in Northern California Coastal Streams, updated March 14, 2008), which are not regionally applicable to the Big Sur River because the region terminates north of the County of San Francisco.

The commenter states in Comment 3-90 that:

“A bypass flow estimated from the 2007 SWRCB Instream Flow Policy can also be compared to procedures given in the joint CDFG/NMFS's June 17, 2002 Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid- California Coastal Streams (2002 CDFG/NMFS Instream Flow Guidelines).”

However, the 2002 CDFG/NMFS Instream Flow Guidelines have not been finalized and do not support the suggested interim bypass flows presented (refer to 2002 CDFG/NMFS Instream Flow Guidelines Section II.1. Diversions > 3cfs or > 200 acre feet). Additionally, 2002 CDFG/NMFS Instream Flow Guidelines clearly state that:

“These guidelines do not constitute a final agency action for purposes of the National Environmental Policy Act or the California Environmental Protection Act....Rather, guidelines are intended to preserve a level of flow that ensures that anadromous salmonids will not be adversely impacted by diversions.”

As such, the interim bypass requirements have not been demonstrated as appropriate.

Based on baseline flow rates at the USGS gage, the proposed interim bypass flow requirement of 40 cfs during June through November would effectively preclude project pumping about 69 percent of the time during June, 90 percent of the time during July, 97 percent of the time during August, 100 percent of the time during September, 97 percent of the time during October, and 91 percent of the time during November. The proposed interim bypass flow requirement of 132 cfs from December 1 through May 31 would effectively preclude project pumping about 71 percent of time for the overall season and 92 percent of the time during May when irrigation requirements average 149 AF, based on baseline conditions. It should be noted that while the Commenter requests the water right application use instantaneous measurements in monitoring compliance with the water rights application, the suggested interim bypass flow were set using a **mean annual** flow rate, in

accordance with the 2007 Draft Policy (which was adopted as final Policy, State Water Board Resolution No. 2007-0057, May 4 2010).

RTC 3-34

Comment 3-34 addresses the use of the proposed interim bypass flow rates and compares them to the percentile flow diversion limitations used in the DEIR. This comment also discusses protection of public trust resources and suggests that potential impacts from baseline diversions be assessed in the EIR.

In response to this comment, RTC 3-1 and RTC 3-15 discuss the selection of percentile flow rates and the rationale for their use.

In reference to the development and purpose of the environmental baseline used in the DEIR, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19. As noted in previous responses, project impact is determined based on changes to baseline conditions that would be brought about directly or indirectly as a result of implementing the proposed project. It is not the purpose of an EIR to assess the "impact" of the environmental baseline, i.e., conditions that exist at the time the environmental review is initiated. However, the EIR must evaluate the cumulative impact of a project and in doing so the impact of past "projects" (projects such as historical diversions for irrigating El Sur Ranch pastures) must be taken into account when considering whether or not the proposed project would have a substantial contribution to impacts due to past, ongoing and future projects.

The effects of historical diversions to El Sur Ranch pastures are addressed in the cumulative impact analysis presented in this EIR and within the No Project Alternative analysis, which assesses the comparative impact of proposed project diversions relative to the alternative which would prevent appropriative diversions to the project site. RTC 2-14 also addresses the cumulative analysis. Also, we refer the reader to RTC 3-33, which addresses the appropriateness of the requested interim bypass flow rates under CEQA.

RTC 3-35

This comment states that:

"Because the area that this sediment discharges to is critical habitat, a technical study is needed on the areas of erosion along the walls of Swiss Canyon to identify the level of stability and causes of any instability and to provide mitigation measures for stabilizing the slopes and preventing further erosion."

This comment also suggests that the study results and mitigation measures be included in the DEIR.

In response to Comment 3-35, this comment does not identify what "this sediment" is that is of concern to the commenter; therefore it is unclear to us how to specifically address this comment. However, as noted on pages 4.2-32 to 4.2-33 of the DEIR, REJA (2007) evaluated erosion along the banks of Swiss Canyon using historic aerial photography to identify potential effects of irrigation on Swiss Canyon erosion. Results of this study were summarized in the DEIR and it was found that irrigation of the pastures did not cause or contribute to Swiss Canyon erosion. The study, in fact, determined that gullying and slumping in Swiss Canyon was reduced, in part, because of runoff controls. Additionally, as noted in the DEIR on page 4.2-32, the pastures are bounded by road embankments and field borders, preventing off-site runoff, and dense ground cover and runoff controls prevent substantial on-site erosion and off-site sediment transport. Further, a Technical

Memorandum¹² prepared by Natural Resources Consulting Engineers (NRCE) dated May 2010 and included with this Final EIR as Appendix 9, estimates pasture erosion potential as very slight (about 0.075 tons per acre per year using the Water Erosion Prediction Project software and 0.049 tons per acre per year using the Universal Soil Loss Equation). The 2010 memorandum also states that previous studies (studies cited in the DEIR) concur that off-site erosion does not occur from irrigation of pastures and on-site erosion and off-site transport from irrigated pastures is minimal.

Regarding the comment's request for additional studies, we refer the reader to RTC 1-5, above, which addresses this issue.

RTC 3-36

This comment requests that the DEIR evaluate whether leakage from an irrigation pipe(s) is discharging into Swiss Canyon, the potential impacts associated with pipe maintenance in Swiss Canyon, and the need for permits along with the recommended permit conditions.

In response to Comment 3-36, the proposed project does not entail changes in existing irrigation infrastructure or in pipe maintenance activities. Ongoing effects related to pipe leakage (if indeed leakage is occurring) and maintenance would, therefore, be part of the existing condition and would not constitute an impact of the proposed project unless: 1) the leakage or maintenance is substantially increased as a result of the project, and 2) that increase would result in a substantial change in existing conditions. This EIR finds that neither of these conditions would be caused by the project because the proposed increases in site irrigation would be relatively slight.

Regarding the comment's reference to permit conditions, recommended permit conditions cannot be discussed until/unless a permit is required and issued. The DEIR identifies no permits that are required to continue ongoing diversion operations should the proposed water right be granted. With the implementation of proposed mitigation measures, additional permits may be required, but the identification of conditions that could be contained within these permits would be speculative at this time.

RTC 3-37

Comment 3-37 questions whether or not baseline conditions and the project fall under the Irrigated Lands WDR and whether an NOI would be submitted. This comment also requests copies of plans and monitoring records be submitted with the DEIR and how the mitigation measures would be consistent with the Irrigated Lands WDR requirements.

In response to Comment 3-37, please refer to RTC 3-2. As noted in that response, the Central Coast Regional Water Quality Control Board's 2010 Conditional Waiver of Waste Discharge Requirements [WDR] for Discharges from Irrigated Lands¹³ would not apply to the proposed project, nor do any WDRs for irrigated lands apply. Changes to the DEIR are included in Chapter 2 of this Final EIR to reflect this. It is important to note, however, that the ECOMP and IWMP in Mitigation Measures 4.2-2 and 4.2-3 will mitigate water quality and erosion effects identified in the DEIR. Results from monitoring the tailwater pond were provided subsequent to preparation of the DEIR. The sampling was conducted by Hanson Environmental, Inc., August 7, 2007 and August 28, 2007. Because the tailwater pond discharges to the Pacific Ocean, the Ocean Plan contains the relevant

12 NRCE. 2010. Soil and Erosion Information for El Sur Ranch Irrigated Pastures Water Rights Application Number 30166 Technical Memorandum. Prepared for Janet Goldsmith, Esq. and Mark Blum, Esq., May 15, 2010.

13 See Order No. R3-2010-0040 at: http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/docs/2010_0040_ag_order.pdf

water quality objectives. Arsenic, copper, nickel, and selenium, concentrations were all more than 40 times lower than the long-term (six month median) Ocean Plan standard and 250 to more than 16,000 times lower than the California primary drinking water standard (all values less than 1 ug/L [1 ppb]). Lead, silver, and zinc were not detected. Fecal coliform concentrations were more than 20 times lower than the 30-day geometric mean Ocean Plan standard (which is the same as for typical freshwater water contact recreation objectives). Semivolatile organic compounds, volatile organic compounds, and organochlorine pesticides and PCBs were not detected. Levels of ammonia and cyanide were also not detected. The tailwater pond water is reclaimed and reused on irrigated pasture and routed back to the tailwater pond, but does typically discharge to the ocean three to four times during the irrigation season.

RTC 3-38

Comment 3-38 requests that the DEIR evaluate and provide mitigation measures for potential impacts based on results of previous water quality monitoring, in particular, leaching of salts effects on groundwater and surface water quality.

In response to Comment 3-38, the proposed project would use the same irrigation water source as has been used historically for irrigation of El Sur Ranch pasture. In addition, the proposed project would not result in new or substantially larger sources of irrigation runoff to Swiss Canyon or the Big Sur River because directly-irrigated pastures are bounded by roads and embankments. Discharges of runoff to Swiss Canyon and the Big Sur River areas only occur during winter rainfall events. Surface runoff to the tailwater reclamation pond would continue and would continue to be reused, as necessary. Discharge from the tailwater pond and north pasture drainage outlet to the Pacific Ocean. As such, salt concentrations would have no substantive adverse effect on receiving water quality. In fact, additional irrigation and leaching requirements under the proposed project would serve to minimize salt build up in soil and, therefore, would reduce the potential for precipitation events to leach high salt concentration waters to Swiss Canyon or to groundwater. More frequent leaching would serve to dilute salts percolating to groundwater or laterally seeping to Swiss Canyon, compared to existing conditions that occur as a result of higher water use efficiency (less potential for leaching) than recommended by NRCE. The POU is north of the subterranean Big Sur River/alluvial aquifer, on the historic marine terrace and dune deposits. As noted in the DEIR (page 4.2-18), these features are only minimally permeable, are a no-flow boundary, and do not serve to recharge the alluvial aquifer adjacent to the Big Sur River, although some groundwater from these terraces are transmitted to the alluvial aquifer.

As noted in SGI 2005 (page 3-17), recharge to groundwater in the terrace is from percolation of precipitation where the terrace formation abuts the mountains to the east as opposed to percolating groundwater. Additionally, the majority of the POU consists of Santa Ynez fine sandy loam, which has a restrictive layer at about 1.5 feet below ground surface. This serves to limit the movement of salts and leachate to the underlying groundwater and, therefore, the potential for irrigation to affect groundwater quality is slight.

RTC 3-39

Comment 3-39 requests that the DEIR evaluate the impacts associated with applying higher salinity water, the impacts associated with salt leaching, and that pumping should cease when salinity reaches 1000 u/cm followed up by monitoring and reporting requirements.

In response to Comment 3-39 and as noted in RTC 3-38, the project does not propose to use a different water source than is currently used for ranch irrigation and would not, therefore, apply higher salinity water relative to baseline conditions. Additionally, as addressed in RTC 3-38, the proposed project would result in no new adverse effects on salt leaching relative to environmental

baseline conditions. Monitoring for chloride concentrations is currently required by the Department of Parks and Recreation and pumping has historically been suspended, on a voluntary basis, when salinity reaches 1000 u/cm. By ceasing pumping voluntarily, the applicant is able to avoid possible additional monitoring requirements and reduces the potential for salt build up in the soil. Also, as noted in SGI 2005 (pages 3-31 to 3-32), high salt groundwater only occurs in the Old Well and only when Pacific Ocean water surface elevations are high (e.g., spring tides).

RTC 3-40

Comment 3-40 contends that seepage at the cliff face can result in sapping erosion that would increase with more applied water, particularly when leaching for salt removal. This comment also suggests that the DEIR evaluate the source of groundwater seepage along the coastal bluff adjacent to the El Sur Ranch pastures and provide mitigation measures to ensure that irrigation practices do not cause or accelerate coastal bluff instability or erosion.

In response to Comment 3-40, the contention that seepage at the cliff face causes sapping erosion that would increase with the project is not supported by evidence. Lateral movement of water from beneath the pastures is essentially prevented by dry soil conditions under the roads, berms, and buffer zone between the irrigated pastures bluffs during irrigation season. However, in the winter, when soils are saturated, lateral movement of water can occur. The NRCE 2010 evaluation of potential erosion is summarized below.

The REJA consulting engineering geologists study (2007) addressed erosion on the banks of Swiss Canyon and along the coastal bluff on the lower edge of the El Sur Ranch property. The study consisted of reviewing historical aerial photography (taken between 1929 and 2003) and field mapping. Coastal bluff erosion was found to be caused by episodic ocean conditions (high tides and sustained storms) and mostly related to the direction of storm fronts. Erosion along the banks of Swiss Canyon was found to have been reduced from that which occurred during pre-irrigation years due to increased coverage of riparian vegetation and the filling of drainage gullies in establishing the pasture. The study concluded that "irrigation of pasture land has had no discernable effect on rates of coastal bluff retreat within the study area", and that the investigation "did not reveal evidence of increased erosional activity during the past 50 years or so, either along the bluff top or on the banks of Swiss Canyon. In fact, subaerial gullying and slumping has diminished over this time period, primarily due to filling of gullies and control of surface runoff."

Hanson Environmental Inc. (2006) conducted a month-long survey of erosion and seepage conditions along the coastal bluff of El Sur Ranch. Five stations were established along the western (coastal) edge of Fields 7 and 8. Stations were visited and photographed on a twice weekly interval between September 9 and October 16, 2006. This time period included a six-day irrigation of Fields 7 and 8 from October 6-12. The study did not find any erosion resulting from irrigation or overland runoff along the bluff face during the field surveys. This study is significant because irrigation of Pastures 7 and 8 is the most likely to cause bluff face seepage and erosion.

The sapping hypothesis that coastal bluff instability and erosion is caused by irrigation seepage is not consistent with the findings of previous investigations. The commenter contends that two processes might be causing erosion of the coastal bluff; processes that may be accelerated if greater than baseline irrigation applications were to be applied on project pastures. The first process consists of infiltrated groundwater flowing down-gradient (towards the coastal bluff) on top of the restrictive clay layer and accumulating into concentrated groundwater flow paths. According to this hypothesis, upon reaching the bluff, the perched groundwater seeps out of the cliff face and causes gully formation and erosion in the form of scallops or theatre-headed valleys on the bluff face at the location of concentrated groundwater seepage. Photographs of scallops along the El Sur Ranch coastal bluff were included in this commenter's letter to support this claim that this process is

occurring at El Sur Ranch. The 2005 and 2008 coastline photographs provided show defined scallop-shaped erosion formations along Pasture 7 near Swiss Canyon.

These erosion features could be associated with groundwater flows near the soil surface. However, for the proposed project to affect sapping erosion of the coastal bluffs, these features must be caused by irrigation drainage flows and not by rainfall events. Additionally, for impacts to be substantial, the magnitude of irrigation-induced erosion must be significant, relative to total bluff erosion.

This condition was addressed in the investigation by REJA. The investigation found no increased erosion activity along the irrigated pasture bluff or banks of Swiss Canyon during the 50 years of irrigation preceding the 2007 report. As noted above, based on aerial photos since 1929, field mapping and review of previous reports, REJA concluded that "irrigation of pasture land has had no discernable effect on rates of coastal bluff retreat within the study area", and that the investigation "did not reveal evidence of increased erosional activity during the past 50 years or so, either along the bluff top or on the banks of Swiss Canyon. In fact, subaerial gullying and slumping has diminished over this time period, primarily due to filling of gullies and control of surface runoff."

The commenter does not provide any evidence that the seepage at the cliff face is a result of irrigation, and did not provide analysis to show that increased irrigation will increase seepage to the cliff face, but rather uses coastline photography to subjectively determine that, "The number and density of these scalloped-shaped gullies appears to have increased significantly between 1989 and 2005." No measurements or image analysis was performed. Furthermore, if this is correct, it does not necessarily follow that the cause was the irrigation from 1989 through 2005.

The estimated average annual irrigation diversion from 1989 through 2005 was 815 acre-feet per year with a maximum diversion of 1,136 acre-feet in 2004; the estimated average annual irrigation diversion from 1975 through 1988 was 1,070 acre-feet per year with a maximum diversion of 1,737 acre-feet in 1984. In other words, irrigation levels decreased during the period when it was suggested that erosional activity increased. This does not support a correlation between irrigation and sapping erosion.

Irrigation of the pasture began approximately 60 years ago, and irrigation pumping from 1989 through 2005 is not greater than prior pumping. On the other hand, a review of the monthly precipitation on the El Sur Ranch, as correlated from the Monterey precipitation record and the precipitation measurement at the El Sur Ranch, shows that there were two months during the 1975 through 1988 period with over 10 inches of precipitation and that during the 1989 through 2005 period there were 12 months with over 10 inches of precipitation. While a correlation between irrigation and cliff face erosion is not apparent, there may be a correlation between the greater number of high precipitation periods from 1989 through 2005 than occurred from 1975 through 1988.

Direct evidence of erosion from seepage was not provided in the comment letter, but photographs were provided showing darkened areas and pampas grass growing along the bluff in specific areas, which is suggested to have resulted from seepage to the cliff face in the upper soil layers. The 2005 and 2008 coastline photographs provided in the comment letter show vegetative growth, specifically pampas grass, below pasture 7 and 8. The comment letter suggested that the presence of such saturated soils along the coastline would cause instability and slumping of the surface soils.

The photographs provided in the comment letter are not clear support for the conclusions regarding slump erosion processes. The resolution of the coastline photos is too coarse to differentiate between areas darkened by vegetative shading and bare soil faces darkened because of seepage. Supporting a contrary conclusion, the 2006 Hanson field survey of the same Pasture 7 field area found no indications of seepage along the bluff during or after irrigation of the Pasture 7. Little, if any,

evidence was provided in the comment letter to support linking the presence of vegetation to the process of erosion by slumping of saturated soils. Further, no mention was made of the role of bluff vegetation in reducing erosion because of anchoring by plant roots. If the presence of cliff-face vegetation were, in fact, evidence of erosion by slumping of saturated soils, the saturated soil conditions are much more likely to occur as a result of precipitation rather than irrigation, as previously discussed.

Coastline photographs archived by the California Coastal Records Project were investigated for signs of scallop formation in areas other than El Sur Ranch. Several examples of scallop-shaped erosion formations were found below natural and dry pasture landscapes, where no irrigation occurs. The bluffs in the areas where the formations are seen have protection from waves and rocky formations, which reduce erosion from wave action. Most of the erosion in these locations is from cliff face seepage and surface runoff. Because these erosion formations are located outside the El Sur Ranch area, and because there is no irrigation in the land behind and up-gradient from these bluffs, the scallop formations are caused wholly by natural rainfall.

REJA notes that, "Surf erosion is the primary agent affecting bluff retreat; if surf erosion ceased, the coastal bluffs would soon reach a stable angle of repose regardless of whether or not the land adjacent to the bluffs is irrigated." If, as suggested in the comment letter, infiltrated groundwater is flowing down-gradient (whether from natural rainfall or irrigation) on top of the restrictive clay layer, forming scallops or valleys on the bluff face, those processes should yield a stable angle of repose at the bluff face. The fact that the bluff face is nearly vertical indicates that a stable angle of repose has not been achieved. This supports REJA's conclusion that wave action is the primary mechanism of bluff erosion.

The second process of coastal bluff erosion caused by sapping consists of infiltrated groundwater flowing down-gradient above the restrictive clay layer and causing saturated soil conditions at the coastal bluff. The saturated soil conditions could result in instability because of pore water pressures and the increased weight of water. If this were to occur, unstable surface soils would then slump off the bluff face. While saturated soil conditions on the bluff face can result in erosion, the saturated soil conditions are much more likely to occur as a result of precipitation than irrigation, as previously discussed.

RTC 3-41

This comment provides background information on the determination that pumped groundwater is a surface water diversion and notes that although the requested diversion is identified in the DEIR as a surface water diversion requiring an appropriate Water Right, the DEIR does not acknowledge the fact that the SWRCB has an established test for determining if pumped groundwater is subterranean flow. This comment also suggests that the DEIR acknowledge the SWRCB's Decision 1639 and demonstrate that these conditions are met at the POD. Additionally, this comment request that the SWRCB make a finding that the El Sur Ranch wells divert groundwater from a subterranean stream in either the CEQA or Water Rights permit process.

In response to Comment 3-41, please refer to RTC 3-27.

RTC 3-42

This comment suggests that the DEIR and Water Rights application are in conflict regarding whether or not riparian lands are included in the request for an appropriate water right and should discuss separately the riparian and non-riparian land impacts and requested diversions.

In response to Comment 3-42, the DEIR and Water Rights application are not in conflict regarding whether or not riparian lands are included in the request for the appropriative water right. Page 2-19 of the DEIR states that the irrigated area includes the 25 acres of land currently served by an existing riparian water right. The 3rd Amendment explicitly states on page 4, under item 3, that,

“The total quantity and rate of water diversion requested under this Application for use on the 267 Acre Net Place of Use include Applicant’s claimed existing riparian diversion right”

The DEIR clearly evaluates the effects of diversions under only the riparian water right in Chapter 6, Alternatives Analysis, under Alternative 1, No Project/No Permit Alternative. Page 6-2 of the DEIR states that Alternative 1 is the condition where the Applicant diversions are limited to the riparian Water Right. Under the proposed project, the Applicant would irrigate both riparian and non-riparian areas with appropriative water diversions. As such, irrigation of only the 247 acres of non-riparian under the proposed project would not sufficiently evaluate proposed project effects. Additionally, the proposed project is the increase in diversions compared to baseline conditions, applied to the entire POU. Therefore, the existing claimed riparian Water Right is included in the baseline condition. Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the DEIR’s use of environmental baseline conditions to determine project impacts and RTC 3-6 which addresses separate assessments for riparian and “non-riparian” lands.

RTC 3-43

This comment suggests that it is unclear if the water right application is requesting an appropriative water right for water used on riparian lands.

In response to Comment 3-43, we refer the reader to RTCs 2-10, 3-6 and 3-42. Further, we note that conditions contained within Water Right Application 30166 would apply to the diversion of riparian-righted water as well as water diverted under the proposed appropriative water right, but an appropriative water right is not needed for the project applicant to divert water for application on portions of the property that are subject to the riparian right.

RTC 3-44

Comment 3-44 addresses potential errors in POU area measurements or description and suggests that the appropriative Water Right is needed for 223 acres, not 242 acres as noted in the DEIR, and that only 248 acres are irrigated pasture.

In response to Comment 3-44, please refer to RTC 3-6 and RTC 3-42, which address the inclusion of the riparian acreage in the appropriative water rights application. As noted in RTC 3-6, the 267-acre POU includes both directly irrigated pasture lands (223 acres) and indirect irrigation of pasture adjacent to Swiss Canyon (19 acres) irrigated by seepage water from the irrigated fields.

RTC 3-45

This comment requests clarification about whether or not riparian lands are included in the request for an appropriative Water Right and that the impacts to riparian and non-riparian lands and requested diversions be evaluated separately.

In response to Comment 3-44, please refer to RTC 3-42 and RTC 3-43.

RTC 3-46

This comment suggests that the POU area in the DEIR and Application are in error and notes that the DEIR does not consider Swiss Canyon to be irrigated and that irrigated pastures be measured and documented by a licensed land surface. Additionally, this comment requests that the DEIR be revised based on this updated and more accurate information.

In response to Comment 3-46, please refer to RTC 3-6 and RTC 3-44, which address actual irrigated area acreages. Please refer to RTC 3-42 and RTC 3-43, which address inclusion of the riparian acres in the application and environmental analysis. The DEIR analysis was conducted using the POU as identified in the application. The 267-acre POU includes the 223 acres of directly-irrigated pasture for which an appropriative water right is being sought, 19 acres of indirectly-irrigated pasture included within Swiss Canyon, and 25 acres of directly-irrigated pasture for which there is a riparian water right.

RTC 3-47

Comment 3-47 notes that water use information prior to 1975 and following 2004 is not provided, nor is actual electrical usage provided. Additionally, this comment notes that daily records of pump operations were not available prior to 1975 or after 2000. This comment requests that engineering calculations be provided in the EIR to convert electrical consumption to pumped volume and rate, including input data, pump efficiency test results, sources and magnitude of potential error and any other assumptions used to make the diversions and pump capacity estimates.

In response to Comment 3-47, we acknowledge that daily data are not available and details of the electrical usage and pumping rate calculations are not available. Pump efficiency test results and electrical uses for the 2004 test are provided in NRCE 2007, and a summary of changes in maximum pumping efficiencies. Additionally, daily pump and operations records were also available for 2004, as noted in the NRCE 2007 report page 7-22. Please refer to RTC 1-5, which addresses the DEIR's use of best available information and need for additional studies. While the calculated information would be useful in preparation of the IWMP in response to Mitigation Measure 4.2-2, it would not alter the significance determination. Equipment and operational errors in field measurements are already inherent in the analysis and limit the determination of exact levels of impact. Please also refer to RTC 3-7.

RTC 3-48

Comment 3-48 requests that the DEIR provide a discussion of how the monitoring of various diversion volumes and pumping rates would be accomplished using power usage rather than direct measurement with a flow meter, including specific data collection requirements. The comment further states the DEIR should also discuss use of calibrated flow meters for instantaneous and cumulative flow measurements.

In response to Comment 3-48, part of the purpose of Mitigation Measure 4.2-2 is to identify workable solutions to meeting mitigation requirements. Please refer to RTC 3-8, which already addresses the commenter's request.

RTC 3-49

Comment 3-49 describes how irrigation requirements were estimated and states that estimated optimum irrigation requirements presented in the DEIR are an overestimation of actual historic use. The comment further states that the annual maximum diversion of 1615 AFY and 20-year rolling average of 1200 AFY is 68 and 25 percent greater than the 30-year median actual water use.

In response to Comment 3-49, the process used to estimate irrigation requirements were detailed in NRCE 2005 and NRCE 2007. The estimated irrigation requirements are greater than actual historic uses, but are never used to estimate actual historic uses and are therefore not an overestimation of actual historic uses. As stated in NRCE 2005, “[t]he use of average estimated pumping on the [El Sur Ranch] from 1983 through 2002 is not a valid determination of the water requirements for the [El Sur Ranch] pastures.” We acknowledge that the requested diversion limits are greater than median or mean historic uses, and any increases in proposed diversions were addressed in the impacts analysis. This is consistent with the DEIR’s presentation of the proposed project.

RTC 3-50

Comment 3-50 notes that the annual diversion request is an additional 10 percent above the optimum irrigation requirement for leaching of salts and that the need for leaching could be reduced by irrigation management, reduced Old Well pumping, and close monitoring of irrigation water salinity.

In response to this comment, the 20-year rolling average annual diversion request amounts to 2 AFY more (less than 0.2 percent) than the average net irrigation requirement and 8.5 AFY less than the median net irrigation requirement identified in NRCE 2007.

RTC 3-51

Comment 3-51 states that the annual diversion limit is based on optimum irrigation during a year similar to the drought of 1977 and that the DEIR does not consider effects of historic diversions on public trust resources.

In response to this comment, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the baseline as the basis for impacts assessment in the CEQA process and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection. Please refer to RTCs 2-14 and 3-34, which address effects of historic diversions addressed in the cumulative impacts analysis.

RTC 3-52

Comment 3-52 states that the annual diversion limit is based on optimum irrigation during a year similar to the drought of 1977 and that the DEIR does not consider effects of historic diversions on public trust resources.

In response to the comment, please refer to RTCs 2-14 and 3-34, which address the effects of historic diversions presented in the cumulative impacts analysis. The selection of the maximum annual diversion limit was presented by the project applicant as part of Water Right Application 30166 as amended. The DEIR addresses the potential impacts of the project as proposed, and presents alternatives to the proposed project which could reduce those impacts. Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the baseline as the basis for impacts assessment in the CEQA process and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection. Please refer to RTCs 2-14 and 3-34 which address effects of historic diversions addressed in the cumulative impacts analysis.

RTC 3-53

Comment 3-53 notes discrepancies between identified irrigation requirements in various documents and request that Table 2-3 be updated to reflect the most recent NRCE 2007 table.

In response to this comment, please refer to RTC 3-9 which addresses an updated table based on NRCE 2007.

RTC 3-54

Comment 3-54 notes that the maximum diversion limit contained in Water Right Application 30166 is based on a non-baseline year with the worst flows on record and questions whether the request is a reasonable use. This comment notes that the DEIR does not present a comparison between El Sur Ranch historic use and regional historic use and that the requested diversion exceed irrigation requirement for pastures measured in Monterey County area or cited as being considered not wasteful.

In response to Comment 3-54, comparison of historic El Sur Ranch use with historic regional use or recommendations is not warranted in the CEQA process. Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the baseline as the basis for impacts assessment in the CEQA process and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection. Please refer to RTC 3-10, which addresses the Application request and use of baseline in the CEQA analysis.

RTC 3-55

Comment 3-55 requests that the DEIR should clarify whether or not the pastures are considered un-cultivated cropland and subject to Water Code beneficial use limits on irrigation amounts. This comment also notes that the DEIR does not present a comparison between El Sur Ranch historic use and regional historic use and that the requested diversion exceed irrigation requirement for pastures measured in Monterey County area or cited as being considered not wasteful. Additionally, this comment notes that the year used to select the maximum diversion is not within the CEQA baseline years.

In response to Comment 3-55, please refer to RTCs 2-12, 3-12, and 3-54 above. The commenter's concerns are hereby forwarded to the project decision-makers for their consideration.

RTC 3-56

Comment 3-56 suggest that the 20-year running average does not substantially reduce the number of years the maximum volume can be diverted; the maximum diversion can occur for the next 10 years without exceeding Application limitations. This comment also suggests that such use is unreasonable.

In response to Comment 3-56, please refer to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address public trust resources protection and RTC 3-12, which addresses the 20-year rolling average.

RTC 3-57

Comment 3-57 provides information about the historic pumping and river flow conditions and notes that the requested 735 AF seasonal diversion limit exceeds the calculated irrigation requirement for a year with no precipitation.

In response to Comment 3-57, we note that the commenter misuses the information regarding irrigation requirements for a year with no precipitation. Data used to generate the 'no precipitation' condition was an average of all years and cannot, therefore, be compared with a maximum diversion conditions. If the worst months for consumptive water use were used to identify the 'no precipitation' condition, the requested diversion may not exceed the 'no precipitation' requirements.

RTC 3-58

Comment 3-58 notes that the DEIR does not provide information on the relationship between river flows and historic diversions, with reference to current knowledge about fish passage requirements. As such, the comment suggests there is no analysis of historic diversion impacts on fish passage and the requested diversion limits do not offer protection of public trust resources. This comment also requests that the DEIR show that the flow percentiles in the mitigation measures are protective of fish passage and public trust resources.

In response to Comment 3-58, as noted in the DEIR flow relationships and fish passage constraints have not been identified, nor were they identified subsequent to DEIR publication. The CEQA analysis determined the significance of project impacts compared to baseline conditions and presented mitigation measures to reduce impacts to existing conditions levels, not to some unknown, unidentified level beyond baseline conditions. Please refer to RTCs 3-15 and 3-24, which address use of percentile-based mitigation measures. Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the baseline as the basis for impacts assessment in the CEQA process and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection.

RTC 3-59

Comment 3-59 suggest that consideration should be given to adding additional mitigation to further restrict diversions during drought conditions.

In response to Comment 3-59, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the DEIR's use environmental baseline conditions to determine potential project impacts and RTC 3-58 which addresses the DEIR's mitigation measures. The commenter's suggestion to propose additional mitigation beyond that necessary to reduce impacts to a level of insignificance is hereby forwarded to the project decision-makers for their consideration.

RTC 3-60

This comment notes how much the monthly maximum seasonal diversion request is than the monthly baseline seasonal average and suggests that diversion limits proposed in the application would conflict with goals of public trust resource protection. This comment also suggests that the DEIR provide a discussion of the requested 37 AF 'cushion' and impacts on public trust resources from using the month with the second highest average diversion for establishing the dry season diversion limit. This comment also notes discrepancies in Table 2-3 of the DEIR and states that monthly averages for historic requirements are not provided.

In response to comment 3-60, it is not valid to compare the seasonal monthly **maximum** with a baseline monthly **average**. Please refer to RTC 3-9 which addresses Table 2-3. Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 which address the baseline as the basis for impacts assessment in the CEQA process and RTC 3-58 which address mitigation measures. Please refer to RTC 3-18 regarding justification of the 37 AF 'cushion'.

RTC 3-61

This comment contest the POU acreage and notes the DEIR does not provide a rational for the 5.84 cfs maximum instantaneous diversion rate, and errors in Table 4.1-1.

In response to comment 3-61, Table 4.1-1 is in error. Based on the Application diversion requests, Table 4.1-1 has been revised as follows:

TABLE 4.1-1			
WATER RIGHT APPLICATION NO.30166			
SUMMARY OF BASELINE ASSUMPTIONS AND PROPOSED CHANGES (1985-2004)			
AS EVALUATED IN THIS DEIR			
Diversion Type	Baseline ¹ 1985-2004	Proposed Project ² 19 years plus next year	Net Change Evaluated in the DEIR
Maximum annual usage	1,136 AF (2004)	1,615 AF	+479 AF
Maximum calculated usage	1,441 AF (1997)	1,615 AF	+174 AF
20-year annual rolling average	857 AF	1,200 AF	+343 AF
Maximum 30-day average rate (5.34 cfs)	234 339 AF (Aug/Sept 1997; June 1986: 5.70 cfs)	318 AF (5.34 cfs)	+84 -21 AF (-0.36 cfs)
Maximum monthly instantaneous rate	>6.05 8.4 cfs	5.84 cfs	≤ -0.16 cfs
Maximum monthly diversion (July 1 – Oct 31)	269 AF (Sept 1997; 4.52 cfs)	230 AF (3.87 cfs)	- 39 AF (-0.65 cfs)
Maximum seasonal diversion (July – Oct 31)	701 AF (1997)	735 AF	+34 AF
Notes:			
1. See Table 2-1, this DEIR (1985-2004 historic average with two wells in operation).			
2. El Sur Ranch Application No. 30166, revised October 17, 2006			
Source: El Sur Ranch Application No. 30166, revised October 17, 2006; ESR Technical reports (SGI 2005, 2006).			

Please refer to RTCs 3-6, 3-43, 3-44, 3-45, and 3-36, which address the POU acreage. Please refer to RTC 3-19, which addresses the rationale for the 5.84 cfs maximum instantaneous diversion rate request/limitation.

RTC 3-62

Comment 3-62 requests that the DEIR document the reasoning behind the maximum instantaneous diversion rate of 5.84 cfs, demonstrate why the El Sur Ranch fits the conditions specified in CCR Title 23 Section 697(a)(1) for 1 cfs per 50 acres, use the actual acres being irrigated in the analysis, and compare the instantaneous diversion rate to the baseline condition.

In response to Comment 3-62, please refer to RTC 3-61, which addresses the reasoning behind the maximum instantaneous diversion request and actual acres being irrigated. Impact 4.2-1, (page 4.2-59), Impact 4.2-5 (page 4.2-73), and DEIR Table 6-1 compares the instantaneous diversion rate to the baseline condition. As stated in RTCs 2-12 and 3-12, it is beyond the scope and authority of this EIR to make a legal determination. As such, it is beyond the scope and authority of this EIR to make a determination regarding whether or not the pastures are un-cultivated croplands and subject to Water Code limitations on irrigation. The commenter's concerns are hereby forwarded to the project decision-makers for their consideration.

RTC 3-63

Comment 3-63 notes that the DEIR does not provide the reasoning behind the maximum 30-day average diversion rate of 5.34 cfs, and state the combined pumping capacity of both wells in operation is the sum of the individual maximum pumping rates. Additionally, this comment notes that the 230 AF maximum monthly seasonal diversion amount is based on the 5.34 cfs diversion rate.

In response to Comment 3-63, please refer to RTC 3-20, which addresses the reasoning behind the 5.34 cfs maximum 30-day running average diversion rate. The combined pumping capacity with both wells in operation is not a simple sum of the individual well capacities; well zones of influence

maximum pumping rate for each well depends on which field is being irrigated. Neither well can irrigate all fields because irrigation lines from each well are not connected to all fields. The actual effective maximum capacity is about 6.3 cfs.

RTC 3-64

Comment 3-64 notes that the reasonable use diversion of 1 cfs per 50 acres does not seem to apply to the El Sur Pastures and that Table 4.2-6 average and maximum project values are the same.

In response to Comment 3-64 and as stated above in RTCs 2-12 and 3-12, it is not appropriate under CEQA for an EIR to make a legal determination of reasonable use. The determination of reasonable use is, appropriately, deferred to the SWRCB in their consideration of the approval of the water right application. Please refer to RTCs 3-10 and 3-54, which address the applicant's selection of information to justify diversion requests. It is also beyond the scope and authority of this EIR to make a determination regarding whether or not the pastures are un-cultivated croplands and subject to Water Code limitations on irrigation. The commenter's concerns, however, are hereby forwarded to the project decision-makers for their consideration. In addition, please refer to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection. It should be noted that any potential Table 4.2-6 errors do not affect any of the impacts analysis; impacts analysis were conducted independent of Table 4.2-6, which was created just to show relative differences. Table 4.2-6 has been revised as follows to fix errors and clarify information (see Chapter 2 of the FEIR, page 2-8:

TABLE 4.2-6						
BASELINE AND PROPOSED PROJECT DIVERSIONS						
Period	Baseline Mean (1985-2004)		Project 20-Year Average^a		Project Maximum^{a,b}	
	acre-feet	cfs	acre-feet	cfs	acre-feet	cfs
November through April	<u>741</u>	<u>0.0211</u>	<u>485-0</u>	0.52 (0.50 -0.02)	244	0.68 (0.66)
May	104	1.69	318-147	<i>5.34</i> <i>2.39</i> (3.65 0.70)	318	5.34 (3.65)
June	172	2.89	318	5.34 (2.45)	318	5.34 (2.45)
July	152	2.48	184	3.09 (0.62)	230 184	3.09-3.74 (1.26 0.62)
August	143	2.32	184	3.09 (0.76)	230 184	3.09-3.74 (1.42 0.76)
September	155	2.60	184	3.09 (0.49)	230 184	3.09-3.87 (1.27 0.49)
October	90	1.47	184	3.09 (1.63)	230 184	3.09-3.74 (2.27 1.63)
Seasonal (July through October)	540	2.21	735	3.01 ^{bc} (1.80)	735	3.04^b 3.87^c (1.80 1.56)
Seasonal Maximum Monthly 30-day Avg.	269	4.52	230	3.87 (-0.65)	230	3.87-5.34 (-0.65 +0.82)

Notes:
^a Values in parenthesis are the difference between the proposed project and baseline. Bold italics are proposed project application constraints. Other values are calculated based on application constraints. The Project 20-Year Average has a 20-year average annual diversion of 1,200 acre feet; the Project Maximum has a maximum annual diversion rate of 1.615 acre-feet. Values for cfs assume the acre-feet are distributed evenly across the time period; daily and instantaneous flow data was not available for baseline, therefore, determination of diversion rates used the same process to assess potential project conditions.
^b Project maximum is included for informational purposes. It is not appropriate to compare the Project maximum with the baseline mean; Project maximum should only be compared with baseline maximum. Additionally, the project maximum diversion rates cannot be sustained for the entire season or year; 230 AF for each month in the irrigation season would exceed the 735 AF seasonal maximum.
^cThe difference between this value and monthly values is based on rounding errors.
Source: PBS&J 2008.

RTC 3-65

Comment 3-65 notes some errors in Table 4.1-1. In response to Comment 3-65, please refer to RTC 3-61, which corrects Table 4.1-1 errors.

RTC 3-66

Comment 3-66 notes errors in Table 4.2-6 from the DEIR and notes that the reasoning behind the seasonal average and maximum values are the same. The comment also notes that the Table 4.2-6 values are not the same as the proposed diversion limitations contained in Water Right Application 30166 and states that the maximum seasonal diversion rate is in error because 5.84 cfs could be diverted for up to 19 consecutive days without exceeding the monthly maximum volume limit or 5.34 cfs 30-day average. The comment further implies that the overlapping diversion limits exemplify the application's complexity which could lead to difficulties in monitoring and reporting compliance.

In response to Comment 3-66, the similarity between seasonal monthly maximum and average diversions, shown in the Table 4.2-6 from the DEIR, was because the actual monthly maximum, 230 AF, cannot be sustained throughout the season without exceeding the 735 AF seasonal diversion limitation. It would be misleading to provide four months of 230 AF diversions during the season or to arbitrarily select which months can divert the maximum amount, and which could not. Therefore, given the seasonal maximum of 735 AF, and given the season is 4 months long, 184 AF per month represents the maximum monthly average that could occur during a given season. This was the same value because it was assumed that on an average, the maximum seasonal diversion amount would be used. The modified table adds a footnote explaining that the 'maximums' cannot be directly compared with baseline, because baseline conditions are 'averages' and that the 230 AF could not occur for the entire season, so the seasonal maximum remains the same as the seasonal average.

The contention that 5.84 cfs could be diverted for 19 days and not exceed the proposed diversion limits is in error. The 5.84 cfs diversion rate is a maximum **instantaneous** diversion rate and could not, therefore, be applied for 19 consecutive days over a 30-day period; 19 consecutive days, or even one day, is not an instantaneous condition. Although the diversion limit requests are complicated, they are intended to minimize potential conflicts or ambiguities. As recommended in the DEIR, an IWMP would be prepared to facilitate implementation of, and compliance with, permit conditions. Please refer to RTC 3-23, which further addresses concerns about the complexity of proposed conditions contained in Water Right Application 30166.

Please also refer to RTC 1-5, which addresses the request for additional studies.

RTC 3-67

Comment 3-67 requests that the reasoning behind the 30-day running average be provided in the DEIR. The comment suggests that this reasoning should demonstrate compliance with Water Code beneficial use determinations. The comment further suggests that DEIR compare the 30-day average rate to environmental baseline conditions, and that the DEIR explain why the application includes different diversion limits for monthly and 30-day running averages.

In response to Comment 3-67, please refer to RTC 3-20 which addresses the 30-day running average and monthly diversion limits. Please refer to RTCs 2-12, 3-12, and 3-67, which address the scope of the CEQA process in reference to legal definitions and determinations in relation to beneficial use. Please refer to RTCs 3-10 and 3-54 which address the applicant's selection of information to justify diversion requests. Please also refer to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection.

RTC 3-68

Comment 3-68 describes groundwater flow in relation to river surface water flow and refers to the commenter's 2006 memo regarding the constriction hypothesis and saltwater intrusion lifting effect for why, at the very low end of the Big Sur River (just upstream of the lagoon), groundwater flows into the surface channel. The comment goes on to describe that while the aquifer cross-sectional area is reduced at the constriction, the subterranean flow to the ocean may not be reduced because the aquifer hydraulic conductivity in the constriction areas is much higher than the hydraulic conductivity in the alluvial aquifer. The commenter asserts that the transverse flow of the river in the ZOI is a critical factor in flow gains and losses from pumping because it cuts across the regional direction of groundwater flow.

In response to Comment 3-68, the unimpaired groundwater flow gradient is identified in Figure 3-14 of SGI 2005 and shows that groundwater naturally flows from the northeast to the southwest in the area of the Big Sur River from stations P4u to P2. In this reach, the Big Sur River also flows north east to southwest. Transverse (south east to northwest) stream flow does not occur until P1, near the lagoon and downstream of VT2. As such, the 'gaining' reach is actually an area flowing parallel to the groundwater flow, not perpendicular, which would indicate **less** groundwater flowing into the surface channel in this area (P4 to VT2).

We agree with the commenter that it is water surface elevations within the aquifer (subterranean flow elevations) compared to the surface water (surface expression of the Big Sur River) that drive whether 'groundwater' flows into the surface channel or vice versa. We also agree that it is likely that the flow constriction at the notch is not a likely factor for causing upwelling of groundwater within the surface channel. Measures of electrical resistivity reported in SGI 2005 do indicate that the saline wedge underlying the notch varies over time and may affect the freshwater gradients. However, as noted by the commenter, this is not quantified.

Because of the complexity of the entire river system (subterranean flow properties and pathways, as well as surface channel flow and characteristics), it is difficult to determine exactly what is causing and contributing to the changes in gradient between the alluvial aquifer area and the surface channel area. Regardless, the exact nature of groundwater upwelling does not alter the impacts analysis, which was based on measured responses to project pumping. The analysis was not based on physical processes relationships and characteristics. The first full paragraph following Figure 4.2-3 has been modified as follows:

The width of the groundwater basin decreases substantially at the downstream end, where the river and alluvium pass through a narrow gap in the Franciscan Formation near where the Big Sur River curves to flow southwestwardly (Jones and Stokes 1999). However, because this narrow gap is very deep and composed of materials with a likely hydraulic conductivity (e.g., boulders and rocks) (SGI 2005), the narrowing does not likely form a constriction to freshwater groundwater flow from the alluvial aquifer to the Pacific Ocean. ~~This bedrock constriction naturally forces groundwater to seep into the lower most reach of the river as the path of least resistance to the ocean.~~ Moist, seeping banks were observed above the river level near the upper end of the lagoon, which presumably was discharging groundwater (Jones and Stokes 1999). Additionally, the resumption of streamflow downstream of the intermittent reach in 1990 (when the river ran dry near the Andrew Molera State Park, further upstream) is evidence that groundwater discharges into the river in the lower reaches. Geophysical surveys (SGI 2005) identified a deeper ancestral canyon on the northern boundary of the alluvial aquifer within the floodplain. Density dependant groundwater flow and transport modeling using SEAWAT 2000¹¹ indicated that this canyon is a preferential flow path for seawater intrusion (SGI 2005).

RTC 3-69

Comment 3-69 discusses Darcy's Law and determines that water flow through the notch area would be greater than through upstream areas of the alluvial aquifer, even though the cross-sectional area may be smaller. This comment also notes that fresh groundwater upwelling caused by salt water intrusion has not been quantified and there are many variable effects such that it has not been shown that sea water intrusion could have measurable effect. Because this effect has not been shown, the commenter concludes that it is not a substantial factor in groundwater flows to the surface channel.

In response to Comment 3-69, it should be noted that this analysis assumed that the hydraulic gradient in the alluvial aquifer is the same between upstream locations and the notch area, which may not be appropriate. The commenter's 2006 comment letter, referenced in this comment, performs an analysis of the potential ability of the notch area to present a constriction to groundwater flow by comparing Figure 4.2-1, 4.2-2a, and 4.2-2b cross-section B-B with cross-section D-D. Given that the 'gaining' area of the lower Big Sur River reach near the project site is within cross-section C-C, it would be more appropriate to compare cross-sections B-B, C-C, and D-D to more accurately identify what is happening in the river system. Additionally, Figure 4.2-3 indicates that the base of the gravel layer in cross-section B-B would be very different than C-C and D-D. This would greatly affect alluvial aquifer flow in these areas and the propensity of subterranean flow to seep into the surface channel. Bedrock elevation and surface channel elevation would also affect local hydraulic gradients and water surface elevations, both within the surface channel and subterranean channel (alluvial aquifer). SGI 2007 Figure 3-18 shows, in a longitudinal profile along the surface channel, that groundwater gradients are likely changing from upstream to downstream locations within the alluvial aquifer system and slightly different than the surface channel water surface elevations.

Furthermore, the commenter's contention that sea water intrusion effects on groundwater flow is not a substantial factor because the effects of salt water intrusion are not quantified and are variable is not supported by evidence. Because information is not sufficient to either confirm or dismiss effects of sea water intrusion effects, this process cannot be dismissed as a potentially important factor that may cause or contribute to the lower reaches to alternate between gaining and losing conditions, either in combination with pumping effects or under no-pumping conditions.

RTC 3-70

Comment 3-70 contends that the orientation of the surface channel and hydraulic properties of the aquifer and channel are the main driving factor for groundwater seepage into the surface channel. This comment also seems to consider the entire alluvial aquifer area as the Creamery Meadow area and notes the DEIR identification of changes in groundwater gradients up to 600 feet above the ZOI.

In response to Comment 3-70, it should be noted that the Creamery Meadow portion of the lower reach is limited to the south area and not the north area where the PODs are located.

The DEIR states that change in the groundwater gradient could occur up to 600 feet above the ZOI identified in technical studies and, therefore, project diversions could affect a wider area than previously identified. This contention has been subsequently analyzed in greater detail by PBS&J (now Atkins) using actual study data. The assessment presented in the DEIR was based on the coarse graphics provided in SGI 2007. Use of actual study data provides a better understanding of the flow conditions.

The 600-foot upstream location is at station P5, which is in a long (about 1000-foot) riffle area, just above the 'deep pool' and is considered in the SGI studies to be beyond the ZOI. Station P6 is also located in the long riffle area above the 'deep pool' and is considered to be upstream of the ZOI. At

P6L, groundwater gradients increased in response to higher flow at VT1 (a precipitation event response) during the non-pump test condition, but did not follow the same pattern as flow at VT1; no rising and falling curve. Two days after flow leveled off at VT1, groundwater gradients dropped and then leveled off during the pump test condition time frame. This indicates that there were no pumping effects at P6L. At P5L, there was a marked response in groundwater gradient to flow at VT1 and gradients following the rise and fall of flow at VT1. Additionally, within a few days of pumping at both pumps, groundwater gradients at P5L dropped (became slightly more negative) and continued to drop, even though flow at VT1 had stabilized. Overall, the groundwater gradient at P5L dropped by less than 0.1 ft/ft. At P4L, the groundwater gradient did not respond as readily to flow at VT1 compared to P5L, although it did increase. It may be that there is a several day lag between flow at VT1 and when groundwater gradients could increase. However, both pumps were turned on before any lag trends could be identified. Because this station is assuredly within the ZOI, pumping resulted in a reduction in groundwater gradients (more water flowing out of river channel and into the alluvial aquifer) that continued to decline after flow at VT1 had stabilized. A similar effect was seen at P3L. P2L gradients showed little response to increased flow at VT1 and substantial effects (reduction in groundwater gradient) of pumping.

Therefore, effects of both pumps pumping could extend further upgradient than expected by the pump zone tests. Based on the groundwater elevation differences between P5L and P4L, it is likely that the effect is not a direct drawdown, but rather, more groundwater lost from the P5L area because of a steeper groundwater gradient between P5L and P4L caused by direct groundwater drawdown at P4L. The potential for a ZOI that extends beyond the boundaries indicated in the SGI reports was addressed in the DEIR (page 4.2-62) and the analysis was conducted with this understanding. The actual study data provides more details regarding this situation, but analysis of this data does not alter the DEIR impact significance.

RTC 3-71

Comment 3-71 notes that the DEIR emphasizes gains and losses within the ZOI and contends that these gains and losses are related to the river orientation (because of groundwater flow gradient effects) and that the river configuration is dynamic and changes over time. This comment also states that a storm event in October 13, 2009 created a second channel, which would affect flows and flow gains/losses. The change in channel configuration means that the relationships identified in the DEIR no longer exist. The comment goes on to reference historic changes in channel configuration and position and the assumption that river conditions, as assessed, would remain constant is not justified. Additionally, this comment requests that the DEIR evaluate impacts of changing channel location on gains and losses and provide mitigation monitoring measures to document and measure the changes in river flow during pumping whenever the channel migrates or the character of the channel be material changes.

In response to Comment 3-71, we acknowledge that this river system is dynamic and that changes in channel configuration occur. Data presented in the SGI studies, Jones and Stokes study, and by the commenter have shown that the current channel has changed somewhat and migrated further into the Creamery Meadow, away from the PODs. Additionally, review of Google 2010 aerial data indicates that the current Big Sur River channel is not substantially different than during the 2006 SGI study. The focus on potential effects within the ZOI is based on the best available information. Through evaluation of the study, impacts are quantified to the maximum extent practicable and used as the basis for identifying significant and potentially significant effects. Impacts on conditions such as gradients, fish passage, fish habitat, and surface flows were found to be potentially significant, and mitigation measures provided to reduce project effects. The mitigation measures also provide a mechanism whereby the applicant can continue to monitor the situation and more explicitly define what effects would occur and what operations would minimize effects. The use of percentile-based flows at a stable gage removed the confounding dynamic channel nature from the equation and

allows for project effects to be reduced; flows at the USGS gage would flow down the Big Sur River regardless of any changes in channel configuration or project pumping. Tying the mitigation to the hydrologic regime, combined with the ability to modify mitigation based on additional studies, provides for long-term viability of the mitigation measures in response to changing conditions.

Please refer to RTC 1-5 which addresses the request for additional studies. Please also refer to RTC 3-21, which addresses the potential for changing channel configuration or location and its speculative nature. Please refer to RTC s 3-1, 3-14, 3-21, and 3-24, which address selection of percentile-based flows at a stable USGS gage in the mitigation measures to reduce effects of project pumping.

It is interesting to note that in this comment (and others), the commenter identifies the dynamic nature of the Big Sur River surface channel and that changing conditions would result in changes in relationships regarding gains/losses, pump effects, and conditions critical for fish passage. This begs the question, if, according to the commenter, the dynamic nature of the stream system compromises the results of studies performed for the DEIR, why then would the results of the proposed IFIM study not be similarly compromised? The same natural phenomena that would alter relationships assessed in the DEIR would alter the relationships determined in an IFIM study and invalidate any identified bypass flow requirements.

RTC 3-72

This comment asserts that the DEIR assesses impacts based on the assumption that water comes from two separate sources (groundwater and surface water) and that the amount of water lost from the surface channel remains constant.

In response to Comment 3-72, as noted in RTCs 1-1, 3-3, 3-5, and 3-27 the DEIR is not evaluating two separate sources of water; all water diverted is from the subterranean portion of the Big Sur River. The terminology used in the impacts assessment of 'groundwater' and 'surface water' is used to identify the specific habitat and/or location of potential effects. The term 'groundwater' is used to identify the subterranean stream flow conditions, diversions, and effects on the subterranean system, and the term 'surface water' is used to identify effects on the surface expression (river channel) of the Big Sur River.

RTC 3-73

This comment identifies that there are technical and legal complications arising from considering diversions from two different sources including the assumption that the river losses are constant and that this rate of loss will occur in perpetuity. This comment reiterates the dynamic nature of the system.

In response to Comment 3-73, please refer to RTCs 3-71 and 3-72.

RTC 3-74

Comment 3-74 suggests that the DEIR analysis ignored the lag time between cessation of pumping and restoration of water levels and that the duration of pumping extends beyond the time listed in the DEIR tables. The comment states this omission should be accounted for in the environmental impact analysis and diversion limits.

In response to Comment 3-74, please refer to RTCs 3-23, which addresses pump effect duration. In the same manner that recovery does not occur immediately following cessation of pumping, the extent of diversion effects do not occur immediately following the beginning of pumping; there is

also a lag in time before pump effects would be experienced at the river channel, in particular. As such, the recovery lag would be substantially negated by the initial lag before a drawdown effect is experienced. Furthermore, project diversions that affect, or would respond to, pump drawdown (increased diversion rates) are small in comparison to baseline diversion rates. It would be impossible to determine in advance when a flow limitation condition would occur such that project pumping could cease and allow sufficient recovery, **before** the limiting condition (e.g., flow rate) is met. Similar to the commenter's suggested operational condition that pumps are stopped when flow drop below an interim bypass flow value at the USGS gauge, the DEIR mitigation measure diversion limitations can be reasonably implemented and pumps operated in compliance with the diversion requirements.

RTC 3-75

Comment 3-75 requests that the DEIR be revised to address how the impacts of diversions from the separate sources, surface water and groundwater, will be monitored to ensure that the assumptions about the conditions in the ZOI made in the environmental analysis remain valid.

In response to Comment 3-75, please refer to RTCs 1-1, 3-3, 3-5, 3-27, 3-71, 3-72, and 3-73 which address the commenter's contention that diversions would occur from two separate sources.

In keeping with the requirements of CEQA, the DEIR assesses the potential impact of the proposed project relative to environmental baseline conditions at the time the NOP was circulated (please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 which address the DEIR's determination and use of the environmental baseline). As noted in RTC 3-71, mitigation measures presented in the DEIR provide a mechanism whereby the applicant can continue to monitor river/lagoon conditions and more explicitly define what effects would occur and what operational refinements could be employed to minimize effects of pumping. This EIR does not propose methods to monitor changes over time in the assumptions presented in the DEIR pertaining to conditions in the ZOI as monitoring such changes would not serve to further mitigate potential impacts associated with proposed project diversions

RTC 3-76

Comment 3-76 suggests there is a proposal to separate sources of water into surface water and groundwater and that this will require that the monitoring program take into account not only the river flows at a surface gage, but also the condition and location of the channel, the groundwater levels in and adjacent to the ZOI and changes in the level of surface water in the ZOI because of variations in tides, lagoon characteristics, and channel configuration.

In response to Comment 3-76, please refer to RTCs 3-71, 3-72, and 3-75.

RTC 3-77

Comment 3-77 notes that the complexity of the six diversion limits contained in conditions proposed Water Right Application 30166 will be difficult to monitor, report, and enforce. Further, if the permit assumes that something other than the full rate of diversion affects flows in the river, then a bypass flow limitation would be a moving target.

In response to Comment 3-77, we refer the reader to RTCs 3-1, 3-25, 3-21, 3-23, 3-26, 3-29, 3-1, 3-72, and 3-74, which address various aspects of the commenter's proposal of implementing a bypass flow limit as a condition of the proposed water right. As noted previously, a bypass flow limit is not proposed in the monitoring strategy or mitigation measures of this EIR, nor is it part of proposed diversion limitation conditions in the water right application itself.

The complexity of monitoring and implementing the proposed water right conditions are addressed in RTC 3-66 above.

RTC 3-78

Comment 3-78 again raises the questions of two separate sources of diversions and suggests a conflict with SWRCB's Decision 1639. This comment also asserts other technical issues that are being raised as a result of the proposal to separate water sources.

In response to Comment 3-78, please refer to RTCs 3-71, 3-72, and 3-75 which address separate sources of water. Additionally, refer to RTCs 3-3, 3-5, and 3-37 which address conflicts with SWRCB's Decision 1639.

RTC 3-79

Comment 3-78 suggests that the DEIR impact analysis assumes that all flow diverted under the proposed water right would cause potential impact on surface water flow in the river. The comment notes that this is consistent with other water rights permits issued for subterranean stream diversions. The commenter suggests that this would make establishing and enforcing diversion limitations and bypass flow requirements consistent with other permits.

In response to Comment 3-78, please refer to RTCs 3-71, 3-72, and 3-75. Further, as noted in RTCs 2-1, 3-3, 3-5, 3-29, and 3-72, diversions of subterranean Big Sur River flow are, in fact, considered a surface water diversion in the DEIR. Several studies referenced and discussed in the DEIR identify that diversions from the subterranean portion of the river have an effect on surface water in the river channel (surface expression of the Big Sur River). As explained in the DEIR, the Big Sur River is composed of both the subterranean portion and the surface expression. As such, it is several hundred feet wide and several tens of feet deep in the alluvial aquifer valley area. As such, diversions of subterranean flow do not result in an equal reduction in surface water flow in the river channel. In fact, as noted in RTC 3-14, above, and in Impact 4.2-2 page 4.2-62 of the DEIR, for each cfs of water diverted at the POD, a corresponding reduction in river flow of only 0.24 cfs was measured in 2007.

As noted in RTC 3-77, it would be imprudent to assume that diversions are a direct withdrawal from the surface expression channel because this assumption is not supported by the evidence.

RTC 3-80

Comment 3-80 notes that the DEIR uses historic flow records for the Big Sur gage and that this gage would be used to measure flows at the point of diversion, determine compliance with water rights permit and bypass flow limits, and to monitor impacts from the pumping of the wells. This comment notes that this requires an understanding of the gains and losses between the gage and PODs and that these gains and losses should be identified and accounted for when evaluating the environmental impacts and when establishing, implementing and monitoring minimum bypass flows needed to protect public trust resources. This comment also notes that information on gains on losses between the gage and PODs are not provided in the DEIR and that information is incomplete and conflicting (e.g., Table 4.2-4).

In response to Comment 3-80, available data regarding gains and losses between the Big Sur gage and the PODs are limited. Please refer to RTC 1-5 which addresses the use of baseline and best available information in the CEQA process. The cumulative impact discussion identifies the potential maximum diversions that could occur. Table 4.2-3 lists the estimated gains from tributaries within the watershed and downstream of the USGS gage station. Table 4.2-4 lists the flows downstream of

the Andrew Molera State Park and the Big Sur gage. At the time the estimates were prepared, the average monthly flows at the park were, indeed, higher than those at the Big Sur gage. As noted by the commenter, the Big Sur river system is complex. Reaches of the river can fluctuate between gaining and losing conditions. The limited data may appear in conflict because of this.

Regardless, the DEIR does not identify the use of the Big Sur gage for measuring flows at the points of diversion, determining compliance with water rights permit conditions and bypass flow limits, or for monitoring impacts from well operations. The DEIR uses the best available relationship between the Big Sur gage and VT1 for identifying flows reaching the ZOI for the impacts analysis. This is explained in the DEIR (see page 4.2-56) and complies with CEQA requirements pertaining to the use of best available information. The DEIR does not require or suggest that this gage be used for identifying future impacts; flows at the USGS gage are used only in the mitigation measure criteria for identifying when a critical flow condition might occur and requiring that project pumping cease. The DEIR does not require use of the Big Sur gage for determining compliance with the water right permit conditions or bypass flow limits as there are no bypass flow limits contained in the application or the DEIR. As noted previously by the commenter, mitigation proposed in the DEIR is based on percentile flows not bypass flow limits.

RTC 3-81

Comment 3-81 notes that the DEIR's report of some measured gains and losses is not sufficient for identifying what rate of flow loss should be used in setting bypass flow requirements for the water right permit. The comment presents analysis and suggests a reasonable loss factor. This comment also notes that the causes of losses have not been studied and that anthropogenic losses are not identified. The commenter also suggests that the lack of this information is because the DEIR uses percentile-based flow criteria in the mitigation measures.

In response to Comment 3-81, identification of the causes of losses and the presentation of data on gains and losses are not in the DEIR because such information does not currently exist. The exclusion of this data is not because the DEIR uses percentile-based flows to set mitigation limitations as implied in the comment. We acknowledge that this lack of data precludes determination of bypass flow requirements. In fact, it is precisely this lack of information that warrants the mitigation approach used in this DEIR. The DEIR used the relationship established by SGI between the Big Sur gage and VT1 for estimated flow in the impacts analysis (see footnote 25, page 4.2-56 of the DEIR). This was the best available information at the time of DEIR preparation.

Potential anthropogenic losses were identified and used in the cumulative impact analysis in the DEIR. Please refer to Impact 4.2-9 beginning on page 4.2-79 of the DEIR.

RTC 3-82

Comment 3-82 recommends that, based on noted calculations, sources, and the information in the comment letter's Table 3, a loss in instantaneous flow of 5 cfs should be assumed downstream of the USGS Big Sur gage when calculating bypass flow requirements although a more thorough analysis may suggest that 8.9 cfs is more appropriate.

In response to Comment 3-82, we reiterate that, for reasons presented above, this EIR does not recommend bypass flows. Because this EIR does not recommend bypass flows, the calculation of such flows is not relevant to this review. Please refer to RTC 3-29.

RTC 3-83

Comment 3-83 suggests that the DEIR provide an analysis of the losses or gains between the Big Sur gage and the POD and determine what values should be used to correct the gage reading in setting bypass flow requirements.

In response to Comment 3-83, the commenter's suggestion is not relevant to the adequacy of the DEIR because the DEIR does not set bypass flow requirements. We refer the reader to RTC 8-82 above. In addition, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-11 and 2-19 which address the CEQA analysis and use of a defined baseline for determining impacts and requests for additional studies and RTC 3-1 which addresses the CEQA scope and the DEIR's authority in setting bypass flow requirements.

RTC 3-84

Comment 3-84 suggests that the DEIR should document and evaluate natural and anthropogenic gains and losses below the USGS gage and any potential future riparian diversions.

In response to Comment 3-84, please refer to RTC 3-81 which addresses gains and losses below the USGS gage. We also refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-11 and 2-19 which address the CEQA analysis and use of a defined baseline for determining impacts and requests for additional studies. At the time of the NOP, existing water rights (known potential anthropogenic diversions) were acquired from the SWRCB and used in the DEIR to assess potential project and cumulative impacts. In reference to the potential for future riparian diversions and their cumulative impact, please refer to RTC 3-30, above.

RTCs 3-85 and 3-86

Comment 3-85 recommends that, as an alternative to identifying gains and losses, the DEIR should evaluate whether another gage should be installed lower in the river and closer to the POD. The comment also notes that CDFG staff has submitted a proposal for a USGS gage in the Andrew Molera State Park area, but that long-term funding for the gage is questionable.

In response to Comment 3-85, we agree that a permanent gage located closer to the POD would be an asset to management of water resources and understanding potential project effects on the river system. However, the installation of such a gage is not essential for the determination of potential project impacts under CEQA, or for the adequate mitigation of potential project impacts. Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-11 and 2-19, which address the CEQA analysis and use of a defined baseline for determining potential project impacts and required mitigation.

RTC 3-87

Comment 3-87 suggests that the DEIR was written with the assumption that public trust resources can be protected using diversion limits based on percentile flow thresholds and notes that there are discrepancies between the commenter's tables, the Application table, and the DEIR percentile flows (Table 4.2-1). This comment also notes the overlapping mitigation flow thresholds and that future plans are not available for public review; other agencies will not have the opportunity to review plan flow thresholds. This comment also asserts that specific standards for resource protection are not included.

In response to Comment 3-87, in accordance with CEQA, the DEIR assesses potential project impacts and identify mitigation measures, where applicable and feasible, to reduce potential impacts to less-than-significant levels. Under CEQA, a reduction of impact to environmental baseline

conditions is considered adequate mitigation to avoid significant impact. Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, and 3-10, which address the DEIR's use of the environmental baseline as the basis for impacts assessment. Also, please refer to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28 which address the protection of public trust resources.

Regarding Table 4.2-1, please refer to RTC 3-31. The differences in identified percentile flows noted in the comment are because the DEIR used baseline years while the commenter and Applicant used the period of record or some other period.

The mitigation measures do contain some text errors that result in overlapping flow thresholds. Please refer to RTC 3-2, which removed overlapping thresholds. This correction did not result in any substantive change to the DEIR's evaluation of impact or determination of mitigation measures.

The proposed mitigation measures include review by other agencies and provide specific standards for reducing potential project impacts. Mitigation measures include specific requirements that project pumping cease when critical flow thresholds are met. Mitigation measure 4.2-3 requires review by the SWRCB and specific practices be implemented. Mitigation measures 4.3-1 and 4.3-2 require consultation with NFMS and CDFG and review and approval by the SWRCB for required plans. Mitigation measure 4.3-4 includes specific conditions (specific DO levels, temperature, and flow rates) that must be met in order to continue project pumping.

RTC 3-88

Comment 3-88 provides the commenter's opinion regarding the need to assess the long-term impact of environmental baseline conditions and provides extensive information in support of this opinion. This comment also reasserts that a more standard approach to the Water Right permit would be more appropriate, using bypass flow requirements established through instream studies at the PODs that require cessation of diversions when flows drop below the bypass requirements.

In response to Comment 3-88, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the DEIR's use of the environmental baseline as the basis for determining project impact in the DEIR and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28 which address the issue of public trust resources protection. The commenter's suggestion that a more standard permit and use of bypass flows is hereby forwarded to the decision-makers for their consideration.

RTC 3-89

Comment 3-89 provides background information regarding fish passage in the study area and presents data and analysis for interim bypass flow requirements. These interim bypass flow requirements are based on an actual maximum pumping rate of 7.93 cfs, which is the sum of the maximum capacities of both pumps.

In response to Comment 3-89, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address using the identified baseline as the basis for impacts assessment in the CEQA process and requests for additional studies.

It should be noted that this comment incorrectly assumes that maximum pumping rate for two wells pumping is the sum of their older individual maximum rates. Pumping capacity is directly a function of the depth to groundwater. Wells in close proximity as the New Well and Old Well will have overlapping drawdown zones and, as such, pumping at each well will affect the pumping capacity at the other. Pumping capacity at El Sur Ranch is also affected by which fields are being irrigated. Additionally, the maximum capacity can decrease over time. The actual maximum pumping rate for both wells in operation, if maximum rates can be simply added to provide the combined capacity, is

closer to about 6.2 cfs (please see RTC 3-111 below for additional detail). Furthermore, the commenter's analysis identifies low flow passage criteria at a location near the upper boundary of the ZOI, but applies the entire diversion request as a direct reduction in surface channel flows at this location, neglecting to consider the studies that show measured effects are only a portion of the diversion rate. Additionally, the analysis does not show how reduced pumping at the downstream POD would, in effect, ameliorate passage constraints at the upper passage transects when flows drop below the suggested interim bypass flows.

The commenter also cites preliminary data from CDFG regarding on-going studies as to bypass flows required for fish passage. We note that these studies are not final, nor are they available for public review, so their use in setting bypass flow requirements is not supportable in our view. Further, if 40 cfs at the USGS gage is used to identify the flow passage requirement (to allow for 30 cfs at the ZOI), during the suggested low flow interim diversion period (June through November), fish passage would only be possible during 9.4 percent of the time (baseline record). Thus, a bypass flow requirement would still not allow fish passage for 90.6 percent of the time during June through November. Using the measured relationships between diversion rates and effects on flow in the surface channel ZOI (0.24 cfs per cfs diverted), not some hypothetical maximum direct withdrawal of diversions, the project would only increase the number of days that flows in the surface channel ZOI fall below 30 cfs, by 29 days over the entire 20-year baseline period, even when diversions continue during periods when the USGS gage flows are lower than 40 cfs. In other words, the project could only affect fish passage 0.8 percent of the time more than no-diversion conditions, even though project diversions would continue during times when USGS flow was less than 40 cfs and flow entering the ZOI was less than 30 cfs.

In general, June median flows at the USGS gage range from 8.1 cfs to 119.3 cfs during the baseline period, with only some above normal and wet June conditions having USGS flows equal to or greater than 40 cfs. Therefore, if 40 cfs is the required bypass flow to permit sufficient fish passage, in most years, flow would not allow sufficient passage and no amount of reduced pumping in June would remedy passage constraints. In fact, in no critical dry June did flow exceed or equal 20 cfs. For the July through October diversion season, median seasonal flows at the USGS gage range from 4.8 cfs to 32 cfs. No amount of reduced pumping in the irrigation season would remedy passage constraints. Furthermore, under baseline conditions, of the five highest historical June diversion amounts, three occurred during a dry June and one occurred during a critical dry June. Under baseline conditions for the irrigation diversion season (July through October), the highest diversion (701 AF) occurred during an extreme critical dry season (1990), with the lowest median flow at the USGS gage. Overall, one of the six highest seasonal diversions occurred during a dry season (675 AF) and two occurred during extreme critical dry seasons (701 and 613 AF).

As the commenter notes, this physical setting is complex; reaches along the Big Sur River fluctuate between gaining and losing conditions, depending upon flow at the upstream USGS gage, inflow from groundwater, and potential diversions between the USGS gage and the ZOI. As the commenter also notes, the channel morphology changes over time. Therefore, establishment of bypass flow criteria would have to change in response to changes in channel morphology over time.

RTC 3-90

Comment 3-90 notes that the DEIR and technical studies do not provide information on flows necessary to protect public trust resources and provides an alternative for identifying interim high bypass flows.

In response to Comment 3-90, please refer to RTC 3-33, which addresses the proposed interim bypass flow requirements, RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the DIER's use of the baseline as the basis for impacts assessment under CEQA, and RTCs 1-8, 2-12, 2-13, 2-14,

2-18, and 2-28, which address the issue of public trust resources protection. It should also be noted that the method used by the commenter uses a **mean annual** flow rate in determining the interim bypass flows to mitigate potential effects of diversions on public trust resources and yet in comment 3-33 and others the commenter asserts that using monthly statistics (exceedence percentiles) is inappropriate for mitigating potential effects. Furthermore, the commenter would require instantaneous measurements to ensure compliance with a condition set based on a long-term average value (refer to Comment 3-93). These approaches are inconsistent and do not provide comparable relationships.

RTC 3-91

Comment 3-91 recommends that bypass flow limitations for the water right should require the cessation of pumping whenever river flow drops below a specified rate(s) as measured at an appropriate river gage.

In response to Comment 3-91, Please refer to RTCs 3-24 and 3-33, which address the proposed interim bypass flow requirements and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources.

RTC 3-92

Comment 3-92 recommends that bypass flow should be based on specific impacts to public trust resources not historic flow percentiles.

In response to Comment 3-92, please refer to RTC 3-33, which addresses the proposed interim bypass flow requirements and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust. Further, please refer to RTCs 3-48 and 3-87, which address mitigation measures proposed under the CEQA process.

RTC 3-93

Comment 3-93 notes that bypass flow limits require daily monitoring and reporting of instantaneous flows at the gage, rate, and time of diversion. Long-term averaging does not capture peak discharge rates the lack of flow metering at the wells precludes sufficient monitoring of diversions.

In response to Comment 3-93, please refer to RTCs 3-33 and 3-90, which address the proposed interim bypass flow requirements and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection. Please refer to RTC 3-90 regarding the inconsistency of requiring instantaneous measurements to meet a requirement based on a long-term average.

RTC 3-94

Comment 3-94 suggests that the requested maximum instantaneous diversion of 5.84 cfs be used as a minimum in setting bypass flow requirements and that measures be implemented to prevent the maximum 7.93 cfs diversion.

In response to Comment 3-94, please refer to RTCs 3-1, 3-15, 3-22, and 3-24, which address the use of percentile flows compared to bypass flows and RTC 3-89 which addresses the maximum pumping rate and proposed interim bypass flow requirements. Also, please refer to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection.

RTC 3-95

Comment 3-95 recommends DEIR be revised to incorporate interim bypass flow requirements of 40 cfs from June 1 to November 30 and 132 cfs from December 1 to May 31 and that the entire diversion be considered to have an impact on river flow.

In response to Comment 3-95, please refer to RTC 3-1, 3-15, 3-22, 3-24, and 3-33, which address the commenter's proposal for interim bypass flow requirements and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the protection of public trust resources.

RTC 3-96

This comment suggest that the proposed interim bypass flows significantly alter the environmental analysis and requests that the DEIR provide and analysis of historic diversions.

In response to Comment 3-96, please refer to RTC 3-1, 3-15, 3-22, 3-24, and 3-33, which address the commenter's proposal for interim bypass flow requirements. In addition, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the determination and use of the environmental baseline presented in the DEIR which served as the basis for impacts assessment in keeping with the requirements of CEQA. Lastly, please refer to RTCs 3-48 and 3-87, which address mitigation measures proposed in the DEIR in keeping with CEQA requirements.

RTC 3-97

Comment 3-97 suggests that there is a potential for irrigation water to enter Swiss Canyon via seepage or overland runoff. In response to Comment 3-97, please refer to RTCs 3-25, 3-36, 3-38, 3-44, and 3-46, which address the potential for runoff and seepage to Swiss Canyon; irrigation runoff is prevented from flowing to Swiss Canyon by roads and embankments. Irrigation seepage is used to irrigate portions of Swiss Canyon.

RTC 3-98

Comment 3-98 addresses discrepancies in irrigated acreage and questions whether or not Swiss Canyon is included in the irrigated acres and POU. In response to Comment 3-98, please refer to RTCs 3-44, 3-45, and 3-46, which address POU acreage and the inclusion of Swiss Canyon in the irrigated acreage.

RTC 3-99

Comment 3-99 notes that the REJA study states that eroded areas, slumps, and slope failure along walls of Swiss Canyon were filled between 1956 and 1967 and that the means of fill was not identified in the study. As such, the comment states that these areas could be susceptible to erosion and failure if the fill was not engineered fill. This comment also suggests that because sediment could be discharged to critical habitat, a technical study is required to identify the level of stability and mitigation measures, if necessary, and that study results should be included in the DEIR and recommendations as DEIR mitigation measures.

In response to Comment 3-99, it should be noted that the REJA study did not state that the Swiss Canyon eroded areas were filled between 1956 and 1967. The filled areas referred explicitly to the erosion areas associated with the drainage to the tailwater pond. In addition, please refer to RTC 3-40, which summarizes the erosion studies and potential for sediment transport to Swiss Canyon and RTCs 3-25, 3-36, 3-38, 3-44, and 3-46, which address the potential for runoff and seepage to Swiss Canyon. Lastly we again refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and

2-19, which address the determination and use of environmental baseline conditions presented in the DEIR which served as the basis for determining project impacts. The prior creation of fill areas on the project site is part of the environmental baseline and is only relevant to the DEIR's evaluation of impact if proposed project changes in baseline conditions will result in significant impact.

RTC 3-100

Comment 3-100 provides background information regarding Swiss Canyon erosion and the potential for irrigation pipe leakage and maintenance. This comment also recommends that the DEIR evaluate whether leakage from an irrigation pipe(s) is discharging to Swiss Canyon and the potential impact from maintenance activities, need for permits, and recommended permit conditions.

In response to Comment 3-100, please refer to RTCs 3-36 and RTC 99.

RTC 3-101

This comment suggests that compliance with water quality standards constitutes a discharge limitation and the Conditional Waiver includes required management practices. This comment also requests that the DEIR evaluate whether the baseline and project would be subject to the Conditional Waiver, and if so, that the monitoring and reporting documents and FWQMP be included in the DEIR

In response to Comment 3-101, the project would not result in any substantive change in historical and ongoing irrigation practices on the El Sur Ranch site and would not be subject to the Irrigated Lands WDR. Please refer to RTC 3-2 regarding the Irrigated Lands WDR (Conditional Waiver).

The commentor understands that water quality standards (compliance with the Basin Plan) constitute a discharge limitation. Water quality standards do not constitute discharge limitations; water quality standards are applicable to only to the in situ receiving water quality. Water quality standards are comprised of both the designated beneficial use and the associated water quality objective. A discharge of waste does not have a designated beneficial use, and as such, does not have a water quality standard but may have a discharge limitation to prevent violation of water quality standards or degradation of water quality. A discharge can be permitted to have a discharge limitation in excess of the water quality objective if the discharge is small and would not constitute a violation of the water quality standard *in the receiving water* (or contribute to substantial degradation).

RTC 3-102

Comment 3-102 suggests that the DEIR evaluate and provide mitigation measures for any potential impacts from irrigating pastures based in part on the results of any previous water quality monitoring, particularly, the practice of leaching out salts using additional irrigation waters.

In response to Comment 3-102, please refer to RTCs 3-38 and 3-39, which address salt leaching and potential effects on water quality.

RTC 3-103

Comment 3-103 notes that the salinity cut-off for ceasing well pumping is not a permit requirement for Water Right Application 30166 or included as a CEQA mitigation measure. The comment also cites text that appears to be in conflict regarding whether the cut-off is voluntary or required and that the determination of a less-than-significant impact is in conflict with SGI 2005 and 2007 which identifies the need to shut off the Old Well regularly and the need for 10 percent additional diversion

for salt leaching. This comment requests that the DEIR expand on the potential impacts from applying higher salinity water, regardless of where the salinity comes from, and that the higher salinity water and associated impacts of leached salts may cause a significant impact. This comment also suggest that a mitigation measure is needed to shut off the wells whenever salinity reaches 1,000 uS/cm, followed up by sampling and testing for chloride concentrations. The shutoff time, date, and water quality measurements should also be documented and reported. This comment also reiterates concerns about the use of historic practices as baseline and refers to a previous comment.

In response to Comment 3-103, please refer to RTCs 3-38, 3-39, and 3-102, which address salt leaching. In addition, please refer to RTCs 3-87 to 3-96, which address the DEIR's use of environmental baseline conditions to assess potential project impacts.

Further, in general, waterlogging (saturated soil conditions/perched water) under saline conditions can have additional adverse effects on plant growth and survival. Therefore, to avoid adverse effects and additional monitoring requirements, the applicant voluntarily shuts off the well if salinity exceeds 1,000 uS/cm and would continue to do so under the project. We note that the text referenced is unclear as to voluntary and mandatory requirements. DEIR text on page 2-11 and 2-12 is revised as follows:

When electrical conductivity is above 1.0 mmhos/cm (uS/cm), the Ranch must perform additional analysis to determine if the chloride concentration exceeds 250 parts per million (ppm). In the event that the chloride concentration exceeds 250 ppm, the California Department of Parks and Recreation (DPR) may require the Ranch to terminate pumping until the chloride concentration in the well is reduced. According to information in the Ranch's water right application (as amended October 17, 2006), the Ranch typically stops pumping the well voluntarily when salinity levels, measured as electrical conductivity, reach 1.0 micromhos per centimeter (mmhos/cm).³ ~~When electrical conductivity is above 1.0 mmhos/cm, the Ranch must perform additional analysis to determine if the chloride concentration exceeds 250 parts per million (ppm). In the event that the chloride concentration exceeds 250 ppm, the California Department of Parks and Recreation (DPR) may require the Ranch to terminate pumping until the chloride concentration in the well is reduced.~~

RTC 3-104

Comment 3-104 provides a summary of existing coastal bluff erosion and provides a hypothesis that sapping erosion occurs. Aerial photographs in support of this hypothesis are also provided in this comment.

In response to Comment 3-104, please refer to RTC 3-40, which summarizes the NRCE 2010 evaluation of potential sapping erosion.

RTC 3-105

Comment 3-105 suggests that mitigation measures should be considered a requirement of the water right permit.

In response to Comment 3-105, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the DEIR's use of environmental baseline conditions in determining potential project impacts and RTCs 3-48 and 3-87, which address the mitigation measures presented in the DEIR. The decision to include proposed mitigation measures as conditions of the requested water right permit can only be made by the SWRCB as part of the water right approval process. As defined by

CEQA, the EIR is an informational document only. Nevertheless, the comment is noted and hereby forwarded to project decision-makers for their consideration.

RTC 3-106

Comment 3-106 discusses permit conditions and protection of public trust resources.

In response to Comment 3-106, please refer to RTC 3-105, which addresses the DEIR's use of environmental baseline conditions in determining potential project impacts, mitigation measures presented in the DEIR and the suggestion to include those measures as permit conditions for approval of the proposed water right. Further, please refer to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources and RTCs 3-97 through 3-102 which address reference to General Comment 10 and 11.

RTC 3-107

Comment 3-107 discusses discrepancies in the exact date of operation of the Old Well.

In response to Comment 3-107, the precise starting date for Old Well operation is not known; however, the Old Well was drilled in 1949 and began operation between 1949 to 1950. The exact date of operation and slight discrepancies between sources does not affect the results or adequacy of the DEIR's evaluation of potential project impact.

RTC 3-108

Comment 3-108 describes the Water Right Application 30166 and diversion history on El Sur Ranch. The comment suggests that the DEIR clearly represent the legal status of ranch irrigation operations since April 12, 1992 under Water Code 1052.

This comment does not identify significant environmental issues. The comment references Water Code section 1052, which provides that the unauthorized diversion of water is a trespass for which the SWRCB may impose administrative civil liability (ACL). The SWRCB has not issued an ACL in this matter.

RTC 3-109

This comment refers to a previous comment. In response to Comment 3-109, please refer to RTCs 3-97 through 3-100, which address the referenced comment.

RTC 3-110

This comment expresses confusion regarding acreage totals presented in the DEIR for riparian lands and the POU, and the potential use of an appropriative Water Right for irrigating riparian lands. In response to Comment 3-110, please refer to RTCs 3-6, 3-42, 3-43, 3-44, 3-35, and 3-46.

RTC 3-111

Comment 3-111 requests that pumping rates which are expressed in gallons per minute (gpm) on page 2-6 of the DEIR, be changed to cubic feet per second. The comment also refers to differences in reported maximum rates and restates the calculated maximum pumping rate of 7.93 cfs.

In response to Comment 3-111, we note that the rates listed on page 2-6 are from the results of a study cited in the DEIR which uses the gpm unit. We also note that the maximum pumping rate may

vary; depending on study conditions over time and that the text on page 2-6 reported older pump capacity data than are currently available. In response to Comment 3-111, the DEIR relevant text on page 2-6 has been updated with the most recent (2004) pump test data as follows:

The Old Well is equipped with an electric motor, 60-horsepower (hp) pump that has reported pump rates between approximately 1,1~~1045~~ and 1,208~~2,000~~ gallons per minute (gpm) (2.47 and 2.69 cubic feet per second [cfs], respectively). Since no well drilling report exists, the depth of the Old Well is unknown. The New Well is approximately 32 feet deep and equipped with an electric motor driving a 50-hp pump that has reported pump rates between approximately ~~872963~~ and 1,567 gpm (1.94 and 3.49 cfs, respectively). Both wells' pumps can be operated simultaneously at their maximum pump rates when water is needed for irrigation of pastures, typically during dry periods of the year (e.g., summer months). However, the pumps are typically used to irrigate different fields, so they are operated simultaneously only when the needs of those fields require it.

RTC 3-112

Comment 3-112 notes that the DEIR does not provide duty factors requested per head of cattle and requests DEIR evaluate regional irrigation use and requirements and provide statistics in the evaluation of beneficial use.

In response to Comment 3-112, please refer to RTCs 2-12, 3-12, and 3-55, which address the appropriateness of DEIR's providing legal determinations and comparing historic El Sur Ranch use with historic regional use. Further, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54, which address the DEIR's use of environmental baseline conditions as the basis for determining potential project impact and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address public trust resources protection.

RTC 3-113

Comment 3-113 requests a numbers-unit equivalence. In response to Comment 3-113, please refer to RTC 3-103.

RTC 3-114

Comment 3-114 reiterates the commenter's confusion regarding the salinity shut-off and requests additional, specific details so that they can be incorporated into the requested water right. In response to Comment 3-114, please refer to RTCs 3-103 for text edits and explanations.

RTC 3-115

Comment 3-115 contests the validity of the WAA. In response to Comment 3-115, this comment does not address the adequacy of the DEIR and is forwarded to the decision-makers for their consideration. The DEIR analysis is based on baseline conditions (e.g., flow, fish passage, diversion rates, and practices) and, primarily, SGI report results compared to the project effects. The WAA is the analysis used to identify available quantities of water within the Big Sur River system for the Water Right Application. The WAA analysis is a coarse analysis and does not provide the details used in the DEIR analysis and was not used in the DEIR analysis.

RTC 3-116

Comment 3-116 notes that only 23 acres of the 25 riparian acres in the POU are irrigated. In response to Comment 3-116 and as noted above, although 23 acres within the 25-acre area riparian

area are currently irrigated, the entire 25 acres is included in the POU delineated in Water Right Application 30166. Please refer to RTCs 3-6, 3-42 through 3-45.

RTC 3-117

Comment 3-117 suggests that a determination of reasonable and beneficial use would provide rational for CEQA significance determination. In response to Comment 3-117, please refer to RTC 2-46 which addresses the determination of “beneficial use.” Also, please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54, which address the DEIR’s use of environmental baseline conditions as the basis for determining potential project impact.

RTC 3-118

Comment 3-118 revisits previous comments regarding diversion limit discrepancies. In response to Comment 3-118, please refer to RTCs 3-49 through 3-67.

RTC 3-119

Comment 3-119 contends that specific mitigation measures are not provided and requests that the DEIR include management plans which list specific operation practices and procedures. In response to Comment 3-119, please refer to RTC 3-87.

RTC 3-120

Comment 3-120 refers to a previous comment. In response to Comment 3-120, please see RTCs 3-87, 3-105, and 3-106.

RTC 3-121

Comment 3-121 refers to a previous comment. In response to Comment 3-121, please refer to RTC 3-107.

RTC 3-122

Comment 3-122 notes that the DEIR’s summary of mitigation measures is complex and overlapping. In response to Comment 3-122, please refer to RTC 3-2 and note that the DEIR’s impact summary table (Table 3-1) has been revised to reflect updated mitigation. The revised table is included in Chapter 2 of this Final EIR.

RTC 3-123

Comment 3-123 refers to previous comments. In response to Comment 3-123, please refer to RTCs 3-42 through 3-46 and RTCs 3-68 through 3-96.

RTC 3-124

Comment 3-124 refers to a previous comment. In response to Comment 3-124, please refer to RTC 3-86.

RTC 3-125

Comment 3-124 revisits a previous comment regarding aquifer flow and suggests that only information from a registered geologist/geohydrologist or professional engineer should be used in describing conditions within the area.

In response to Comment 3-124, please refer to RTCs 3-68 through 3-71. Also, please refer to RTC 1-5, which addresses CEQA requirements for using the best available information in EIR impact analyses. Even though the referenced study was conducted by a non-certified professional, this does not invalidate study's results. Given the commenter provides no evidence to support questioning the validity of the study, and given the limited information available concerning this complex physical setting, the study used in the DEIR represents the best available information. Its use in the DEIR, therefore, is entirely appropriate in our view.

RTC 3-126

Comment 3-126 revisits a previous comment regarding provision of information without a determination of geohydrologic significance. In response to Comment 3-126, as previously noted, the DEIR provides background information regarding relevant studies and known understanding of the local geology.

RTC 3-127

Comment 3-127 notes that soils distribution and detailed information is not reported in the DEIR and refers to a previous comment. This comment also requests a soils map.

In response to Comment 3-127, please refer to RTC 3-104 which addresses clayey soils and seepage. Please refer to the new NRCE 2010 report cited in that response for details on soils, infiltration, and runoff. Please refer to RTC 3-40 which addresses the potential for seepage. A soils map is provided in Appendix 9 of this Final EIR (NRCE Technical Memorandum dated May 15, 2010).

RTC 3-128

Comment 3-128 refers to previous comments. This comment also states that the 'normal winter flow' value should be categorized as an average of normal daily flow.

In response to Comment 3-128, please refer to RTC 3-41. The 169 cfs called out as a 'normal winter flow' is not an average of normal daily flow. The DEIR text states, '...normal winter flows **up to** [emphasis added] 169 cfs (Table 4.2-1).' This is the 60th percentile flow during March; it is not an average of normal daily flows. As the 60th percentile, it is within the 'normal' year category and is the maximum 'normal' daily winter flow. Please also refer to RTCs 3-41 and 3-46.

RTC 3-129

Comment 3-129 refers to a previous comment and revisits the groundwater upwelling issue. In response to Comment 3-129, please refer to RTC 3-125, which addresses the use of licensed professionals only and RTCs 3-68 and 3-69 which address groundwater upwelling.

RTC 3-130

Comment 3-130 refers to a previous comment and revisits the groundwater upwelling issue. In response to Comment 3-130, please refer RTCs 3-68 through 3-71, which address groundwater upwelling.

RTC 3-131

Comment 3-131 refers to a previous comment. In response to Comment 3-131, please refer RTCs 3-68 through 3-71, which address groundwater upwelling and flow gradients, and RTCs 3-47 and 3-48, which address historic pump diversions.

RTC 3-132

Comment 3-132 refers to a previous comment regarding salinity triggers for pumping cut off. In response to Comment 3-132, please refer RTCs 103.

RTC 3-133

Comment 3-133 refers to Table 4.2-4 in the DEIR and variable gaining/losing condition determinations. This comment also requests that the DEIR clarify the changing location of VT2 between study years.

In response to Comment 3-133, please refer RTCs 3-80 and 3-83 which address Table 4.2-4 and gaining/losing conditions. As shown below, text in the DEIR has been added to clarify some issues:

Paragraph below Table 4.2-3, page 4.2-46 of the DEIR:

Two of the tributaries, Pheneger Creek and Pfeiffer Creek, are essentially dry during the summer and have no base flow. The total base flow from the other tributaries is about 0.98 cfs, which is about 18 percent more flow added to the Lower Big Sur River below the USGS gage. However, there is evidence in the SGI studies that the Lower Big Sur River is a losing reach¹⁷ below the USGS gage at least downstream of the Andrew Molera State Park, which would serve to further modify flows reaching the project site. Jones and Stokes (1999) calculated the average annual water budget for the river below the USGS gage in order to determine the potential flow rates in the river at the Andrew Molera State Park. Table 4.2-4 compares the average flow rate at the USGS gage station with calculated flows at the Andrew Molera State Park based on the Jones and Stokes (1999) average annual water budget.

Month	At USGS Gage ^a	At Andrew Molera State Park	Difference	
	cfs	cfs	cfs	%
January	223	251	28	13%
February	267	292	25	9%
March	220	239	19	9%
April	146	150	4	3%
May	66	68	2	3%
June	36	37	1	3%
July	23	24	1	4%
August	17	18	1	6%
September	15	16	1	7%
October	18	19	1	6%
November	47	64	17	36%
December	102	125	23	23%

Note:
a. Data presented is for the same time frame as data for the Andrew Molera State Park
Source: Jones and Stokes 1999 and PBS&J 2008.

Second paragraph below Table 4.2-4, page 4.2-46 of the DEIR has been modified as follows:

To better characterize flow the flow regime in the Lower Big Sur River near the project site, temporary continuous gage stations (velocity transects [VT]) were installed during a series of three studies that were conducted in 2004, 2006, and 2007 (SGI 2005; 2007; and 2008, respectively). The locations of the velocity transects for the 2007 study are ~~is~~ shown in Figure 4.2-5. One gage station (VT1) was about 4,000 feet upstream of the project site (Figure 3-18 SGI 2008), one gage station (VT3) was located after Lower Big Sur River curves to run in a southwesterly direction in Zone 4 (2007 study only), and the other gage station (VT2) was located at the downstream end just before the upper lagoon at the boundary between Zone 1 and Zone 2. During the studies, river flow upstream of the project site at gage station VT1 was always higher than flow adjacent to the area of diversions at gage station VT3, indicating that the river loses flow to groundwater within this section (Figure 3-28 SGI 2008). River flow measured just before the upper lagoon (VT2) was almost always higher than where the Lower river adjacent to the area of diversions (VT3), indicating that this section of the river gains water from groundwater inflows.

RTC 3-134

Comment 3-134 refers to a previous comment regarding flow losses. In response to Comment 3-134, please refer RTCs 3-80 through 3-83.

RTC 3-135

Comment 3-135 refers to a previous comment regarding coastal bluff stability. In response to Comment 3-135, please refer RTCs 3-40.

RTC 3-136

Comment 3-136 questions the data source for cumulative water rights diversions and refers to a previous comment.

In response to Comment 3-136, the source of data used was a table provided by the SWRCB, 2005, including water rights permit information. This information is currently available via eWRIMs and current permitted diversions are actually lower than those used in determining the impacts analysis. Please refer RTCs 3-32, 3-33, and 3-34, which address use of 5.84 to determine a bypass flow. The text has been edited to reflect the correct table number reference.

RTC 3-137

Comment 3-136 refers to a previous comment and suggests that water quality data is lacking and natural degradation in the tailwater pond is not supported. In response to Comment 3-136, please refer to RTCs 3-101 and 3-102.

RTC 3-138

Comment 3-137 refers to a previous comments regarding salt build up and leaching. In response to Comment 3-137, please refer to RTCs 3-101 through 3-104.

RTC 3-139

Comment 3-139 questions the Anti-Degradation Policy summary and notes that beneficial uses do not sufficiently cover anti-degradation.

In response to Comment 3-139, we believe the commenter confuses the regulatory information. The discussion of anti-degradation policy referred to in the comment is as a portion of the anti-degradation policy is implemented in the Basin Plan; it is language from the Basin Plan. Basin Plan designated beneficial uses, as discussed in this section, are specific regulatory determinations used in defining water quality standards. As such, this is not a discussion of SWRCB Resolution 68-16 – it is the Basin Plan implementation of the policy.

RTC 3-140

Comment 3-140 refers to a previous comment regarding the Irrigated Lands WDR. In response to Comment 3-140, please refer to RTCs 3-101 and 3-102.

RTC 3-141

Comment 3-141 refers to a previous comment. In response to Comment 3-141, please refer to RTCs 3-63 through 3-67, which address the ability to sustain an allowed **instantaneous** maximum diversion rate for 19 days. Note that RTC 3-64 provides clarifying revisions to the DEIR's Table 4.2-6.

RTC 3-142

Comment 3-142 refers to previous comments. The comment also summarizes SGI study artifacts that preclude more detailed analysis: artifacts noted in the DEIR.

In response to Comment 3-142, please refer to RTCs 3-68 through 3-85, and 3-87 through 3-96.

RTC 3-143

Comment 3-143 refers to a previous comment regarding saline water impacts. In response to Comment 3-143, please refer to RTC 103.

RTC 3-144

This comment requests that the ZOI be drawn on all maps. In response to Comment 3-144, we refer the reader to Figure 4.2-6 in the Draft EIR, which delineates the radius of influence of both the new and old wells. We also refer the reader to Appendix 10 of this Final EIR, which provides the 2006 and 2007 groundwater contour maps prepared by SGI for the project applicant. The maps identify the upgradient radius of influence of both project wells in 2006 and 2007, respectively.

RTC 3-145

Comment 3-145 refers to a previous comment regarding mean values and comparison with percentile categories.

In response to Comment 3-145, please refer to RTC 3-86. The percentile values are used to identify the breaks in the various categories of flows. The mean average for each study month is used to characterize hydrologic regimes because we are looking to see what category the month is in. For the short time periods and more uniform conditions evaluated, mean and median are not very different.

RTC 3-146

Comment 3-146 notes errors in calculations of bankful and flood flows.

In response to Comment 3-146, the bankfull and flood flow rates were erroneously calculated based on all flow rates as opposed to annual peak flow rates. Revised numbers do not change the impact significance. Bankfull tables and text have been revised as follows:

TABLE 4.2-8		
ESTIMATED BANKFULL AND FLOOD FLOW IN THE LOWER BIG SUR RIVER AFFECTED AREA		
Return Period Return Year	Flow Rate	
	Baseline cfs	Proposed Project cfs
Bankfull		
1.5	48.02 <u>1206.4</u>	47.94 <u>1206.3</u>
2	28.24 <u>1663.1</u>	28.29 <u>1662.9</u>
2.5	41.02 <u>1772.6</u>	40.86 <u>1772.4</u>
Flood		
10	257.24 <u>294.9</u>	257.04 <u>294.8</u>
Source: PBS&J 2008.		

TABLE 6-3

COMPARISON OF FLOW RATES FOR CHANNEL-FORMING FACTORS AND FREQUENCY FOR NON-EXCEEDENCE OF CRITICAL FLOW RATES FOR BASELINE, PROPOSED PROJECT, AND PROJECT ALTERNATIVE CONDITIONS

Flow Condition cfs	Baseline/ Historic cfs	Proposed Project/ Alternative Limits on Diversions cfs	No Project Alternative cfs	No Project Alternative Difference		Alternate Irrigation Efficiency cfs	Alternate Irrigation Efficiency Alternative Difference		CDFG Alternative Difference			
				Baseline cfs	Proposed Project cfs		Baseline cfs	Proposed Project cfs	CDFG Alternative cfs	Baseline cfs	Proposed Project cfs	
Flood												
10-year	<u>257.2</u> 4294.9	<u>257.0</u> 4294.8	<u>257.2</u> 4294.9	0.04	<u>0.26</u> 0.1	<u>257.2</u> 4249.9	0.04	<u>0.26</u> 0.1	<u>4294.9</u>	<u>0</u>	<u>0.1</u>	
Bankful												
2.5-year	<u>41.02</u> 1772.6	<u>40.86</u> 1772.4	<u>41.91</u> 1772.6	0.89	<u>1.05</u> 0.2	<u>41.45</u> 1772.6	<u>0.43</u>	<u>0.59</u> 0.2	<u>1771.9</u>	<u>0.3</u>	<u>-0.5</u>	
2.0-year	<u>28.24</u> 1663.1	<u>28.29</u> 1662.9	<u>28.64</u> 1663.4	0.4	<u>0.32</u> 0.2	<u>28.20</u> 1663.1	<u>-0.01</u> 0	<u>-0.09</u> 0.2	<u>1662.4</u>	<u>-0.7</u>	<u>-0.5</u>	
1.5-year	<u>48.02</u> 1206.4	<u>47.94</u> 1206.3	<u>48.24</u> 1206.4	0.22	<u>0.33</u> 0.1	<u>48.13</u> 1206.4	<u>0.14</u>	<u>0.22</u> 0.1	<u>1205.7</u>	<u>-0.7</u>	<u>-0.6</u>	
Critical Flow (Frequency of Non- November Exceedence [%])												
1 cfs	<u>1.934</u>	<u>2.349</u>	<u>1.489</u>	<u>-0.46</u> 0	<u>-0.82</u> -1.15	<u>1.979</u>	<u>0.03</u> 0.65	<u>-0.33</u>	<u>1.34</u>	<u>0</u>	<u>-1.15</u>	
0 cfs	<u>4.08</u> 0.92	1.23	0.92	<u>-0.16</u> 0	<u>-0.31</u>	1.07	<u>-0.01</u>	<u>-0.16</u>	<u>0.92</u>	<u>0</u>	<u>-0.31</u>	

RTC 3-147

Comment 3-147 refers to a previous comment. In response to Comment 3-147, please refer to RTC 3-105

RTC 3-148

Comment 3-148 requests that the DEIR provide the ZOI when pumping both wells combined. In response to Comment 3-148, this data is not available. Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54 which address the baseline as the basis for impacts assessment in the CEQA process and request/use of additional studies.

RTC 3-149

Comment 3-149 discusses potential effects of sustained pumping during drought conditions and potential depletion of groundwater supplies and impact on public trust resources.

In response to Comment 3-149, during a critical dry year, there would still be more than 1,700 AF in the Big Sur River during July through October that could serve as water supplies (using an average of 7 cfs, which is the 10th percentile July through October flows). If all flows were at the 10th percentile for the entire year, this would still result in 17,900 AFY of water supplies available at the USGS gage. If only half of that reached the project area, there would still be sufficient supplies to recharge the subterranean portion of the Big Sur River by over 10 times. Additionally, as required by the mitigation measures, if flows dropped to critical dry levels, project pumping would cease. Therefore, it is unlikely that project diversions, even during drought conditions, could substantially deplete alluvial aquifer storage and result in sustained water table reductions.

Please refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54, which address the DEIR's use of environmental baseline conditions as the basis for determining potential project impact and RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address public trust resources protection.

RTC 3-150

This comment questions that losses above the ZOI are reported to only occur when diversions are greater than 5.0 cfs. The comment also suggests that the change in river flow volume lost by project above ZOI should be provided for comparison with gains/losses in the ZOI. The commenter also suggests that perhaps the ZOI is larger when pumping from both wells is combined.

In response to Comment 3-150, the commenter appears to misunderstand the information presented. To clarify, the flow loss of 16 percent occurred when pumps were diverting more than 5 cfs. The DEIR does not state that no losses would occur at lower rates of diversion; it simply describes the condition during which losses were identified. Similar to other identified losses, 16 percent flow loss above the ZOI, with 5 cfs of pumping, would result in 3 percent flow lost per cfs diverted. This information can be used to identify potential project effects. However, available information is insufficient to specifically identify what the resulting flow volumes would be. Because of artifacts in the various SGI studies, the data cannot be analyzed for determining potential effects of individual wells and precisely defining the ZOI for individual wells. However, the combined effect of operating both wells represents the 'worst-case' situation and is reasonable and appropriate under CEQA for use in the EIR's impact analysis.

RTC 3-151

Comment 3-151 notes that localized effects are important and that localized gains and losses are important for fisheries habitat and passage. This comment also notes different values identified for potential flow losses from pumping.

In response to Comment 3-151, localized changes are important but cannot be accurately identified. As such, where applicable, the impact significance is 'potentially significant' and mitigation measures are provided to reduce any potential project effects to less-than-significant levels. The various values for potential flow losses from diversions are attributed to the different sources of information and data calculations used to quantify effects. Flow losses may be greater or smaller in response to diversions depending upon the ambient conditions and methods and accuracy of data used in calculations. The uncertainty in exact values and relationships combined with the potential adverse effect on the environment dictate a determination of 'potentially significant' and require mitigation any potentially significant project effects.

RTC 3-152

Comment 3-152 restates that the changing location of VT2 should be addressed. In response to Comment 3-152, please refer to RTC 3-133.

RTC 3-153

This comment requests a definition of terms and an explanation of the analysis. The comment also questions how losses during average conditions could be worse than maximum conditions.

In response to Comment 3-153, the measured surface flows identified direct losses to surface channel expression flow between upstream and downstream locations (e.g., the difference between surface water flows entering the ZOI and leaving the ZOI) during pumping. However, it did not account for what the flow would have been if pumping had not occurred **and** if groundwater seeped into the surface channel as it would under unimpaired conditions. For instance, if during a pumping test, 20 cfs entered the ZOI and 10 cfs left the ZOI, the diversion effect was identified as a 10 cfs loss in river flow. However, if, under non-diversion conditions, not only would 20 cfs continue flowing downstream, but an additional 5 cfs of groundwater were to seep into the surface channel so the net unimpaired downstream flow would be 25 cfs. Thus, the effect of diversion would not be 10 cfs, flow loss, but rather, the difference between 10 cfs and 25 cfs, or a 15 cfs flow loss.

Averaging of DEIR flow losses may understate some impacts, but, because only average baseline data can be used (there is no daily baseline diversion data), this is the only reasonable approach to quantifying potential effects. The maximum project diversion condition could have less of an effect than baseline conditions because the maximum allowable project diversion could be less than the maximum that has occurred during baseline conditions. Potential project effects all depend on the starting point, which is the baseline condition. For example, if baseline average diversions were 100 AF and the project allowed an average diversion of 150 AF, the project effect for average diversion would be 50 AF. If the baseline maximum diversion was 350 AF, and the project maximum diversion was limited to 320 AF, the project effect would be -30 AF. This would result in a situation where the maximum project diversion impact would be lower than the average project diversion impact.

RTC 3-154

Comment 3-152 concerns the bankfull calculations presented in the DEIR. In response to Comment 3-152, please refer to RTC 3-146.

RTC 3-155

Comment 3-154 suggests that 5.84 cfs diversion could be sustained for up to 19 days without exceeding permit limitations and therefore, impacts are not adequately addressed. The commenter also states that the lack of minimum interim bypass flow requirements for maintaining habitat and fish passage is incorrect and refers to a previous comment. The comment contends that the use of 1 cfs for minimum required flow is inadequate. Finally, this comment recommends that Table 4.2-9 be revised to include the commenter's interim bypass flow requirements.

In response to Comment 3-154, the commenter is incorrect in assuming that the **instantaneous** maximum 5.84 cfs diversion rate shown in the water right application could be sustained for up to 19 days without exceeding application's diversion limits. Please refer to RTC 3-66, which addresses a 5.84 cfs sustained diversion rate.

The Commenter is also incorrect in stating that there is an interim bypass flow rate identified based on the commenter's analysis. Please refer to RTC 3-66 and RTC 3-89 regarding the suggested interim bypass flow requirements. The commenter does not sufficiently justify the selected interim bypass flow rates. As noted in RTC 3-89, the low flow interim bypass requirement would not result in substantially more days where flow near the ZOI was 30 cfs or more, based on a conservative, flat, 10 cfs unimpaired flow loss between the USGS gage and the ZOI. During both project and baseline operational conditions, if pumping ceased when flow at the USGS gauge was less than 40 cfs, fish passage constraints would only be prevented 0.8 percent of the time. Please also refer to RTC s 3-87 through 3-96 regarding the referenced comment. As noted in the DEIR, to date, there is no fish passage requirement.

The 1 cfs value used to assess potential project effects was used only to show relative effects of the project on low flow conditions. The 1 cfs used for identifying potential low flow impacts is reasonable because the 10th percentile flow for the driest irrigation season month (September, 6.6 cfs at the USGS gauge) is equivalent to about 1 cfs at the ZOI (using the SGI 2007 measured relationship between the USGS gage and VT1, for USGS gage flows less than 20 cfs, as reported in footnote 25, page 4.2-5 of the DEIR).

RTC 3-156

Comment 3-156 suggests that 5.84 cfs diversion should be applied across the board.

In response to Comment 3-156, it is incorrect in assuming that **instantaneous** maximum pumping rate could be sustained and that the instantaneous maximum should be compared with the baseline daily maximums. Baseline daily diversions are not known and can only be estimated based on total monthly values. When instantaneous maximum project diversions are compared with instantaneous maximum baseline diversions, project diversions are lower because, historically, the baseline instantaneous maximum has been greater than 5.84 cfs. When estimating potential effects on flow statistics, the 5.84 instant rate or 5.34 sustained maximum rate cannot be applied across the board either, because that would result in a yearly or seasonal diversion that exceeds the Application limits. Those conditions could not occur and the statistics would be meaningless. However, in Section 4.3 Biological Resources, sustained maximums and instant maximums can be used and are evaluated because the impacts analysis is not statistically based. These values are also used in the Section 4.2 Hydrology, Geohydrology, and Water Quality impacts analysis, where impacts analysis is not statistically based.

RTC 3-157

Comment 3-157 notes the use of mean flows for certain analysis and suggests median flows would be more applicable.

In response to Comment 3-157, the text has been revised to incorporate median, as opposed to mean, flows. See text changes to Section 4.2 (Hydrology) of the DEIR that are presented in Chapter 2 of this Final EIR as well as the revised DEIR Table 5-1. It should be noted that the median baseline flow is not the same as the median USGS gage flow; the baseline flows adjust for the changes in flows between the USGS gage and the ZOI using the relationship established by SGI 2007. Using the median flows does not substantively change the DEIR's determination of impact significance.

RTC 3-158

Comment 3-158 revisits the groundwater seepage in Swiss Canyon and potential pipe leakage. In response to Comment 3-158, please refer to RTC 3-36, which addresses this issue.

RTC 3-159

Comment 3-159 revisits mitigation measure management plan approvals and asks what additional permits would be required for plan implementation. In response to Comment 3-159, please refer to RTC 3-2, 3-8, 3-21, and 3-86, which address this issue.

RTC 3-160

Comment 3-160 questions values used in Table A and the difference between table 4.2-6 average November through April. In response to Comment 3-160, the differences are due to unit conversion errors. Table 4.2-6 has been edited to fix the error.

RTC 3-161

This comment refers to previous comments regarding the use of mitigation measures based on percentile flow rates instead of bypass flow rates. In response to Comment 3-161, please refer to RTCs 3-68 to 3-96, and RTC 3-153.

RTC 3-162

Comment 3-162 refers to previous comments and revisits coastal bluff erosion, seepage in Swiss Canyon and mentions that no evaluation has been performed regarding runoff to the drainage north of the pastures north of Swiss Canyon.

In response to Comment 3-162, please refer to RTCs 3-25, 3-36, 3-38, 3-44, 3-46, 3-99 and 104. As previously noted, the irrigated pastures are surrounded by embankments and roads that effectively prevent off-site runoff, except at the two identified discharge locations, and runoff from the pastures only occurs in response to rainfall events.

RTC 3-163

Comment 3-163 refers to previous comments and revisits the IWMP and ECOMP requirements and approvals and seems to assert that there is a conflict with the statement that the Irrigated Lands WDR does not require BMPs or discharge limitations. The comment questions whether the ECOMP constitutes a modification of the IWMP and asks when it has to be submitted for approval. The

comment also questions whether approval by the SWRCB is a CEQA process or some other equivalent permit process. The comment also asks will erosion control occur year round, is the project proposing an increased cattle grazing intensity, how does the ECOMP compare with the FWMP, and what BMPs will be implemented?

In response to Comment 3-163, please refer RTCs 3-101, 3-102, 3-1-3, and 3-104. The ECOMP is a required component of the IWMP. Because IWMP must be developed and implemented immediately following approval of the EIR, the ECOMP must be developed and implemented immediately following approval of the EIR. The Mitigation Measure 4.2-3 has been amended to clarify approval by the SWRCB is required. As with most management plans of its nature, the CEQA process and approval is not required. However, for compliance with CEQA, if the Water Right is granted, the Applicant must comply with the mitigation requirements in this DEIR. Erosion control will occur in accordance with the ECOMP as approved by the SWRCB and, as stated in the mitigation measures, inspections and repairs must occur before the beginning of the irrigation season and at least until October 15. If the Applicant elects to irrigate in the winter months, this practice would extend the irrigation season, and inspection and repairs would be required. It is not within the scope of this EIR to compare the identified mitigation with the FWMP, which is required, as applicable, under a separate regulatory authority. BMPs that would be implemented would be detailed in the ECOMP. BMPs identified in the mitigation measure include: regular inspection, maintenance, documentation, and reporting; maintenance of healthy vegetative cover; limitations on grazing intensity in poorly vegetated areas; revegetation of disturbed areas; erosion and sediment transport BMPs; inspection and repair of flow control devices and eroded areas; operator training and operations and management protocols; and designation of a responsible party.

RTC 3-164

Comment 3-164 notes that the project would be subject to the Irrigated Lands WDR and notes that the order has been updated. In response to Comment 3-164, please refer to RTCs 3-2 and 3-37.

RTC 3-165

Comment 3-165 revisits the issue of salinity levels in relation to project diversions and again asserts that 5.84 cfs can be diverted for up to 19 days.

In response to Comment 3-165, please refer to RTCs 3-39, 3-49 through 3-67, and 3-103 which address salinity and RTCs 3-66, 3-141, and 3-155 which address the commenter's contention that 5.84 cfs diversion could be sustained over 19 days.

RTC 3-166

Comment 3-166 suggests that the maximum average pumping diversions are not realistic because it assumes pumping has to take place for longer than 30-days. This comment also restates concerns about the accuracy of Table 4.2-6 and previous comments regarding documentation of channel conditions. This comment also mentions the June 28, 2006 memorandum on the NOP regarding temperature data in the 2004 SGI study.

In response to Comment 3-166, please refer to RTCs 3-64, and 3-68 through 3-79, which address previous comments. The comment regarding the temperature discussion in the 2006 memorandum does not address the adequacy of this DEIR. In evaluating potential water quality effects and effects on fish, all water quality data available from the SGI reports, including temperature data, was assessed. In addition, there is no basis for the commenter's assumption that irrigation would not take place for longer than 30 days. The maximum average pumping diversions are just that, average pumping diversions. As noted previously, because baseline data can only be estimated on

an average monthly basis, the project diversions must be summarized in a similar way in order to evaluate project impacts relative to that data.

RTC 3-167

Comment 3-167 notes that the Mitigation Measure 4.2-8 has an alternative mitigation measure, for which feasibility is unknown. Additionally, the commenter questions how conclusions regarding the effectiveness of mitigation at reducing impacts can be made when project impacts cannot be definitively determined. The comment also states that this mitigation does not address required permits or other approvals, such as land use approvals.

In response to Comment 3-167, we note that Mitigation Measure 4.2-8 contains optional approaches to mitigation potential project impacts on dissolved oxygen levels in the Big Sur River. As stated in the DEIR, the feasibility of one of the options identified (the installation of an instream aeration system) has not been proven. Prior to selecting this option, however, the measure requires that the applicant ascertain that the measure is indeed feasible and effective. If the measure is found to be infeasible, other feasible means of mitigating the impact included in Measure 4.2-8 must be implemented in order to reduce the potential impact to a level of insignificance. The first part of the mitigation measure is mandatory until/unless the Applicant develops and implements a feasible aeration system.

We recognize that the installation of the aeration system will require acquisition of required permits including, but not limited to a streambed and lakes alteration agreement. This requirement could affect the feasibility of this approach and will be a key element in the decision to proceed with this option or the other equally effective options identified in Measure 4.2-8.

It is possible to identify effective mitigation measures even if the precise extent of the potential impact is unknown through the establishment of clearly defined performance criteria. In the case of Impact 4.2-8, known conditions that cause DO stresses are identified as the triggers for project diversions to cease. It is not necessary to **know** the exact extent of the project impact to understand that the potential impact of diversions is avoided if those diversions are stopped.

RTC 3-168

Comment 3-168 questions the maximum annual diversions used and why there are differences.

In response to Comment 3-168, as noted in RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54, project impacts are assessed in comparison to the environmental baseline conditions defined in the DEIR. Further, as noted in RTCs 3-10 and 3-54, the Applicant is at liberty to use the information they deem reasonable in justifying their requested diversion(s). It will be the responsibility of the SWRCB to determine if the requested diversions are reasonable and consistent with the California Water Code in their consideration of Water Right Application 30166. It is not the purpose of this EIR to make that determination.

The 1,411.8 AFY maximum historic diversion is based on the maximum diversion rates other water right holders could exercise plus maximum historic use at the El Sur Ranch. In keeping with the requirements of Section 15130 of the State CEQA Guidelines, historic diversions are supplemented by any foreseeable future new diversions to define the cumulative context for assessing the cumulative impact of the proposed project. The proposed project would have a significant cumulative impact if its contribution to the cumulative impact of other past, ongoing and future diversions would be considerable. The baseline condition for the cumulative analysis includes the maximum project historic baseline diversion (1,136 AFY) plus the maximum diversions that could occur under the other water rights holders within the river system (275.8 AFY, for a total of

1,411.8 AFY). The project effects are then added to the cumulative condition to identify whether there would be cumulative effects and if the proposed project would contribute considerably to cumulative effects. California law requires each person or organization that uses diverted surface water or pumped groundwater from a known subterranean stream to: 1) file a Statement of Water Diversion and Use (Statement); or 2) file an application to appropriate water with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division). A Statement should be filed if water is diverted and used under a claim of riparian entitlement to the natural stream flow. A recent records search on October 4, 2010 identified no additional water rights in the Electronic Water Rights Information Management System than listed in Table 5-1 on page 5-3 of the DEIR. Subsequent to that search, the Division issued Division Decision 2010-02 approving Application 30946 (Permit 21272), on December 6, 2010. Pursuant to Application 30946, Clear Ridge Mutual Water Company has the right to appropriate up to 42 acre-feet per year at a rate not to exceed a maximum instantaneous rate of 0.058 cfs, during the season from January 1 through December 31, from the subterranean stream portion of the Big Sur River. With the addition of this water right, the 1,411.8 AFY maximum historic diversion rate referenced above would be increased 42 AFY to 1,452.8 AFY. Based on the criteria presented in the DEIR, this increase would not substantially change the results and conclusions concerning the cumulative impact of the proposed project.

Potential future riparian water right claims cannot be reasonably determined and would be speculative.

RTC 3-169

Comment 3-168 revisits the issue of a mislabeled table reference and source of cumulative diversion rates and that the cumulative analysis needs to account for riparian diversions.

In response to Comment 3-168, please refer to RTC 3-136, which addresses the table and source of data. Please refer to RTCs 3-30 and 3-84 which address Big Sur River riparian diverters. This analysis was prepared using the best available information at the time. Data regarding current riparian claims that may or may not be active was not available. Given that the appropriative diversions are small in comparison to the project, it is expected that the riparian diversions, if any, would not be substantial. The Big Sur River watershed is largely undeveloped and has few land uses requiring unidentified water diversions.

RTC 3-170

Comment 3-170 refers to a previous comment regarding the potential for substantial groundwater drawdown to occur. The commenter contends that the DEIR has not established that recharge or surface expression flows could sustain the maximum diversion during the long term without contributing to groundwater drawdown problems. This comment also requests a calculation of underflow from the BSR entering the lower alluvial aquifer and that a mass balance analysis be performed.

In response to Comment 3-170, please refer to RTC 3-149 which addresses loss of groundwater and sufficiency of water supplies. Also, please also refer to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54, which address the DEIR's use of environmental baseline conditions as the basis for determining potential project impact and commenter requests for additional studies. The POD is a surface water diversion from the subterranean river flow. As noted in previous studies and by the commenter, the system is in a dynamic equilibrium. As such, groundwater recharge from the surface water expression is efficient.

RTC 3-171

Comment 3-171 refers to a previous comment regarding bankful flow. In response to Comment 3-171, please refer to RTC 3-146.

RTC 3-172

Comment 3-172 suggests that the statement that runoff from the irrigated lands does not flow to the Big Sur River ignores the 25 acres of riparian lands. The comment states, "It seems that, by definition, lands that are riparian to a river drain towards that river, which contradicts the DEIR's statement." The comment recommends that Mitigation Measure 4.2-4 also be applied to the riparian portion of Impact 4.2-11. This comment also refers to a previous comment regarding actual acreages.

In response to Comment 3-172, please refer to RTC s 3-6, 3-42, 3-43, 3-44, and 3-45, which address the POU and acreages. Please refer to RTC 3-32 and 3-35 which address POU runoff. Although the riparian lands had historically drained towards the river, they are now bounded by embankments and roads which direct runoff to the on-site tailwater pond. As noted previously, off-site runoff from the pond does not occur except during rainfall events, and when offsite runoff does occur, it is to the ocean, not the Big Sur River.

RTC 3-173

Comment 3-173 has three main sections. The first of these recommends that the DEIR be revised to reduce confusion and increase consistency when referring to exceedance flows (Tables 4.2-1, 4.3-7). This standardization would make the presented values the same between sections. The second part of the comment questions whether passage transects 10 and 11 are within the ZOI. The comment indicates that other sections of the DEIR indicate that these are within the ZOI (DEIR page 4.3-40). The comment recommends that the radius of the ZOI be put onto Figure 4.2-5 (the comment refers to Comments 3-55 and 3-57). The comment indicates that "... the pumping influence may extend further upstream than the theoretical radius of ZOI." The third part of Comment 3-174 recommends that specific flow limits in relation to the mitigation measures for Impact 4.3-1 be added to the DEIR. The existing mitigation measure calls for development of a detailed flow monitoring plan to be approved by the SWRCB in consultation with NMFS and CDFG. The comment indicates that "It's not clear whether these final consultations will occur before or after the development of flow threshold[s] for the Final EIR." The comment goes on to question the timeline for this plan, asserts that it will be after the Final EIR because flow thresholds are required, questions the approval process for this plan, and questions the other permits or requirements that may be required for the plan. The comment incorporates previous comments (3-9 and 3-64) in relation to DEIR Table A (DEIR page 4.3-38).

In response to comment 3-173 we first acknowledge that the values presented between Section 4.2 and 4.3 were different and somewhat confusing. These have not been standardized in the EIR. The use of exceedence or non-exceedence terminology is standard practice. To make the terminology consistent could confound language and introduce errors (if a reference is missed) that could create other comprehension issues. The ZOI boundary was added to the figures as discussed in RTC 3-144. The third part of the comment questions the thresholds to be used in a detailed flow monitoring plan, timing for development of this plan, and the consultation and approval process. The intent of the mitigation measure was to allow the creation of a site-specific real-time monitoring system that would allow more flexibility and response to changing hydrology than use of mean daily flows from the USGS gage. Creation of specific monitoring plans that require the approval of one or more regulatory agencies outside the EIR process is relatively standard practice and consistent with CEQA requirements. Mitigation measure 4.3-1 includes Mitigation Measure 4.2-2 by reference.

Mitigation measure 4.2-2 presents the thresholds which would be used in creation of the IWMP. At their discretion, the SWRCB can require such a plan to be developed as a condition of their water right determination. All extraction rates and volumes would have to fit within the guidelines established by that water right and therefore, no additional CEQA review should be required.

RTC 3-174

Comment 3-174 follows a pattern very similar to 3-173. The first part of Comment 3-174 asserts that the presentation of exceedance values in Table 4.3-9 is confusing and conflicts with those presented in other sections. Also, the values on Table 4.3-9 do not agree with those on Table 4.2-1. The second part of the comment refers to the focus of the juvenile passage analysis on passage transect 4. The comment states that “Other passage transects are equally important. In particular, passage transects 10 and 11 frequently failed to have sufficient flows for passage during several of the studies.” The comment asserts that the DEIR states that the relationship between passage data, pumping, and water surface elevations are “somewhat limited.” The comment then goes on to ask “Are they limited sufficiently that the statements about changes in flow and depth...are only rough estimates? This statement seems to invalidate much of the DEIR analysis of impacts to river flow by pumping.” The third part of the comment refers to the proposed mitigation for Impact 4.3-2. The comment makes the same points as in Comment 3-173 in relation to specific flow thresholds, timing of flow monitoring plan development, consultation timing, approval process, and permitting. It also refers to comment 3-9 in relation to minimum bypass flow.

In response to comment 3-174, we first refer the reader to the RTC 3-173 for a discussion of exceedance flows. We agree that passage at transects 10 and 11 is equally important; however, passage at these riffles did not appear to clearly respond to the pumping tests (Hanson 2007). Both of these transects are within the ZOI as depicted by SGI (2008) and indicated in the DEIR (page 4.3-40). The analysis focused on passage transect 4 because it was located in the area with the greatest change in surface water elevation, was not overly affected by the tide, and had water depths that were near the passage criteria. If pumping were to create a barrier to movement, this is where it would be expected to occur. Because water depths at passage transects 10 and 11 did not clearly respond to pumping they were not discussed in detail.

The comment indicates that the DEIR says that the relationship between passage data, pumping, and water surface elevations are “somewhat limited.” This quote from the DEIR is taken out of context. The entire sentence reads “Passage data and the precise relationship between pumping attributable to the project and reductions in water surface elevations are both somewhat limited” (DEIR page 4.3-41). The key to this sentence and the statement is the precise relationship. There is no doubt that pumping lowers the water surface level and reduces instream flow; the DEIR presents these two statements as facts (page 4.3-40). The estimated changes in depth are as accurate as the data collection devices and quality control would permit. Characterizing them as “rough estimates” is, in our opinion, an over simplification. There certainly could be a compounding of errors between the piezometer data, field-collected water depths at the passage transects, instantaneous flow calculation, and so on. Because of this and because there is not a substantial change in instream flow when the pumps are turned on, the ‘precise relationship’ between pumping and water surface elevations was described as being somewhat limited. This sentence has been removed from the discussion in the EIR.

The final point in comment 3-174 reiterates the concerns about the implementation of the mitigation measure requiring development of a detailed flow monitoring plan. These comments are essentially the same as those submitted in comment 3-174 and the reader is referred to that response.

RTC 3-175

Comment 3-175 states that the DEIR "...states that there is a reduction of 0.30 cfs for every 1 cfs pumped, a 30% reduction. Elsewhere in the DEIR, values of 24% are used for losses to the river flows from pumping. Elsewhere on page 4.2-64 the 'loss of flow gain plus flow loss to groundwater' is said to be 16%." The comment indicates that this range of loss values is not clearly explained. The next part of Comment 3-176 relates to the maximum diversion rate and asserts that the 1.4 cfs value used in the DEIR. The comment indicates that, "A project difference between baseline and 318 acre-feet for the average 30-day average rate of 5.34 cfs is 84 acre-feet. As discussed above, the maximum pumping rate is 5.84 cfs. Pumping for 27 days at 5.84 cfs produces 312 acre-feet, which is less than the 318 acre-feet 30-day average maximum." The comment asserts that these values do not agree with that in the water right permit limits and that the DEIR should include an analysis from the maximum rate of pumping, not an average because "...fish are a biological resource; pumping impacts to fish today can't be mitigated with future periods of non-pumping." The comment goes on to incorporate Comment 3-9 which deals with baseline issues.

The final part of the Comment 3-175 refers to the mitigation measure for Impact 4.3-4. It states that the 10 cfs threshold used in the mitigation measure is different than the process used in other mitigation measures and different than the 40 or 132 cfs minimum flow recommended by the commenter in Comment 3-9. It questions the process for the proposed aeration system and indicates that a permit from CDFG could be required for this action along with a permit from the state parks system. It questions the permit process, approvals, and states that "...it doesn't appear that the planning effort for the instream aeration system alternative has been adequate to consider it a feasible mitigation measure."

In response to Comment 3-175, we note that the different reductions of instream flow are in fact accurate. The 2007 SGI report stated that pumping reduced instream flow by 0.3 cfs for every 1 cfs pumped. The 2008 SGI report refined this number slightly to 0.24 cfs lost for every 1 cfs pumped. The 16 percent value is the result of interpretation of the piezometer data. The 0.3 cfs was used in the fisheries analysis because it is the highest value presented and therefore could represent the highest level of impact to the resources. For a detailed discussion of the different flow loss values see DEIR pages 4.2-62 to 4.2-64.

In response to the questions about the diversion rate attributable to the proposed project we first note that the water right application sets a 30-day average limit of 318 acre-feet. The difference from Table 4.1-1 attributable to the proposed project is 84 acre-feet per month. Converting this to cfs (dividing by 30 to generate acre-feet per day, then multiplying by approximately 0.5 to convert acre-feet to cfs) yields an increase in pumping, on average, of 1.4 cfs. Pumping at the maximum allowable rate (5.84 cfs) would result in reaching 318 acre-feet (not 312 as indicated in the comment) in 27 days. However, it is important to note that there is a monthly limit of 230 acre-feet per 30-day month between July 1 and October 31 also set in the application (DEIR Table 4.1-1). Under maximum pumping this monthly limit would be reaching in just under 19 days of continuous pumping and in 22 days at 5.34 cfs per day. It is unlikely that irrigation would be required at full volume for 19 to 22 days. Because it is the most water that could be removed at one time, from a fisheries perspective, the 1.4 cfs represents the worst case scenario of changes in pumping volume attributable to the proposed project.

The comment indicates that an average rate of extraction should not be used because fish are impacted by extraction today and that impacts to them cannot be mitigated by future periods of non-pumping. In response, we first note that the rate of extraction used in the DEIR is not proposed to change from existing (DEIR Table 4.1-1). The volumes change and because the rate does not, the only way to extract the extra volume is to pump more days overall or more days at a higher rate (but still within the historic rates). In other words, to reach the new 30-day average of 318 cfs the

proposed project could pump at 5.84 cfs for an extra 7.3 days or at 5.34 cfs for an extra 7.9 days. The actual amount of change in the Big Sur River on any given day would not be different than is discussed in the DEIR. The length of time the river would be subject to extraction would be more than under baseline conditions.

The final part of Comment 3-175 deals with the threshold for Mitigation Measure 4.3-4a. The threshold in Mitigation Measure 4.3-4a, has two parts. The first is the 10 cfs value as indicated in the comment. The other is water temperatures above 18°C. This entire impact focuses on DO levels. The purpose of the mitigation measure is to reduce or limit pumping when flows are low because low flow limits water exchange in the area. It sets a second temperature threshold because high water temperatures limit the amount of DO in the water. If water temperatures are 5°C and flows are below 10 cfs, this mitigation measure by itself would not limit pumping. The 10 cfs value was chosen because, based in the field monitoring in 2007 (Hanson 2008), DO levels gradually increased in late September as flows increased and temperatures decreased. At flows over 10 cfs there appeared to be sufficient water exchange that DO levels were not at levels considered stressful or lethal for steelhead.

In relation to Mitigation Measure 4.3-4b (aeration) we note that as it is written, "...all required permits..." would be obtained before this measure would be implemented (DEIR page 4.3-45). This would likely include a streambed alteration agreement and conditional use permit from the State Department of Parks and Recreation. The approval process is expected to be one similar to other SWRCB-required monitoring plans where agency approval and permits are required prior to implementation. Based on the data in-hand, the low DO levels in the lower river appear to be a site-specific short-term problem. The option provided if diversions are to occur when flows are low and temperatures are high is for the applicant to provide a method if temporarily increasing the DO levels in the river. Instream aeration systems are used, most frequently in wastewater discharge channels, to increase the DO levels in the effluent before it reaches the receiving waters. These are somewhat different systems than the Big Sur River, but the application technologies remain essentially the same. The potential impacts associated with the system are discussed in the mitigation measure. The mitigation measure appears feasible, would effectively reduce the impact, and could substantially improve habitat conditions for steelhead in the lower Big Sur River during periods of extremely low flow and high water temperatures.

RTC 3-176

Comment 3-176 refers back to their General Comment 10 for "...a discussion on the possible source of the spring in Swiss Canyon and the likely need for additional permits." In response to comment 3-176, we refer the reader to RTCs 3-97, 3-98, and 3-99.

RTC 3-177

Comment 3-177 states:

Table 5-1 should also include the cubic-feet-per-second diversion rates because these values are needed to determine the loss in flow downstream from the USGS gage and aid in establishing bypass flow requirements. The table or another table should also include riparian diversions, existing and potential.

In response to Comment 3-177, the maximum allowable diversion rates, as available in the SWRCB eWRIMS database (Electronic Water Rights Information Management System, available at: <http://www.swrcb.ca.gov/ewrims/>), have been added to Table 5-1. The revised Table 5-1 is included in Chapter 2 (Text Changes to the Draft EIR) of this Final EIR (see page 2-14). Errors identified in this table were also corrected. Regarding known claimed riparian diversions, please refer to RTC

3-168, above. It should also be noted that Application Numbers S014133 and S014132 are claimed rights for the El Sur Ranch and, as such, are included in the baseline maximum diversion (refer to row "El Sur Ranch Historical Maximum Annual Usage – Unpermitted (2004)").

RTC 3-178

Comment 3-178 questions the acreage the Applicant wants to use for claiming a riparian right because the April 22, 1999 memorandum by Mr. Moeller states that riparian acreage is 90 acres with a 270 AF annual diversion and the DEIR states riparian acreage is 25 acres.

In response to Comment 3-178, we refer the reader to RTC 2-9 above.

RTC 3-179

Comment 3-179 notes that the DEIR baseline and water rights application do not use the same time period to justify diversion rates.

In response to comment RTC 3-179, please refer to RTCs 3-10 and 3-54 regarding the use of baseline in the CEQA analysis. Additionally, the DEIR does not justify a specific diversion rate(s). The DEIR analyzes potential impacts associated with a specific diversion rate(s).

RTC 3-180

Comment 3-180 states that SGI 2005 does not contain a table 6-13, referenced in the DEIR, but does have daily rates listed in Table 2-2. This comment also states that the maximum rates of pumping during the 2004 study was 5.83 cfs and questions use of 80 AFY for the No-Project Alternative since a 3 AFY duty factor would be reasonable use for riparian lands.

The reference to Table 6-13 has been amended to refer to "Table 2-2." The overall maximum diversion rate was greater than 6 cfs. However, during the study, the maximum rate was 5.83 cfs. The use of 80 AFY for the No Project Alternative is based on prorating historic use at the POU for 25 acres instead of 267 acres. No measurements or records were available to identify exactly how much irrigation was applied to the 25 acres of riparian lands during the baseline periods. While a duty factor of 3 AFA could be considered, for the purposes of the CEQA analysis it was assumed that current operational practices would continue under the No Project Alternative and that management of the riparian lands would be similar to management of the entire POU. As such, the resulting diversion would be 80 AFY for the riparian lands.

RTC 3-181

Comment 3-181 questions why the maximum average 30-day diversion rate is 0.53 cfs, the use of duty factors, and whether wells can be reduced to such a low pumping rate and what the pumping rate could be for the riparian fields.

In response to comment 3-181, an average rate includes days where no pumping occurs. As such, the average rate would be very low under conditions where pumping occurs only occasionally. If the No Project Alternative would pump the entire 80 AF during one 30-day, this would result in a maximum average pumping rate of 1.34 cfs. However, this is an unreasonable assumption and not supported by baseline records; during baseline conditions, pumping occurred during all months of the irrigation season. The pumping rates do not relate to any duty factors. Please refer to RTC 3-61 regarding the use of duty factors and project pumping. The maximum pumping rate for the riparian fields could be variable, but would not include both pumps in operation. As noted in Table 6-1 on page 6-3 of the DEIR, the maximum pumping rate could exceed 6.0 cfs.

RTC 3-182

Comment 3-182 states that Table 6-2 does not compare all six requested diversion limits. This comment also request clarification on the use of 16 percent total diversion compared to 24 and 30 percent total diversion. Finally, this comment questions the difference between Alternative 4 and the project, considering diversions are the same.

Table 6-2 does not compare all six requested diversion limits, because as stated in the title, it only compares irrigation season diversion limits. Additionally, it is not possible to compare effects of instantaneous diversion limits because no instantaneous baseline data is available against which to compare potential project impacts. Please refer to RTC 2-23 and 2-24 regarding the applicability of the instantaneous 5.84 cfs diversion limit comparisons. Please refer to RTC 3-176 regarding diversion rates and surface channel expression flow losses.

RTC 3-183

Comment 3-183 restate that Table 6-3 should use peak annual flow rates and that only non-exceedence or exceedence terminology should be used. In response to comment 3-183, please refer to RTC 3-146 regarding Table 6-3 and RTC 3-174 regarding the use of 'non-exceedence' and 'exceedence' terminology.

RTC 3-184

Comment 3-184 suggests that erosion would increase without irrigation would not necessarily occur or be measureable. This comment also suggests that any on-site erosion may be offset by reduced coastal bluff erosion and that the DEIR does not discuss coastal bluff erosion.

In response to comment 3-184, as stated in the DEIR on page 4.2-171, more visual evidence of on-site erosion (e.g., gulleys and rills) occurred prior to irrigation of the POU and that reduced erosion since then is attributed to good ground cover. Consequently, it can be expected that removing irrigation would allow conditions to revert to pre-irrigation conditions, and therefore, more on-site erosion. Coastal bluff erosion is addressed on DEIR page 4.2-32 to 4.2-33 and in RTC 3-40 and is not related to pasture irrigation.

RTC 3-185

Comment 3-185 suggests that there is not much flow bypass requirement for Alternative 4.

In response to comment 3-185, please refer to RTC2-38, 2-39, 2-41, 2-48, and 2-94 regarding use of bypass flows.

RTC 3-186

Comment 3-186 questions where the boundaries of the El Sur Ranch reach are located and if this is within the ZOI or ZOI plus 600 feet upstream.

In response to Comment 3-186, as stated in the DEIR and copied in this comment, the El Sur Ranch reach is defined as 300 feet upstream of the most easterly diversion and 300 feet downstream of the most westerly diversion. This refers to 300 feet upstream of the New Well and 300 feet downstream of the Old Well. As such, this cannot be the ZOI plus 600 feet. Using the scale bar on site figures, this puts the El Sur Ranch reach at the top of Zone 4 extending into the lagoon (Zone 1) (refer to Figure 4.2-4 on page 4.2-37 of the DEIR). As noted on this figure and in discussions, the ZOI extends from between the top of Zone 4 and bottom of Zone 5 to the bottom of Zone 2.

RTC 3-187

Comment 3-187 questions where and how often DO samples would be taken and what the reporting requirements would be and that notification of deficient conditions would only occur after 14 days of deficient flow conditions and other delaying factors.

In response to comment 3-187, footnote 4 on page 6-20 identifies the location of DO instruments. It does not explicitly identify the measurement time intervals or reporting requirements. The footnote has been edited to clarify that 'recording data sondes' are continuous recording units. Alternative 4 operates on an 'action-level' approach, typical of many water quality management approaches. On page 6-21 of the DEIR, it is clearly stated what actions would be taken prior to the 14 day 'delay' in reporting. Because DO fluctuates with climate, tides, and time of day, regardless of pumping, measurements would be variable, and it would not be practicable to notify the agencies every time DO drops below 6.0 cfs. Additionally, it may take time for effects related to actions are evident in the system or even associated with the alternative's practices. Footnote 44 on page 6-20 has been revised as follows:

44. The two continuous recording data sondes deployed on the Big Sur River to monitor DO, one located near the river bottom within an upwelling pool (near Station 8) and the second located near the river bottom near the head of the lagoon at Station 6.

RTCs 3-188 and 3-189

Comment 3-188 describes the specific mitigation measures for Alternative 4. Comment 3-189 states that the 0.5-foot depth requirement does not identify whether this is a point location or passage transect condition. This comment further notes that the requirement conditions for when project pumping could resume includes a clause that allows pumping when connectivity is lost throughout the El Sur Ranch reach and flow is higher than the low flow rate.

The monitoring location is identified on page 6-21 in footnote 45; it is the location where flow became discontinuous. Page 6-21 of the DEIR clearly states that the area where connectivity is assessed is the El Sur Ranch reach, which is not the entire river, and is defined in footnote 43 on page 6-20 of the DEIR. The identified clause for when pumping could resume has a typographical error and is amended as follows:

Page 6-21, last paragraph, last sentence:

... The project applicant could not resume diversions until the El Sur Ranch reach has at least 0.5 feet of water depth at the depth location, or no loss of surface water connectivity exists throughout the El Sur Ranch reach, and the and the water flow rate exceeds the low flow rate,⁴⁶ or the El Sur Ranch reach has at least 0.5 feet of water depth at the depth location, no loss of water connectivity exists throughout the Reach, and the DO at the downstream recording sonde is 6 mg/l or above.

RTC 3-190

Comment 3-190 notes that Alternative 4 does not appear to be feasible because of the delayed notification requirement, predetermination of agency options, lack of information on why trigger conditions are appropriate, and apparent requirement that the river go dry before pumping ceases. The commenter also indicates that the DEIR supports the infeasibility of this alternative (last paragraph, page 6-23) and suggests this is a contradiction of the alternatives analysis process.

In response to comment 3-190, nowhere in the discussion does this alternative predetermine agency options. Requiring agency notification only after it has been demonstrated that mitigating activities, triggered by action levels, do not remediate instream deficiencies is a reasonable approach to managing water quality. Trigger conditions are based on fish passage requirements (connectivity and 0.5 foot depth) and DO conditions below water quality standards. The 0.5 foot depth at the 'depth location' clearly captures the fish passage constraint condition. The DEIR does not require the river to go dry before pumping ceases; the DEIR requires pumping to cease when the river DO is less than 6 mg/L and/or when connectivity is lost. Up to 3.0 cfs of pumping can still occur, because 3.0 cfs of pumping is the baseline diversion and not the Alternative 4 diversion. While the last paragraph on page 6-23 does indicate that there is no evidence Alternative 4 mitigation would ameliorate passage and water quality constraints, it does not state that this alternative is infeasible.

RESPONSES TO COMMENT LETTER 4: CENTRAL COAST DISTRICT OF THE CALIFORNIA COASTAL COMMISSION

Response to Comment (RTC) 4-1

The first paragraph of Comment 4-1 presents information on the Central Coast District of the California Coastal Commission's (Commission) involvement in the environmental review process for the El Sur Water Right Application 30166. The comment also reiterates basic project information contained in the DEIR. In response to this comment, we acknowledge the information provided and hereby forward it to the project decision-makers for their consideration.

The second paragraph of Comment 4-1 notes that the DEIR forms the basis for review of the Water Right Application 30166 for SWRCB and other resource agencies including the Commission and recognizes the importance of a thorough analysis of potential project impacts. The comment states, "And given the coastal resource values associated with the Big Sur River and the surrounding area, including the fact that the Big Sur River is one of last [sic] remaining undammed rivers in the Central Coast that supports the Federally-endangered South-Central Coast Steelhead trout, the importance of a thorough and accurate analysis is heightened."

In response to the second paragraph, the comment is informational in nature. The information is noted and hereby forwarded to the project decision-makers for their consideration.

RTC 4-2

Comment 4-2 expresses the commenter's disappointment that, "...the document relies on a baseline that relies on historic and not legally recognized diversions from the river." The comment contends the DEIR uses an inappropriate environmental baseline for the evaluation of potential project impact and states, "The project itself cannot also constitute the baseline. Please explain why the DEIR describes one proposed project in the project description and then uses a different proposed project for the impact evaluation."

In response to Comment 4-2, the validity of using the environmental baseline contained in the DEIR for evaluating potential project impacts is addressed in several previous responses to comments (RTCs). We refer the reader to RTCs 1-7, 1-8, 1-9, 2-10, 2-11 and 2-19. RTCs 1-7 and 2-19. In response to the comment's request for an explanation of why the DEIR uses two different project descriptions, the DEIR uses one project description and that description is presented in Chapter 2 of the DEIR. We assume that comment's reference to a second "different" project description refers to the DEIR's description of the environmental baseline. In response, we again refer the reader to previous RTCs that fully address the validity of the baseline used in the DEIR, but we also note that the proposed project and the environmental baseline are distinct elements of the DEIR. The proposed project is the water right that would be granted if Water Right Application 30166 is approved. The environmental baseline is defined by the condition of the physical environment that existed at the time the Notice of Preparation (NOP) for the El Sur Ranch Water Right EIR was circulated.

RTC 4-3

Comment 4-3 requests information on any permits that were obtained for wells and infrastructure on the project site. Specifically, the comment asks if a coastal development permit (CDP) was obtained for construction of the "new well." The comment concludes with the statement, "In short, the DEIR provides an unclear history related to the timing and permitting of this well, and these facts need to be clearly established in order to understand the project and its potential impacts."

In response to Comment 4-3's request for permit information, an inquiry was made of the project applicant to provide that information. In response, the project applicant's legal representative provided a letter to the EIR preparer dated April 1, 2011: Subject – Response to Comments by California Coastal Commission and Department of Parks and Recreation. This letter and attachments are included in their entirety in Appendix 4 of this Final EIR.

In response to Comment 4-3's assertion that a clear history of the timing and permitting of the new well is necessary to understand potential project impacts, we disagree with this contention. Based on the comment, we assume the commenter contends that, if the new well was constructed without the required permits, historical diversions made by the well were illegal and should not be included as part of environmental baseline conditions. This contention is not supported by the state CEQA Guidelines and relevant CEQA case law. We refer the reader to RTC 2-19 which addresses this issue in detail.

RTC 4-4

The first sentence of Comment 4-4 contends that the DEIR's representations of the proposed project and environmental baseline are incorrect and, thus, lead to incorrect impact determinations. In response, we disagree with this contention and refer the reader to RTCs 1-7, 1-8, 1-9, 2-10, 2-11 and 2-19, which explains the rationale for using the environmental baseline contained in the DEIR and supports its validity based on the State CEQA Guidelines and CEQA case law.

Comment 4-4 further states:

The DEIR states that baseline pumping rates have had a substantially larger effect on Big Sur River underflow, surface water elevations, and flow rates than would be caused by the anticipated additional increase that is being requested in the application. The DEIR demonstrates that the reductions in flow amounts and water levels caused by historical pumping have resulted in various effects on biological resources associated with the river, and allows the reader to conclude that these effects would be considered significant under CEQA thresholds, were they actually being evaluated in the DEIR.

In response, we concur and note that the above statement is consistent with information presented on page 4.2-61, last paragraph, of the DEIR, which states:

It should be noted also the proposed increases in pumping rates are relatively slight compared to baseline pumping rates. Baseline pumping has historically had a substantially larger effect on surface flow elevation than will be caused by the anticipated increase in pumping that will occur as a result of the proposed project. While baseline pumping conditions, by definition, do not require mitigation under CEQA, the effect of baseline pumping on stream hydrology, water quality, and, particularly fish passage in critically dry conditions serves to magnify any adverse cumulative effect of project pumping on aquatic resources.

Comment 4-4 further states:

For, example, evidence shows that Basin Plan fish passage and dissolved oxygen criteria have not been met over various study periods as a result of historic pumping, and the significance thresholds indicate that failure to meet these criteria would result in a significant project impact. However, the DEIR only evaluates a small increase above historic pumping levels, and finds less-than-significant impacts with that small amount of additional pumping. The DEIR shows, and the reader can infer, that if

considered as a whole, the water right application would likely have significant and unavoidable hydrologic and biological impacts; however, it fails to make those findings because only a portion of the actual project is evaluated.

In response to the comment, the Basin Plan is a “water quality” plan and does not contain quantifiable standards for fish passage as stated in the comment. We refer the reader to page 4.3-35 of the DEIR and the discussion contained under the heading “Significance Criteria.” As noted there, the dissolved oxygen (DO) threshold is in fact taken from the Basin Plan (Water Quality Control Plan for the Central Coast Basin, 1994), but fish passage criteria are taken from Bjornn and Reiser (1991) and correspond to those recommended in the *Big Sur River Protected Waterway Management Plan*. Based on these criteria the proposed project is considered to have a potentially significant impact on biological resources if it will:

- Impair passage of adult steelhead between November 1 and May 31 by reducing water depth below 0.6 feet for 25 percent of the total stream width or reducing depth such that less than 10 percent of the contiguous stream width is under 0.6 feet deep;
- Impair passage of juvenile steelhead between June 1 and October 31 by reducing water depth below 0.3 feet for 25 percent of the total stream width or reducing depth such that less than 10 percent of the contiguous stream width is under 0.3 feet deep;
- Increase mean daily water temperature above 20°C or hourly temperatures over 24°C;
- Decrease DO below 7.0 mg/L in the Big Sur River;
- Result in sedimentation of habitat used by sensitive amphibians, or other changes in water quality, such that the habitat would become unusable for any life stage;
- Result in flow alterations such that amphibian breeding habitat in Swiss Canyon or the Big Sur River becomes unsuitable;
- Result in flow alterations that created unsuitable habitat for aquatic reptiles; or
- Result in degradation of sensitive vegetation communities.

As stated in the DEIR, impacts in any of the above categories would be considered unavoidable significant effects only if they could not be (a) eliminated, (b) avoided or minimized by redesign of some components of the projects, (c) reduced to a less-than-significant level, or (d) compensated for by replacement of equal habitat extent and value.

Regarding the commenter’s contention the DEIR inappropriately modified the environmental baseline to exclude historic pumping activities, the commenter presents no evidence that the overall effect of total project pumping would result in significant impacts on hydrology or fisheries that could not be avoided or mitigated. In fact, given the above the information provided above, and the nature of the project (i.e., a water right to divert Big Sur River underflow), any likely impacts related to pumping could be avoided or mitigated to levels considered less than significant by implementing conditions that would halt pumping when the significance criteria listed above are likely to be exceeded.

The comment is correct in that the DEIR evaluates the impact of the proposed increase in underflow diversions relative to historic pumping levels. This is appropriate given that historic pumping activities are considered part of the environmental baseline, which serves as the baseline against which potential project impacts are evaluated. The rationale behind, and support for, the use of this baseline is supported by the State CEQA Guidelines and current case law and is discussed in detail in previous RTCs, particularly RTCs 1-7 and 2-19.

The comment's statement that, "only a portion of the actual project is evaluated" is incorrect. The entire "project," i.e., the granting of Water Right 30166 and all diversions that would be allowed under that right are evaluated in the DEIR. As dictated under CEQA, the changes to the existing physical environment brought about by implementing the proposed project are evaluated in the DEIR. As appropriate, the physical environment is defined by the environmental baseline presented in the DEIR. The validity of the baseline in relation to CEQA and CEQA case law is detailed in previous RTCs, particularly RTCs 1-7 and 2-19.

Lastly, the comment contends that the DEIR's project impact evaluation is incorrect, as are the evaluations of cumulative impacts and alternatives. We assume this is because the commenter contends the DEIR uses an inappropriate baseline. For reasons presented above, we disagree that the environmental baseline is inappropriate, and reaffirm that the environmental baseline used in the DEIR is appropriate and consistent with the state CEQA Guidelines and current CEQA case law. As such, the methods used in the DEIR to evaluate project and cumulative impacts relative to that environmental baseline are appropriate. Likewise, the comparative assessment of project alternatives using the baseline conditions described in the DEIR is also appropriate under CEQA.

RTC 4-5

Comment 4-5 addresses irrigation efficiency measures and states:

It remains unclear why efficiency measures (such as those described under the Alternate Irrigation Efficiency alternative) are not already being employed on the site. An irrigation efficiency of only 60-70% on the site seems unacceptable given the highly sensitive resources of the Big Sur River that are at stake, and the DEIR does not adequately explain the reasons why irrigation methods on the site are this inefficient.

In response to the comment, it is not within the scope of the EIR to speculate on the why the project applicant employs the historical irrigation practices used on the El Sur Ranch site, nor does CEQA require such analysis or evaluation. For informational purposes, the current practices are described in Chapter 2 of the DEIR (see page 2-6 under the heading "El Sur Ranch Irrigation System Operation). We also refer the reader to information presented in the third amendment to Water Right Application 30166.

Comment 4-5 further states

If evaluated properly (i.e., if the entire requested diversion amount were evaluated in this DEIR), the Alternate Irrigation Efficiency alternative would possibly show that efficiency measures could reduce the whole project's significant impacts to a less-than-significant level.

In response, we note that the first sentence above alludes to the commenter's contention that a "proper" evaluation of project impact and the relative impact of project alternatives should use an environmental baseline that does not account for historic and ongoing diversions of Big Sur River underflow to serve irrigated pasture. As noted in previous RTCs, we disagree that the DEIR's environmental baseline is inconsistent with CEQA Guidelines and case law (see RTCs 1-7 and 2-19).

The last portion of this comment is somewhat confusing making it necessary for us to make some reasonable assumptions about the commenter's intent in order to provide a substantive response. It appears the comment contends that, by evaluating the Alternate Irrigation Efficiency Alternative relative to a revised baseline (i.e., a baseline which, we assume, does not account for historical

diversions), the significant impacts of the Alternate Irrigation Efficiency Alternative could be reduced to less-than-significant levels. In response, we note that, as stated on page 3-15 of the DEIR, last paragraph, the Alternate Irrigation Efficiency Alternative would reduce the average annual diversion by 338 AF and the maximum annual diversion by 669 AF, compared to the proposed project. While representing a substantial reduction in annual diversions relative to the proposed project, diversions made under the alternative would still be substantially higher than the No Project/No Diversions scenario. If it is the commenter's contention that any diversions to serve irrigated pasture on El Sur Ranch could constitute a significant impact, the comment that "efficiency measures could reduce the whole project's significant impacts to a less-than-significant level" is unclear and unsupported by evidence.

Comment 4-5 concludes by stating:

The DEIR states that the Alternative Irrigation Efficiency alternative raises consistency issues with the local land use plan related to new development in the coastal zone. The Big Sur Land Use Plan (LUP) does contain strict policies regarding new development in the "critical viewshed," which this site is within; however, the LUP includes exceptions to those policies for essential ranching structures, including water pumps, and associated infrastructure, under careful design and siting controls (LUP Policy 3.2.5.B). A properly sited and designed tailwater recovery system would likely qualify under this exception, and because of its benefits to the overall Big Sur River system, would also likely be consistent with other LUP resource protection policies. Please revise the DEIR to reflect that local plan consistency would not be a disadvantage of this alternative.

In response to the comment, we agree with the comment that ensuring the consistency of any new construction associated with implementation of the alternative would be beneficial. The text provided in the DEIR simply recognizes that if implementation of the alternative would result in inconsistencies with local plans that are unavoidable, this would be a disadvantage of this particular alternative, compared to other alternatives that do not require construction of new facilities. In this sense, the statement in the DEIR is appropriate.

RTC 4-6

Comment 4-6 expresses the commenter's disagreement with the DEIR's determination of the Environmentally Superior Alternative, based on the commenter's contention that the DEIR's definition of the environmental baseline is inappropriate. In response and as noted previously, we disagree that the DEIR's environmental baseline is inappropriate. We refer the reader to RTCs 1-7 and 2-19, which address the consistency of the DEIR's baseline with state CEQA Guidelines and current CEQA case law.

RTC 4-7

Comment 4-7 summarizes the points raised in the previous comments and concludes, "It appears clear that a DEIR that actually analyzes the 'proposed project' (i.e., the water right application) should be prepared and recirculated." In response to the comment, we disagree with the contention that the DEIR is flawed based on its use of the environmental baseline presented in the DEIR. We refer the reader to previous responses including but not limited to RTCs 1-7 and 2-91, which address the adequacy of the baseline used in DEIR.

With regard to the contention that the DEIR should be recirculated, we refer the reader to Section 15088.5(a) of the state CEQA Guidelines that states in part, "A lead agency is required to recirculate an EIR when significant new information is added to the EIR..." The section further states, "New

information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement." Examples provided in Section 15088.5(a) of "significant new information" that would warrant recirculation of an EIR include a new significant impact that would result from the project or from a mitigation measure proposed to be implemented; a substantial increase in the severity of an environmental impact unless mitigation measures are adopted that reduce the impact to a level of insignificance; a feasible project alternative or mitigation measure considerably different from others previously analyzed that would clearly lessen the significant environmental impacts of the project; or the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

As noted above, the environmental baseline conditions contained in the DEIR are consistent with state CEQA Guidelines and current CEQA case law. As such, substantial changes to the DEIR to reflect a different baseline are unwarranted. Without such changes, the criteria for DEIR recirculation of presented in Section 15088.5 of the state CEQA Guidelines are not met.

RESPONSES TO COMMENT LETTER 5: KRONICK, MOSKOVITZ & GIRARD

Response to Comment (RTC) 5-1

Comment 5-1 presents the commenter's understanding that the DEIR concluded that no significant project impacts would occur outside of critically dry years, and that, accordingly, the following comments focus on DEIR material relevant to critically dry years. The comment is noted and hereby forwarded to the project decision-makers for their consideration.

RTC 5-2

Comment 5-2 identifies "input mistakes" made in Chapter 4 of the DEIR. In response to Comment 5-2, the DEIR has been revised to reflect corrections contained in the comment. Please refer to the revised Table 4.1-1 presented in Chapter 2 of this Final EIR, page 2-6. These revisions do not substantively affect the impact determinations or analysis contained in the DEIR.

RTC 5-3

Comment 5-3 identifies corrections to the "30-day average rate (5.34 cfs)." In response to Comment 5-3, Table 4.1-1 of the DEIR has been revised to reflect corrections contained in the comment. Please refer to Chapter 2 of this Final EIR, page 2-6. These revisions do not substantively affect the impact determinations or analysis contained in the DEIR.

RTC 5-4

Comment 5-4 identifies corrections to DEIR's description of "30-day Average Rate" and "Net Change Evaluated in the DEIR." In response to the comment, Table 4.1-1 of the DEIR has been revised to reflect corrections contained in the comment. Please refer to Chapter 2 of this Final EIR, page 2-6. These revisions do not substantively affect the impact determinations or analysis contained in the DEIR.

RTC 5-5

Comment 5-5 suggests that the DEIR's determination of "the highest 30-day average rate within the 20-years analyzed" be revised. In response to the comment, we reviewed the suggested revisions and found them to be appropriate. Table 4.1-1 of DEIR has been revised to reflect corrections contained in the comment. Please refer to Chapter 2 of this Final EIR, page 2-6. These revisions do not substantively affect the impact determinations or analysis contained in the DEIR.

RTC 5-6

Comment 5-6 suggests further clarification and corrections to Table 4.1-1 in the DEIR. In response to the comment, we reviewed the suggested revisions and found them to be appropriate. Table 4.1-1 of the DEIR has been revised to reflect corrections contained in the comment. Please refer to Chapter 2 of this Final EIR, page 2-6. These revisions do not substantively affect the impact determinations or analysis contained in the DEIR.

RTC 5-7

Comment 5-7 suggests additional corrections to Table 4.1-1 in the DEIR. In response to the comment, we reviewed the suggested revisions and found them to be appropriate. The DEIR has been revised to reflect corrections contained in the comment. Please refer to Chapter 2 of this Final

EIR, page 2-6. We disagree that these revisions substantively affect the impact determinations or analysis contained in the DEIR. Please refer to RTCs 5-14, 5-15, and 5-18 below.

RTC 5-8

Comment 5-8 contends the DEIR “erroneously compares” the 20-year rolling average diversion limitations contained in Water Right Application 30166 with the straight 20-year average diversion data contained in the DEIR’s description of environmental baseline conditions.

In response to Comment 5-8, we disagree that the comparison is “erroneous.” In our professional opinion, the DEIR appropriately uses ranch diversions over the 20-year period of record shown in the DEIR to define environmental baseline conditions as a basis of comparison to allowable diversions that could occur under the diversion limitations identified in the water right application as a conservative means of determining potential project impact. While the 20-year record of diversions used to define the baseline does not represent a “rolling average,” it would be exceptionally difficult and speculative to attempt to construct a baseline rolling average using pre-1985 or post-2004 data. In our professional opinion, the comparison of actual diversions during the 20-year baseline period of record with a projection of what could occur over 20-years under the conditions identified in the water right application is appropriate for CEQA purposes.

RTC 5-9

Comment 5-9 summarizes and illustrates the commenter’s proposed revisions to Table 4.1-1 from the DEIR. Upon review of this and previous related comments, Table 4.1-1 was revised as follows:

TABLE 4.1-1			
WATER RIGHT APPLICATION NO.30166			
SUMMARY OF BASELINE ASSUMPTIONS AND PROPOSED CHANGES (1985-2004)			
AS EVALUATED IN THIS DEIR			
Diversion Type	Baseline ¹ 1985-2004	Proposed Project ² 19 years plus next year	Net Change Evaluated in the DEIR
Maximum annual usage	1,136 AF (2004)	1,615 AF	+479 AF
Maximum calculated usage	1,441 AF (1997)	1,615 AF	+174 AF
20-year annual rolling average	857 AF	1,200 AF	+343 AF
Maximum 30-day average rate (5.34 cfs)	234 339 AF (Aug/Sept 1997-June 1986; 5.70 cfs)	318 AF(5.34 cfs)	+84 -21 AF (-0.36 cfs)
Maximum monthly instantaneous rate	>6.05-8.4 cfs	5.84 cfs	<=+0.16 cfs
Maximum monthly diversion (July 1 – Oct 31)	269 AF (Sept 1997; 4.52 cfs)	230 AF (3.87 cfs)	- 39 AF (-0.65 cfs)
Maximum seasonal diversion (July – Oct 31)	701 AF (1997)	735 AF	+34 AF
Notes:			
1. See Table 2-1, this DEIR (1985-2004 historic average with two wells in operation).			
2. El Sur Ranch Application No. 30166, revised October 17, 2006			
Source: El Sur Ranch Application No. 30166, revised October 17, 2006; ESR Technical reports (SGI 2005, 2006).			

RTC 5-10

Comment 5-10 suggests that revisions to Table 4.1-1 would result in substantive changes to the DEIR’s analysis of Impact “4.1-2” in the DEIR’s recommendation to implement Mitigation Measure 4.2-2.

In response to Comment 5-10, we assume the commenter erroneously cited "Impact 4.1-2," as no such impact appears in the DEIR and instead intended to reference Impact 4.2-2. In response to the comment's contention that the analysis and conclusions regarding Impact and MM 4.2-2 should be substantively changed in light of revisions to Table 4.1-1, we disagree for the following reasons.

Impact 4.2-1, and other impacts listed in the Hydrology section of the DEIR (Section 4.2) did not just look at a single-event maximum rate of diversion that occurred historically at El Sur Ranch and listed in Table 4.1-1. In our professional opinion, the comparison of diversions that would occur under the complicated conditions proposed in the water right application, to a single maximum historic event would not provide a useful or appropriate gauge of potential project impact under CEQA. Specifically, we do not agree that a single instance of a September 1990 maximum monthly diversion should be used as the sole basis of defining baseline conditions to compare to diversions that will occur in June, Aug, October, November, etc. under conditions defined in the water right application. In addition to looking at maximum rates of historic diversion, the DEIR's evaluation of hydrologic impacts also takes into account historic average rates which are not directly applicable to Table 4.1-1 (as revised).

In the EIR-preparer's professional opinion, by simplifying historic diversion data for inclusion in Table 4.1-1, and relying exclusively on those data, potential project impacts could be underestimated. While we agree that, technically, the maximum project pumping would not exceed baseline maximum seasonal monthly pumping rates, we do not agree that this fully defines the potential for project impact as implied in the comment. Simply put, just because the monthly maximum diversion occurred once in the 20-year period defining the environmental baseline and was greater than the proposed project's monthly maximum, does not necessarily mean that no impact will occur. Therefore, this EIR compares baseline monthly averages to long-term implementation of project monthly maximums to fully assess potential project impact.

While the analysis, impact statements and, in some cases, mitigation measures in Sections 4.2 and 4.3 of the DEIR have been revised to reflect corrections and clarifications made in response to comments [see Chapter 2 (Revisions to the Draft EIR) of this Final EIR], no substantive changes to the determination of potential project impact are proposed herein.

RTC 5-11

Comment 5-11 contends that, as a result of errors in Table 4.1-1 cited above, all conclusions pertaining to cumulative impacts presented in the DEIR should be changed.

In response to Comment 5-11, while text pertaining to the analysis of cumulative impacts in the DEIR has been revised to reflect corrections and clarifications made in response to comments [see Chapter 2 (Revisions to the Draft EIR) of this Final EIR], no substantive changes to the determination of potential cumulative impact are proposed herein. For further explanation, we refer the reader to RTC 5-10 above.

RTC 5-12

Comment 5-12 states that there is a material error in the analysis through use of a USGS gage flow to VT1 flow relationship that is limited to flows less than 20 cfs and for monthly averages.

In response to Comment 5-12, we acknowledge that use of this equation/relationship was extended beyond the range of its application limits; however, use of these data represents the best information available regarding the relationship between flow at the USGS gage and flow near the POU for assessing proposed project effects in relationship to the 20-year baseline historic record. A better flow relationship for higher flow rates was sought by the EIR preparer, but high flows created

hazardous river conditions and could not be obtained. Please refer to RTC 1-5 which addresses the use of best available data. Additionally, we note that the assessment of low flow conditions (zero flow or less than 1 cfs) occurs within the established relationship limits.

RTC 5-13

Comment 5-13 suggests that inappropriate changes in water surface elevations were used (-0.17 feet) and cites a number of pages where this occurs. The commenter attaches data in the form of a CD to better identify potential effects.

In response to comment 5-13, it should be noted that the commenter erroneously sites an inappropriate use of a drawdown value on a page (4.2-32) that does not in the least mention surface water or groundwater elevations, but rather, refers to erosion and coastal bluff retreat. The selection of the identified change in water surface information presented in the DEIR was based on the best available information; the SGI study reports. Data in these reports were presented in coarse graphics that did not allow for precise identification of changes. The attached CD does not provide the necessary information to better identify the project effects on water surface elevations; no piezometer water surface elevation was included on the CDs. Subsequent analysis of data provided by the Applicant was analyzed by the EIR preparer. This analysis indicates that 0.17 feet of water surface drawdown used in the DEIR analysis was not substantially different than the 0.15 feet of maximum water surface elevation drawdown later identified through detailed analysis of the piezometer measurements in the subsequent data provided. Please refer to details regarding the analysis as discussed under RTC 5-14, below.

RTC 5-14

Comment 5-14 contends that the peizometer data does not support the DEIR finding that the project contributed to a measureable effect on surface water elevation. This comment also notes errors in the Table 4.1-1 and contends that effects were not measureable based on techniques used to measure fish passage.

In response to Comment 5-14, the SGI study identified a small but measureable flow loss in the river at the downstream location when both pumps were diverting compared to the previous non-pumping condition. Flow measurements were made, as is typical for continuous flow monitoring studies, by a measured direct relationship between the change in water surface elevation and flow rates. Therefore, in order for a measureable change in flow to be identified, a measureable change in water surface elevation must have occurred. Measured flow rates could not have dropped without a consequent reduction in water surface elevation. Additionally, close examination of peizometer data shows a definite relationship between reductions in water surface elevation and pumping. The DEIR only analyzed the 2007 study test involving both pumps in operation because the 2007 study represented the test condition with the least external influences (e.g. lagoon closings or rain events).

The lower reaches of the Big Sur River system are hydrologically and geohydrologically complex. Comparison of surface water hydrology under the situation where no pumps are in operation compared to conditions when both pumps are operating is the best means for identifying potential effects of pumping on surface water elevation. However, in some systems, such as the reaches adjacent to the POU, it may take some time for changes in operation to result in a new, stabilized condition from which conclusions about these effects can be drawn. If external events occur such as lagoon closings or rain events, these can mask or exacerbate potential effects. Additionally, if the river system is naturally losing surface water to groundwater, it is more difficult to ascertain if diversions resulted in more loss to groundwater than would normally occur.

Another means for identifying project effects is to look at a similar site upstream of the ZOI and compare hydrologic functions and properties with sites within the ZOI: sites that would be expected to be influenced by diversions. Unfortunately, the situation is complicated by the large extent of the ZOI and the fact that the hydrologic physical characteristics of the system can change dramatically within a short distance. An uninfluenced site with similar characteristics and for which there exists water surface elevation measurement data, was not found.

In keeping with CEQA requirements, the analysis presented in the DEIR was conducted using the best available information. A comparison of the P4 site data was made to characterize unimpaired hydrology, along with the 2007 SGI study period involving both pumps in operation and the preceding week when no pumps were in operation.

It should be noted that a higher flow event occurred at the beginning of the no-pump test condition. Thus, receding hydrograph trends would be more pronounced and may mask or exacerbate trends occurring when both pumps were in operation.

Examination of the data indicated that the water surface elevations rose when the higher flow event passed through the area, sharply decreased, then stabilized, somewhat. The system is complex with losing/gaining conditions occurring and water surface elevations typically experiencing diel fluctuation. Regardless, using the P4 site data, the less affected and more 'natural' or 'unimpaired' water surface elevation trends (slopes) could be estimated. We refer here to these as 'normal trends'. The trends (slopes) were then applied to the water surface elevation data at the further downstream locations to see if trends were different when both pumps were in operation. The normal trend for the last few days of the no-pump test condition (at the tail end of the high flow event effect) was superimposed on the peizometer data for the downstream locations where diversion effects were expected to be the greatest. The 'affected trend' was determined based on a simple linear regression of piezometer elevations during the both pumps on condition. Extending the normal trend through to the end of the study provided the difference between what could normally be expected to occur and what could be expected to occur when pumps are operating. This difference in elevation was used to define the diversion effects in the DEIR.

An analysis applying this method was prepared by SGI, which identified only a very slight effect of pumping on the trends and resulting water surface elevations. However regression equations and errors were not provided as part of the SGI analysis, so an independent analysis was performed by the EIR preparer. Results of the independent analysis showed a maximum effect of the 5.02 cfs diversion resulted in a 0.14 foot lower water surface elevation in the Big Sur River surface expression channel than could be expected if diversions had not occurred. This is slightly lower than, but similar to the 0.17 foot drawdown effect used in the DEIR impacts analysis. The total drawdown equates to a reduction in surface water elevation of about 0.028 feet (approximately 1/3 of an inch) for every cubic foot per second diverted.

RTC 5-15

Comment 5-15 addresses the analysis conducted for Impact 4.3-4 in the DEIR which relates to the proposed project's potential impacts to changes in DO levels in the Big Sur River. The comment is extensive and makes several points which are summarized here:

- 1) The DEIR relies on data from 2007 and construes low DO levels at several locations as a river-wide condition without making a correlation between diversion and DO levels.
- 2) The DEIR fails to take into account pumping rates of 2.37 cfs during the August 31-September 8 period which is less than the 2.60 cfs baseline pumping allowed on Table A and therefore, pumping at this rate is a baseline level and cannot be considered an impact.

- 3) The August 31-September 8 period includes Labor Day weekend during which large amounts of water were used upstream reducing surface flows in the project area and increasing the relative contribution of low DO inflow.
- 4) The DEIR fails to account for "...increased DO concentrations in surface flows resulting from diversion pumping which reduces the contribution of low DO inflow..."
- 5) "The DEIR should be corrected to describe any link between pumping and water stagnation..." The comment goes on to state that use of low DO data for September 28-October 4 "...fails to consider that the low DO concentrations relied upon were measured at a single sensor located near a circumscribed stagnant point in the river, and existed contemporaneously with daily average DO concentrations of 7 mg/L at similar points across the River". Essentially, the comment asserts that the analysis in the DEIR does not support the conclusion that pumping creates widespread areas of low DO.
- 6) Mitigation measure 4.3-4b does not allow the applicant to use other methods to increase the low DO levels in the project area. The measure should include a performance standard and allow any measure that reaches that standard.

We have structured our response to comment 5-15 to follow that of the main points outlined above.

- 1) The 2007 data were used primarily because it is the only continuous record of DO collected during extremely low flow conditions within the project area. This makes it more valuable than spot data collected during other surveys or the 2006 data collected during higher flows. The data for 2007 indicates that DO was below the threshold at both banks for piezometer pair 2 and 3 (Hanson 2008, Figures 52 and 53) and also at the upper left bank (the only DO location) for piezometer pair 4 (Hanson 2008, Figure 54). All three of these locations were well below the threshold when installed with both the pumps running and the pumps off. Spot data collected at passage transects 3 through 9 shows DO levels well below the 7 mg/L threshold when the pumps were running (Hanson 2008, Figure 58-64). Spot data collected in other years (Hanson 2005, 2007) show a similar pattern for DO data from passage transect 7 (in close proximity to piezometer 3) including lower values on the right bank in some samples (Hanson 2007, Figure 3-45). Spot data collected in 2004 shows low DO levels at locations clearly within the ZOI (Hanson 2005). Based in these data, it is reasonable to conclude that low levels of DO are not site-specific but are more widespread throughout the ZOI. The complexity of the DO data, lack of an extended continuous record, and influences from temperature and flow) impair the ability to define a specific relationship between pumping and changes in DO. Because DO levels are below the threshold, any reduction in flows could influence DO levels and have an adverse affect.
- 2) One of the issues of concern with use of the 2007 data is that DO dataloggers were installed late in the summer when DO levels were already stressful if not lethal for steelhead. When they were installed and the New Well was operating (even if it was at the 2.37 cfs claimed in the comment) the levels of DO recorded in the ZOI dropped. It is not clear if this drop is because of the pumps or other factors, but because pumping reduces instream flow then if similar changes were to occur under pumping at proposed project levels, the impact would be similar in that it could contribute to a reduction in DO within the ZOI that could adversely affect steelhead.
- 3) The comment asserts that temporarily increased levels of water use exacerbated the low DO levels over Labor Day weekend in 2007. Perhaps if no pumping had been occurring and DO levels dropped as precipitously as they did, or if there was documentation of increased use of water upstream over this weekend there may be grounds to revisit the analysis. This, however, is not the case.

- 4) The point of this comment is that pumping extracts groundwater which is low in DO therefore allowing more surface water, presumably higher in DO, to reach the ZOI. This contention is problematic because the water from the river recharges the groundwater extracted by pumping. This would mean that as it flows into the ZOI, the surface water moves out of the channel into subterranean flows. The loss of surface water allows a proportionately higher percentage of low-DO groundwater, especially from the Creamery Meadow area, to infiltrate the stream. Because most DO levels are below or close to the basin standard (7.0 mg/L), any potential effect that might reduce flows would have a corresponding impact on DO levels.
- 5) The SGI (2008, p 3-18) report indicates that the flow on the left bank stopped during periods of low flow. The low levels of DO measured in late September and early October were found at two sets of sensors. The left bank sensor at piezometer pair 2 was essentially the same as the right bank sensor until the pumps were turned on and it dropped to between 4 and 5 mg/L (Hanson 2008, Figure 52). The right bank sensor at this location remained above the threshold for the duration of its installation. At piezometer pair 3, the right bank sensor was below the threshold for the entire period it was installed. When pumps were turned on in late September DO levels remained below 7 mg/L. The comment is correct in that, at piezometer 2 and 3, the paired sensor across the river from the low sensor reported levels of DO at or above the 7 mg/L threshold. The Draft EIR's discussion has been revised to reflect this. The conclusion in the SGI (2008, page 3-16) report is that "low river flow conditions...combined with ESR pumping created partial stagnant conditions along the left bank at the P2 location."
- 6) Mitigation measures need to contain adequate information to ensure the reviewers and decision-makers that the impact would in fact be reduced to less-than-significant levels by the measure. By requiring a feasibility analysis first, the applicant is provided the opportunity to propose a specific system to the SWRCB that would achieve the target DO levels and meet operational restrictions of El Sur Ranch. The mitigation measure clearly includes a performance standard and states that "...the in-stream portion of the distribution system shall, at a minimum, result in average river DO levels of six (6) mg/l at each passage transect from transect 2 through transect 8" (DEIR page 4.3-45). The mitigation measure has been slightly edited to allow a variety of systems.

In summary, while comment 5-15 presents a valid observation about the paired piezometer data and DO levels, the assertions that DO levels are only low at specific locations within the ZOI do not appear to be supported by multiple years of spot data and the 2007 continuous data. DO levels appear to be strongly correlated to flow. In 2006 when flows were relatively high, DO was not an issue. In the critically dry 2007, DO was at levels well below the threshold. The extraction of groundwater has been linked to reductions in instream flow (SGI 2008). Because of this, any action that would reduce flow would have a corresponding impact on DO levels, especially during low-flow periods.

RTC 5-16

Comment 5-16 contends that classification of the study hydrologic regime type, using data that included higher flows and precipitation conditions that occurred after the study completion, results in a mischaracterization of the study hydrologic conditions.

In response to Comment 5-16, the use of statistics to classify hydrologic regimes into year types is not arbitrary. It is correct a running average year type was not assessed. The goal to classify potential hydrologic regimes is to make sense out of a large amount of data and compare potential effects under different conditions. The study relied on for a majority of the analysis was the 2007 study, which was identified in the DEIR as a Critical Dry condition. The 2007 study was relied on because it was a true Critical Dry condition that persisted, and it contained a set of pump test

conditions that were the least influenced by external variables. Reclassifying the 2004 study year type does not alter the impacts analysis or the impact significance determinations presented in the DEIR.

RTC 5-17

Comment 5-17 contends that Table A contains mitigation for diversions that are included in the baseline and that diversions would be reduced to below baseline levels with application of the diversion limiting criteria.

In response to the comment, we disagree for the following reasons. The allowable irrigation requirement identified under Mitigation Measure 4.2-2 is the average of baseline monthly diversions. Given that the only data available for baseline conditions are total monthly diversion volumes, the uses of maximum or minimum diversion rates cannot be identified or justified; the data simply does not provide for a better means of describing what was likely to have happened in any given month for any given flow condition during the baseline period of record. As such, the use of monthly average baseline diversions rates, as calculated from total monthly diversion volumes, is reasonable.

RTC 5-18

Comment 5-18 contends that DEIR Impacts 4.3-1 and 4.3-2 erroneously conclude that project-related draw downs would impact fish passage at transects 4, 10, and 11 in light of proposed corrections to Table 4.1-1.

In response to Comment 5-18, we refer the reader to the revised Table 4.1-1 (see Chapter 2, page 2-6 of this Final EIR). We disagree with the commenter's contention that, in light of revisions to Table 4.1-1, the DEIR erroneously concludes the project will have a potentially significant impact on fish passage in transects 4, 10, and 11. According to the application, the only limitation on pumping in December of a dry year would be the 30-day rolling average of 318 acre-feet. Because pumping has occurred only a few times in November and only once in December during the baseline period (1991), the November-December average is 7 acre-feet. This leaves 311 acre-feet that could be pumped during this period which converts to a pumping rate of 5.2 cfs, an instream diversion of 1.6 cfs, and a reduction in the water surface elevation of 0.16 feet (1.9 inches). A drop in water surface elevation of almost 2 inches would certainly impair the ability of steelhead to move upstream especially at passage transects 4, 10, and 11.

We also refer the reader to RTC 3-175 which addresses pumping impacts on passage transects 4, 10, and 11. Further, we note that the requested corrections to Table 4.1-1 are addressed in response to comment 5-9. The DEIR analysis has been reviewed and edited as appropriate to reflect the changes in this table. However, the passage analysis uses the measured change in water surface elevation as reported by SGI (2008) and applies that change to the measured riffle profiles. SGI (2008) clearly indicates that evidence of pumping is seen as far upstream as passage transect 11 and includes a measured drawdown at piezometer P4, immediately downstream of passage transect 11. That pumping reduces the water surface elevations has been shown in multiple studies conducted for this project (SGI 2005, 2007, and 2008). Reduction in elevations is directly related to a reduction in flow as shown by these same studies. Reduction in surface flow increases the transit time, results in increased water temperatures (Hanson 2008), and lower levels of DO.

RTC 5-19

Comment 5-19 contends that, "mitigation measures premised on exceedance flows at the gage (MM 4.3-1, 4.3-2, 4.3-4) are not directly related to river stage requirements for fish passage" and

because of the errors in Table 4.1-1 (see comment 5-9) the measures mitigate for baseline pumping conditions not project impacts. The comment further states that “Even analyzed by comparing total volumes of water, the DEIR cannot make a nexus to resource or water quality impacts without first showing an impact related to seasonal rates of flow.”

In response to Comment 5-19, please refer to RTC 5-18 above, which supports the DEIR’s findings related to potential project impact on fish passage. Relative to the use of exceedance flows at the gage in implementing MM 4.3-1, 4.3-2 and 4.3-4, we disagree with the comment’s contention that this is unrelated to the identified impact and we refer the reader to RTC 3-175. Project impacts are mitigated in comparison to baseline conditions. Project pumping, as discussed in RTC 3-175 has an effect on water surface elevations, and therefore, fish passage at transect 4. We also refer the reader to RTC 5-9 for a discussion of Table 4.1-1 corrections. In reference to the DEIR page 4.3-32 where the process of the passage analysis is presented, studies cited in the DEIR demonstrate that pumping reduces water surface elevation and instream flow (SGI 2008). The proposed project is an increase in pumping; the mitigation for impacts associated with the proposed project is to reduce pumping to baseline levels. We therefore disagree with the comment’s contention that the mitigation measures mitigate for baseline conditions.

RTC 5-20

This comment notes the mitigation measures text errors in relationship to Table A. Additionally, this comment contends that percentile flows are inconsistent with historical flows. In response to comment 5-20, please refer to RTC 3-87 which addresses revised mitigation measure text, simplification of limiting conditions, and consistency with Table A. We also refer the reader to RTC 3-31. Percentile flows are accurate and based on the baseline condition in compliance with CEQA impacts analysis.

RTC 5-21

Comment 5-21 states that operational limitations and continuing operation principles in the water right application are not considered in the determination of the Impact 4.2-4 significance level. The commenter contends that the greatest runoff and erosion potential is a result of precipitation, not irrigation.

In response to Comment 5-21, while we agree that contribution of current irrigation practices to erosion and off-site transport is limited relative to runoff associated with storm events, the water right application’s request for more than 40 percent more maximum and annual diversion, along with the potential for higher winter diversions and an October diversion that would be more than 1.5 times greater than the historical average could have a substantial effect. While the Applicant may not irrigate to the diversion limits, the impacts analysis must be performed under the assumption that this would occur. As such, the potential for runoff and erosion increases and impacts remain potentially significant, but mitigable, as shown in the DEIR.

RTC 5-22

Comment 5-22 contends that the DEIR does not adequately assess the feasibility of proposed mitigation measures presented in the DEIR. In response, we note that each of the proposed measures contained in the DEIR is designed to provide feasible options for mitigating identified impacts. We note that in one instance, Mitigation Measure 4.3-4(b) suggests development of an instream aeration system, the feasibility of which has not been determined. The aeration system, however, is an optional element contained in that measure. The measure gives the project applicant the option of implementing the measure if it is found to be feasible and effective based on identified performance criteria in keeping with the State CEQA Guidelines and current CEQA case law. In the

event that such a system is found to be infeasible or the applicant chooses not to implement it, Mitigation Measure 4.3-4(a) contains other feasible means to reduce the potential impact to a level of insignificance through the implementation of specified diversion limitations. Implementation of Mitigation Measure 4.3-4(a) would be an adequate and effective alternative means to avoid significant impact, i.e., adequate to meet specified performance criteria identified in the DEIR.

In the absence of substantial evidence to the contrary, we reaffirm our contention that mitigation measures contained in the DEIR are feasible and effective in keeping with CEQA requirements.

RTC 5-23

Comment 5-23 contends the cumulative impact analysis must be rewritten to address “fundamental data input errors requiring changes to ‘Net Change Evaluated in the DEIR’ and any resultant impact and mitigation analyses.” We disagree with this contention and refer the reader to RTCs 5-8, 5-10, and 5-11. In the absence of substantive changes to the impact conclusions and mitigation measures presented in the DEIR, the proposed revisions to the cumulative impact analysis suggested in Comment 5-23 are not needed or appropriate. We also refer the reader to the RTC 5-25, below, which contains additional discussion of the cumulative impacts analysis.

RTC 5-24

Comment 5-24 relates to Impact 4.3-1. The comment indicates that the following statement from the DEIR is incorrect: “While baseline pumping conditions by definition do not require mitigation under CEQA, the effect of baseline pumping on fish passage in critically dry conditions, serves to magnify any adverse cumulative effect of project pumping on aquatic resources.” The comment asserts that the studies conducted in 2004, 2006, and 2007 were, in effect, cumulative impact studies because pumping at baseline and project levels along with other upstream water uses were occurring during those studies. The comment states that “Since these measurements and the corrected data demonstrate the lack of El Sur Ranch pumping impacts on fish passage, habitat and water quality, there is no ‘cumulative impact’ to be found, magnified or otherwise.”

In response to Comment 5-24 we refer the reader to the RTC 5-25, below, for a detailed discussion of cumulative impacts analysis. To clarify, baseline pumping is a ‘present’ action as defined in the cumulative analysis. As such, the comment is correct in that studies addressing conditions in 2004, 2006, and 2007 are, in essence, evaluating conditions that, in part, help define the cumulative context in which the proposed project’s contribution to cumulative conditions is assessed. As discussed in the DEIR, the incremental increase in diversions under the proposed project would contribute to overall extraction of water and contribute to impacts on aquatic resources. The determination of whether or not a project’s contribution to a cumulative impact on a given resource is “substantial,” is often dictated by the severity of the cumulative impact on that resource. To further clarify the statement quoted in Comment 5-24, past and ongoing pumping for El Sur Ranch is not considered a “project impact” under CEQA because the effects of ranch irrigation activities are considered part of the environmental baseline conditions. The extent to which historic and ongoing pumping activities have contributed to the degradation and increased vulnerability of a significant resource, the impact of pumping on steelhead passage for example, must be considered in determining whether or not project contributions to the cumulative impact of those activities is considered substantial under CEQA. In this regard, the statement cited above is appropriate and correct. We disagree with the comment’s contention that the cited studies show a lack of El Sur Ranch pumping impacts on fish passage, habitat and water quality. Reductions in surface water elevation and flow related to historic pumping will clearly affect steelhead passage and water quality, particularly under critically dry conditions. While this is considered part of the baseline condition and, therefore, not a project impact, it is considered part of the cumulative impact to which the proposed project will contribute.

RTC 5-25

Comment 5-25 states that “The cumulative impact analyses contained within Impacts 4.3-9, 4.3-10 and 4.3-12 are conclusory, lacking a minimal degree of specificity or detail. Each of these impacts statements recite without evidentiary support that there are other existing water users within the Big Sur River whose extractions are expected to continue. On this basis, the DEIR concludes that reductions in stream flow due to diversions of these other water uses, combined with direct project impacts ... could lead to a significant cumulative impact. The mere identification of existing water users within the lower river falls short of the CEQA requirements to identify past, present and future projects. ... Rather than identifying past, present or future projects the DEIR impermissibly treats baseline environmental conditions as related projects. Furthermore ... any diversions from the past or present projects are already folded into the existing conditions and measurements documented by the 2004, 2005, and 2007 studies. No future projects are identified. Unless some additional future projects are identified and the incremental effects of those projects are estimated, there is no basis to conclude that direct project impacts may ‘make a cumulatively considerable incremental contribution to a significant cumulative effect.’ ”

In response to Comment 5-25 we note that as indicated in the DEIR (page 4.3-49) the reader is referred to Chapter 5 of the DEIR for specifics of the cumulative analysis context. As presented in Chapter 5, there are 28 existing diversions which would be considered the past and present actions. Past and present actions amount to 234 acre-feet annually. The two pending applications to appropriate water would be considered future actions (DEIR page 5-2) and would amount to 1,178 acre-feet annually. Of this 1,136 acre-feet annually is attributable to the historic unpermitted diversions by the applicant (DEIR page 5-3). Overall total diversions are likely underestimated because many of the diversions listed on Table 5-1 are less than 1 acre-foot annually, but when combined may be considerable. Regardless, the increase attributable to the proposed project is 479 acre-feet annually, or a 34 percent increase in diverted water. We acknowledge that it is reasonable to assume that existing diversions would have been occurring when the studies referenced in the comment were occurring. In some ways, this could be considered to make the project-level analysis within Section 4.3 of the DEIR a cumulative impact analysis.

If there are no other future projects, then the proposed project would represent the last extraction of water within the watershed. This would not change the conclusion presented in the DEIR regarding cumulative impact.

More importantly, Comment 5-25 seems to imply that, because historic and ongoing El Sur Ranch diversions are considered part of the environmental baseline conditions defined in the DEIR, those diversions are not to be considered as part of the cumulative impact of all diversions from the Big Sur River. In other words, it appears the commenter contends that El Sur Ranch historic and ongoing diversions, in addition to other current diversions should not be considered as part of the cumulative context against which proposed project’s contribution should be assessed. If our interpretation of this comment is correct, then the comment represents fundamental misinterpretation of the nature and intent of cumulative impacts evaluations required under CEQA.

As described in Chapter 5 of the DEIR and as stated in Section 15355 of the State CEQA Guidelines, “The cumulative impact from several projects is the change in environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.” We emphasize that the above definition requires the consideration of ***past*** and ***present*** projects. The commenter’s apparent contention that only future projects should be included in the assessment of cumulative impact is clearly incorrect. Further, any implication that past and present diversions should not be included in the cumulative impact analysis because they are part of the environmental baseline conditions, also, is clearly inappropriate from the standpoint of assessing cumulative impact.

Simply put, while the proposed project's contribution to the cumulative impact is defined by the difference between environmental baseline conditions and anticipated project-generated conditions, the cumulative context to which this contribution is added is defined by all ongoing diversions (including those for El Sur Ranch) and new probable diversions that could occur in the future, if any.

RTC 5-26

Comment 5-26 asserts that the cumulative impact analysis is limited to addressing potential on-site impacts, inconsistent with the description of the baseline conditions and contrary to the purpose of the cumulative impact analysis under CEQA and the guidelines. The comment contends that considering the cumulative impacts associated with historic and on-going practices, as cumulative, is inconsistent with the established environmental baseline. Additionally, the analysis is contrary to the purpose of the cumulative impact analysis. The comment concludes with alternative language that alters the significance level.

In response to Comment 5-26, please refer to RTC 5-25 above. In light of RTC 5-25, the cumulative context for erosion is limited to past and present projects and the project, itself, because of its geographic location and drainage characteristics. The potential present and past project erosion potential would not be substantial. But if the project erosion potential is added to the present and past erosion potential, the cumulative on-site erosion and off-site runoff that could contribute to erosion is potentially significant. Because the majority of this cumulative impact would be associated with the project, the project impacts would be cumulatively considerable. Therefore, the impact significance level remains 'potentially significant.'

RTC 5-27

Comment 5-27 states that the DEIR makes "numerous inconsistent statements" and refers previous comments which cite specific examples. The comment notes that, in addition to those errors cited above, others are contained in the DEIR which are not identified in Comment Letter 5. The comment concludes with the request that the SWRCB review the complete DEIR for additional inconsistencies.

In response to comments received on the DEIR and subsequent review by SWRCB staff, revisions to the DEIR have been incorporated in this Final EIR to address identified inconsistencies and errors as appropriate. Please refer to Chapter 2 of this Final EIR which contains all proposed revisions to the DEIR.

RTC 5-28

Comment 5-28 contends that Mitigation Measure 4.2-2, "...inappropriately contains a statement that the measure would reduce the proposed project impacts to less than significant, but that continued pumping at baseline levels would result in adverse effects." The comment notes that similar language appears elsewhere in the DEIR and is inappropriate. The comment also reiterates the commenter's opinion that corrections to Table 4.1-1 dictate that Mitigation Measure 4.2-2 be deleted.

In response to Comment 5-28, the DEIR text on page 4.2-68 cited above has been revised as follows:

Although this mitigation measure would reduce the proposed project incremental increase in diversions above baseline impacts to less-than-significant levels, continued pumping at baseline levels during the Critical Dry and Extreme Critical Dry conditions would still result in adverse effects on reductions in the BSR flow regime relative to no-diversion conditions,

although effects would be small (0.16 percent more no-flow days and 0.62 percent more days with flow less than 1 cfs than under no-diversion conditions).

For reasons presented in RTC 5-10, we disagree with the comment's contention that Mitigation Measure 4.2-2 be deleted.

RTC 5-29

Comment 5-29 notes that increased irrigation levels do not dictate herd size on El Sur Ranch irrigated pasture. In response to the comment, the text on page 4.2-71 of the DEIR has been deleted.

~~Furthermore, a greater intensity of cattle grazing (as a result of increased irrigation) could cause or contribute to surface conditions more susceptible to erosion.~~

RTC 5-30

Comment 5-30 states that "Mitigation Measure 4.3-2(a) establishes a 20 percentile threshold between July and October 31, whereas Mitigation Measure 4.2-2 establishes a 10 percentile for the same period in the text on page 4.2-2. The text of MM 4.3-2 does not match MM 4.2-2. However based on the errors in Table 4.1-1 described earlier, both of these Mitigation Measures should be deleted from the DEIR."

In response to comment 5-30 we refer the reader to RTCs 5-9 and 5-10, above, which address revisions to Table 4.1-1. In regard to inconsistencies between MMs 4.3-2 and MM 4.2-2, the discrepancy between the two mitigation measures has been revised. Please refer to the revisions to Mitigation Measure 4.2-2.

RTC 5-31

Comment 5-31 indicates that "At page 4.3-43, the DEIR makes a reference to Section 4.1 in support of the conclusion that the project maximum diversion rate is 1.4 cfs per day based on an 84 AF increase in pumping. Then at 4.3-47, Section 4.0 is cited in support of this conclusion. Neither Section supports this erroneous 84 AF increase."

In response to comment 5-31 we offer the following clarification. The reference to Section 4.0 on page 4.3-47 should read Section 4.1 and has been edited to reflect this. When the DEIR outline was originally assembled, Section 4.0 was the introduction to the environmental analysis; it was eventually changed to 4.1 and the reference to Section 4.0 was simply missed in the editing process. Table 4.1-1 reports a net change evaluated in the DEIR of 84 acre-feet, which when converted to cubic-feet per second over the course of an average 30-day month works out to 1.4 cfs.

RESPONSES TO COMMENT LETTER 6: CENTER FOR BIOLOGICAL DIVERSITY ET AL.

Response to Comment (RTC) 6-1

Comment 6-1 expresses the commenter's opinion that the DEIR is "critically flawed" for reasons presented later in the comment letter. In response, we disagree with this opinion and refer the reader to specific responses to the comments provided below.

Comment 6-1 further states expresses concerns about historical illegal diversions on El Sur Ranch and suggests the SWRCB "issue a proposed Penalty and Draft Cease-Desist Order regarding this violation, and hold a hearing on making the order permanent." In response, the comment is noted and hereby forwarded to the project decision-makers for their consideration.

RTC 6-2

Comment 6-2 states, "We also request pursuant to California Water Code that the SWRCB conduct a hearing on the approval of this DEIR."

In response to Comment 6-2, we note that the DEIR is not subject to SWRCB "approval." The DEIR was circulated for public review and comment consistent with state CEQA Guidelines. As required by CEQA, all substantive comments on the DEIR received during the public review period were reviewed and responded to in writing. These responses are contained in this Final EIR along with original comments. This Final EIR will be considered by the SWRCB for certification at a public hearing, the date of which will be publically noticed in accordance with CEQA requirements.

RTC 6-3

Comment 6-3 lists several attributes of the Big Sur River relative to its ecological diversity. The comment also notes a portion of the river is in the National Wild & Scenic Rivers System and is a "major feature of Andrew Molera State Park and Los Padres National Forest." As noted, the Forest Service considers the Big Sur River to be an "Area of High Ecological Significance." The comment states, "The proposed appropriation will adversely impact the Big Sur River."

In response to Comment 6-3, we acknowledge the key role of the Big Sur River of maintaining ecological diversity in the region. This is illustrated in the DEIR's discussion of the environmental setting presented in Section 4.3 (Biological Resources) of the DEIR (see pages 4.3-1 through 4.3-25). For clarification purposes, we note that commenter's reference to the Forest Service designation attributed to the river applies only to the reach of the river that occurs within Los Padres National Forest and does not apply to the reach of the river that is directly affected by the proposed project.

Further, the portion of the Big Sur River designated as "wild and scenic" does not occur within the area affected by the proposed project. The designation applies to the South and North forks of the river from headwaters to confluence with the river's mainstem.¹⁴ The designation covers the mainstem downstream of that confluence to the Ventana Wilderness boundary in the Los Padres National Forest. The "wild and scenic" designation does not extend beyond that boundary and, therefore, does not include the reach of river directly affected by the proposed project.

14. California Department of Transportation. *Chapter 19 – Wild and Scenic Rivers: Environmental Handbook, Volume I: Guidance for Compliance*. <http://www.dot.ca.gov/ser/vol1/sec3/special/ch19wsrivers/chap19.htm>, Accessed 6/25/2010.

While the project would have no potential hydrological effects on areas of the river that occur in National Forest or within the reach designated as wild and scenic, the project could indirectly affect fish resources that migrate through the project area to these specially designated reaches of the river, so indirect impacts on resources in these parts of the river are possible. As presented in Sections 4.2 and 4.3 of the DEIR, however, all potential impacts on hydrology and biological resources of the Big Sur River are mitigable to levels of insignificance. For this reason, and because the comment provides no evidence to the contrary, we disagree with Comment 6-3's contention that the project will adversely impact the Big Sur River.

RTC 6-4

Comment 6-4 states:

The Water Board's determination of jurisdiction, and of illegal diversions by El Sur, compelled Applicant to apply for a water rights permit in the first place. Yet the Board is now asked to abdicate the very public trust responsibilities it so vigorously propounded. This DEIR and the associated water rights application are El Sur Ranch's attempt to legitimize decades of illegal water diversions from the Andrew Molera State Park. Before the El Sur ranch began illegally diverting water, the Big Sur River was once a spawning run for steelhead. However, El Sur's illegal diversions destroyed the run.

In response to the first line of Comment 6-4, we note that, as presented in Chapter 2 (Project Description) of the DEIR (page 2-12 under subheading "Project History"), in 1992 the State Water Resources Control Board determined that the Ranch was diverting water from subterranean flow associated with the Big Sur River and was, therefore, subject to the board's water right authority. Subsequently, El Sur Ranch filed an application for an appropriative water right to divert from that flow. Subsequent to that initial application, three amendments to the permit application have been submitted. The DEIR addresses the third, and latest, amendment to Water Right Application 30166.

In response to the second line of Comment 6-4, the comment is incorrect. We know of no evidence to suggest the Board has requested abdication of its public trust responsibilities nor does the comment provide any evidence to support this statement. We refer the reader to RTC's 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28 which further discuss the issue of public trust resources in relation to the proposed project.

In response to the third line of Comment 6-4, we disagree with the comment's assertion that the DEIR and project applicant are attempting to "legitimize decades of illegal water diversions from Andrew Molera State Park." As noted above in 1992 the State Water Board determined that the Ranch was diverting water from subterranean river flow subject to the board's water right authority, and El Sur Ranch filed an application for an appropriative water right to divert. The DEIR is an informational document prepared in accordance with the requirements of CEQA to assess the potential environmental impacts of approving the proposed water right. It not the objective or intent of the environmental document to "legitimize decades of illegal diversions," and the commenter provides no evidence to the contrary. Water Right Application 30166 is an attempt to respond to the 1992 determination that a water right is required for diversion of underflow in amounts that exceed the project applicant's existing riparian water right.

Regarding the commenter's reference to diversions from Andrew Molera State Park, we refer the reader to page 2-6 of the DEIR which states that the Old Well and New Well are located approximately 500 and 1,000 feet east of the Ranch pasture boundary, respectively, in an easement within Andrew Molera State Park. By way of background on why the pumps are located on park

property we again refer the reader to the DEIR (page 2-12 under the subheading “Project History”) which states:

The Ranch’s Old Well (State Well Number 19S 01E 16F 02M) was constructed in 1949 on what was then El Sur Ranch property (now Andrew Molera State Park property), and has been used continuously to flood irrigate lands on the Ranch since that time. In 1957, the Ranch allowed construction of another well (i.e., the “Navy Well”) to serve the U.S. Naval Facility at Point Sur, approximately two miles to the northwest. Plans, specifications, and contracts for the construction of the original irrigation system document that the system was built in 1950. The system has been in continuous operation to the present time.

In 1971, the Molera Parcel, on which the Old Well was originally located, was deeded to the DPR [California Department of Parks and Recreation] and became part of the Andrew Molera State Park. The deed reserved the Ranch’s water rights associated with the parcel, and allowed for continued use of, and access to, the Old Well. During the early 1970s, the Ranch sought to improve water distribution reliability by increasing access to available water supplies through the development of the New Well and associated pump system.

In 1972, a temporary use permit was issued by DPR authorizing the drilling of three wells in the park. One well was intended to serve the Andrew Molera State Park headquarters, a second well was intended to serve the U.S. Naval facility, and the third well was intended for Ranch irrigation (Letter from H.R. Howell to file of El Sur Ranch, July 12, 1985). This permit granted an easement for construction and access if a sufficient water supply was discovered. The first well was drilled at the DPR headquarters in 1972 (DWR Drillers Report No. 86694).

In response to the last two lines of Comment 6-4, the comment is correct in that the Big Sur River supported a “spawning run for steelhead” prior to El Sur Ranch diversions. As noted in the DEIR, ranch diversions began in the 1950s, and, clearly, a steelhead run in the river existed at that time. The comment’s contention that a steelhead run no longer exists in the river and that El Sur Ranch diversion were responsible for the elimination of the steelhead run in the Big Sur River is incorrect. We refer the reader to Comment 1-3, above, presented by the National Marine Fisheries Service which highlights significant declines in steelhead populations throughout the central coast region, particularly with in the Pajaro, Salinas, Nacimiento/Arroyo Seco and Carmel river watersheds. The comment states in part:

Present population trends within individual water sheds continuing to support this species is generally unknown, but may vary widely between watersheds. One of the best remaining streams for S-CCC [South-Central California Coast] steelhead is the Big Sur River which is considered to maintain important refugia habitat, important to the long term persistence of this species.

In addition, we refer the reader to Section 4.3 (Biological Resources), which describe the current status of the steelhead fishery within the Big Sur River (see page 4.3-21). This discussion includes the results of recent snorkel surveys which provide empirical evidence of the presence of migrating steelhead in the river. Extensive evidence presented in the DEIR or referred to therein, indicates the persistence of a steelhead run in the Big Sur River. In the absence of any evidence to the contrary, we must conclude the comment’s contention that the steelhead run has been “destroyed” by El Sur Ranch diversions (or by any other source for that matter) is not accurate.

RTC 6-5

Comment 6-5 contends that the, "...DEIR lacks crucial and required information that would enable the SWRCB and the public to make an informed decision." The comment further contends the DEIR is "fundamentally flawed" and contains "glaring inadequacies."

In response to Comment 6-5, we disagree with the comment's contention of inadequacy and refer the reader to page 1-1 of the DEIR which states, in part:

This Draft Environmental Impact Report (DEIR) was prepared in conformance with the California Environmental Quality Act (CEQA) of 1970 (as amended). (Public Resources Code, Section 21000 et seq.) CEQA requires the preparation of an EIR when there is substantial evidence that a project could have a significant effect on the environment. The EIR is an informational document for use by decision-makers and the general public that fully discloses the potential environmental effects of the proposed project. The EIR process is specifically designed to evaluate the potentially significant direct, indirect, and cumulative impacts of the proposed project, and to describe reasonable alternatives to the proposed project that could avoid or reduce those impacts. As provided for in the State CEQA Guidelines,¹⁵ public agencies are charged with the duty to avoid or minimize environmental damage where feasible (Section 15021 of the CEQA Guidelines.) In determining whether changes in a project are feasible, the public agency may consider specific economic, environmental, legal, technological, and social factors. In addition, CEQA requires that an EIR identify any adverse impacts determined to remain significant after mitigation.

In Comments 6-6 through 6-10, the commenter presents specific examples of perceived inadequacies in the DEIR in support of Comment 6-5. We refer the reader to RTCs 6-6 through 6-10 below which address the commenter's contention of inadequacy.

RTC 6-6

Comment 6-6, under the first bullet item, lists development and conservation agreements between El Sur Ranch, Monterey County, and the California Coastal Commission. With reference to Comment 6-5, above, these are presented by the commenter as "key omitted information" in support of the contention that the DEIR is inadequate and "fundamentally flawed."

In response to the comment, we refer the reader to a correspondence from Ms. Janet Goldsmith, of the law firm Kronick, Moskowitz, Tiedemann & Gurrard, representing the project applicant, to R. Hanson of PBS&J, dated March 29, 2010. This correspondence and attachments to the correspondence are included in the FEIR as Appendix 6. The letter addresses the easements referred to in Comment 6-6 and states. As noted in the March 29th correspondence, "the Conservation Easement precludes most development of the proposed project property, including any new residential or commercial development. The conservation easement restrictions are in perpetuity and constitute covenants running with the land." The correspondence notes that while there was at one time a development proposal and development agreement for El Sur Ranch that had been approved by the County of Monterey, the development was subsequently denied by the Coastal Commission (Docket No. 3-85-12).

With the establishment of the Conservation Easement for property which includes the El Sur Ranch Water Right Application 30166 POU, and the 1985 denial of the project applicant's development

15 The CEQA Guidelines are found in the California Code of Regulations, Title 14, Section 15000 et seq.

proposal, it would be extremely speculative to assume future development of the El Sur Ranch POU for any use other than that directly associated with irrigated pasture. Therefore, any contention on the part of the commenter that the DEIR is inadequate or fundamentally flawed because it does not address the potential future impact of alternative development on the project site is not supportable under CEQA. This is further supported by the fact that the applied-for water right would not permit diversions for any uses other than irrigation of previously irrigated pasture: an issue that is also addressed in the 3/29/10 correspondence referenced above.

Given the information presented above, the pertinence of the documents cited in Comment 6-6 to the impact assessment presented in the DEIR is tenuous at best. As such, their omission from the DEIR does not constitute a fundamental flaw or glaring inadequacy of the DEIR under CEQA.

The second bullet item in Comment 6-6, states, "Reports and studies used to demonstrate that the project satisfies the State's obligations concerning the Public Trust Doctrine" are not included in the DEIR and are examples of key information omitted from the DEIR.

In response to this comment, we note that the commenter does not identify specifically the reports and studies to which the comment refers. This makes it difficult to provide a detailed and substantive response to the comment. However, the issue of potential project impact on public trust resources is addressed in previous responses to comments and we refer the reader to RTC's 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28. We also refer the reader to RTC 1-5 which addresses the use of best available information in the DEIR.

RTC 6-7

Comment 6-7 lists, "Discussion of the water rights protests, including those by State Parks, California Sportfishing Protection Alliance and Cal. Department of Fish & Game" as an example of key information omitted from the DEIR.

In response to Comment 6-7, the comment's assertion that the DEIR does not contain a discussion of the cited protests is inaccurate. We refer the reader to page 2-15 of the DEIR, last paragraph, which states:

The DPR (State Parks), the California Department of Fish and Game (DFG), and the California Sportfishing Protection Alliance (CSPA) submitted protests against the application based on alleged potential injuries to public trust resources. These protests were based on the possible effects of groundwater pumping on the Big Sur River. The alleged effects included reduced river flows and corresponding lowered water levels in the river, saltwater intrusion, and the resulting potential impacts to riparian flora and fauna, especially special-status species (including steelhead, California red-legged frog, and southwestern pond turtle). Additionally, the DPR protest asserted that the quantity of water that the Ranch sought to divert for irrigation was excessive for its intended purpose, citing erosion effects purportedly due to irrigation runoff.

Further, we refer the reader to the discussion beginning on page 2-16 of DEIR under the subheading, "Technical Studies Prepared in Response to Protests."

RTC 6-8

Comment 6-8 lists, "Information on the Three Springs source that provided water to Molera Ranch and is now controlled by El Sur," as an example of key information omitted from the DEIR.

In response to Comment 6-8 and others that refer to the “Three Springs source,” the EIR preparer conducted inquiries and requested information on the “Three Springs” source from the project applicant. In response to this request, R. Hanson of PBS&J received an email correspondence dated July 13, 2010 from Mr. Mark Blum, attorney with the firm Horan, Lloyd, Karacchale, Dyer, Schwartz, Law & Cook, representing the project applicant. That correspondence included a number of attachments including a letter to Mr. Hanson dated July 13, 2010 addressing the issue of the Three Springs water source referred to in Comment 12-2. Each of the attachments contained in the July 13, 2010 are provided in this Final EIR as Appendix 7.

The July 13, 2010 correspondence states, in part that:

In summary, a concrete water tank, tank house enclosure and water pipelines matching the description of the Three Springs system in the 1965 Memorandum of Agreement have been located on lands previously owned by Frances Molera, now in Andrew Molera State Park. Since those lands were a part of the original 8,949 acre El Sur Rancho in 1892, it may be technically accurate that the Three Springs system once served the “150 year old ranch”, but the system wasn’t located on the portion of the Rancho comprising the El Sur Ranch and it did not serve those 7,000 acres.

The Three Springs system apparently only supplied water sufficient for the domestic needs of buildings, adjacent gardens and a small orchard on what is now Andrew Molera State Park. There is no historical suggestion that it ever provided water to “Molera ranching north of the Big Sur River, west side of Highway 1.” Irrigation of those lands on the El Sur Ranch was historically accomplished by centrifugal pumps located in Andrew Molera State Park. Irrigation of lands within the Molera Ranch was accomplished with a separate irrigation system constructed there. Both irrigation systems depended upon diversion of river water, not springs.

Based on the information provided above and in the attachments provided in Appendix 7, we concluded that the Three Springs source is not a feasible alternative water source to the proposed project because of its limited capacity and the fact that it does not occur on the project applicant does not have access to these facilities. In addition, if the contention presented in the July 13th letter from Mr. Blum is correct, the Three Springs source would draw water from subterranean flow as would the proposed project and not from percolated groundwater. As with the proposed project, diversion of Big Sur River subterranean flow could effect surface water elevations within the river channel.

Based on this information, and in the absence of any additional information from the commenter or evidence that a viable alternative source exists, we must conclude that the Three Springs source does not represent a feasible alternative water source. As such, it’s omission from the DEIR does not represent a “key omission of information” as suggested in Comment 6-8.

RTC 6-9

Comment 6-9 reiterates the commenter’s concerns regarding information not contained in the DEIR as noted above. The comment also states that the DEIR makes no mention of the luxury residences and the 100-room hotel planned for the property. The comment further states, “The DEIR also substitutes government information with the self-produced ‘studies’ that unsurprisingly reach opposite conclusions.”

In response to Comment 6-9, we refer the reader to RTCs 6-5 through 6-8 which addresses the commenter’s concerns about information not contained in the DEIR. Relative to the commenter’s contention concerning planned development of a hotel on the project site, we refer the reader to

RTC 6-6 which verifies that there are no plans for developing the proposed project site for use other than irrigated pasture. Regarding the last statement in Comment 6-9 pertaining to government information, this comment is extremely vague and unsubstantiated by evidence. Thus, a more substantive response is not possible. At the risk of being overly speculative, we assume the commenter is referring to the protest to Water Right Application 30166 submitted by CDFG and other related documentation submitted by the Department. If this is indeed the case, we note that all documentation submitted by the CDFG and other agencies was taken into consideration in preparing the DEIR and in conducting related technical studies. We also note that all studies submitted by technical experts under contract to the project applicant were submitted to rigorous peer review by the EIR preparer's resource experts. We also remind the reader that an EIR is an informational document intended to provide adequate information regarding the proposed project impact so that the project decision-makers to make an informed decision in keeping with the requirements of CEQA. The document is not intended to advocate for project approval or denial.

The comment's suggestion that information was substituted is incorrect. Studies were conducted in response to agency comments as discussed in RTC 6-7. Clearly, there are disagreements between the resource agencies between which environmental baseline is appropriate for the EIR's impact evaluation. There is also disagreement as to the methodology used to assess public trust resource impacts in the DEIR. These issues are further addressed in RTCs 1-7, 1-8, 2-12, 2-13, 2-14, 2-18, 2-19 and 2-28.

We disagree with the comment's contention that government information was replaced, but because the commenter does not provide any specific examples or evidence, a more substantive response is not possible.

The last sentence of Comment 6-9 states, "The mitigation measures suggested are both impossible to enforce and do nothing to offset the impacts of the proposed project."

In response to measure enforcement, we disagree with the comment that the mitigation measures are impossible to enforce. The SWRCB has the authority to enforce water right permit terms/ mitigation measures that would reduce impacts identified in the EIR to less than significant. The commenter expresses the opinion that the mitigation measures do nothing to offset the impacts of the proposed project, but this is contrary to the data and analysis presented in the DEIR. The commenter's opinion is unsupported by fact or evidence which could allow for a more substantive response.

RTC 6-10

Comment 6-10 expresses concern about the effectiveness of monitoring requirements presented in the DEIR because monitoring by the Board is not required.

In response to comment 6-10, monitoring of the implementation of mitigation measures by Board staff will in fact be required as a condition of permit approval as will applicant compliance with permit conditions.

Comment 6-10 also expresses the commenter's disagreement with the environmental baseline presented in the DEIR. In response, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 which support the validity of the environmental baseline used in the DEIR.

RTC 6-11

Comment 6-11 again refers to “Three Springs” water and “piped in water” as an alternative to the proposed water right, but provides no specifics about these alternatives. In response, we refer the reader to RTC 6-8, above.

RTC 6-12

Comment 6-12 suggests “a far more likely goal of the project” is to provide water for future development. In response, we disagree with the opinion expressed by the commenter. Use of water provided under Water Right Application 30166 can only be used for irrigated pasture, and conservation easements are in place, which restrict development on the project site in perpetuity. Please refer to RTC 6-6, above.

RTC 6-13

Comment 6-13 expresses the opinion that the water availability analysis is critically flawed because, “Assuming low-flow conditions and including the (otherwise omitted) riparian diversions, the river is already fully appropriated.

In response to Comment 6-13, the commenter provides no evidence that the river is ‘already fully appropriated’. The WAA was prepared in compliance with the guidance document for the region. Please refer to RTC 3-115 regarding the use of the WAA in the impacts analysis and potential for additional riparian diversions.

RTC 6-14

The first line of Comment 6-14 states, “...the endangered steelhead population is not “large and healthy” as the DEIR states.”

In response, we note that the reference to “large and healthy” was taken from page 2-18 of the project description under the subheading Water Availability Analysis. This is a very subjective assessment of the resource contained in a non-biologically oriented evaluation, namely, the water availability analysis. We refer the reader to Section 4.3 (Biological Resources) of the DEIR for a more detailed and quantifiable assessment of fisheries resources in the Big Sur River.

Comment 6-14 presents the commenter’s opinion that the DEIR “glosses over CGFG and DPR protests of the water right application. In response, we disagree with this contention and refer the reader to RTC 6-7, above, which addresses the DEIR’s treatment of protests filed on the water right application.

RTC 6-15

The first line of Comment 6-15 states, “The applied-for diversions are merely the latest salvo in a decades-long effort by El Sur Ranch to take water from Andrew Molera State Park.”

In response, we disagree with the opinion expressed by the commenter. The commenter provides no evidence to support the opinion that El Sur Ranch is in some way trying to appropriate water to which Andrew Molera State Park has a valid right. Further, the suggestion of a “decades-long effort” to take water from the park appears to be inconsistent with the information presented in RTC 6-4, above.

The last paragraph of Comment 6-15 expresses concern that the DEIR does not contain an adequate discussion of why three amendments to the water right application were submitted by the project applicant. In response to the comment, the DEIR does not contain an explanation of the motives of the project applicant to submit amendments to the original application because it would be speculative to do so, and because it is not particularly relevant to environmental impact analysis. The proposed project for the DEIR is Water Right Application 30166, as amended, at the time the Notice of Preparation for the EIR was circulated.

We refer the reader to each of the amendments contained in Appendix 8 of this FEIR. As a review of the Amendments 1 through 3 will demonstrate, each of the amendments provides successively more detailed and restrictive diversion conditions to be included in Water Right 30166.

RTC 6-16

Comment 6-16 states the DEIR does not explain why the water right application process has taken 17 years and why illegal diversions have not resulted in penalties.

In response, we note that these issues are not pertinent to the assessment of potential environmental impacts of the proposed project and their discussion is not required to ensure consistency of the document with the requirements of CEQA. The SWRCB has discretion over whether to take enforcement action against an unauthorized diversion of water; the SWRCB's exercise of this enforcement discretion is not subject to review or evaluation under CEQA. In general, however, the SWRCB may consider several factors when deciding whether to pursue enforcement, including the water diverter's compliance with the water right application process.

RTC 6-17

Comment 6-17 reiterates the commenter's opinion that the DEIR does not contain an adequate discussion of water right protests. In response, we refer the reader to RTC 6-7 above.

Comment 6-17 also contends that the response to DPR's protest described in the DEIR was inaccurate. In response, the descriptions provided in the DEIR were based on the review of those protests. Without more specific information from the commenter, we cannot provide a more substantive response.

RTC 6-18

Comment 6-18 states:

While the SWRCB only asserted jurisdiction in 1992, the illegal diversions by El Sur Ranch date back to the 1965 land grant by Francis Molera that was held in trust for five years by the Nature Conservancy. Under the agreement, both the land and the resources underlying that land, including the subterranean portion of Big Sur River, should be protected from outside development. These restrictions are still in place, but not discussed in the EIR.

The DEIR describes the project and the history of the project's operations as necessary to evaluate and review the environmental effects associated with the project. Comment 6-18 does not explain why the agreement mentioned in the comment is relevant to the assessment of environmental impacts of the proposed project under CEQA.

RTC 6-19

Comment 6-19 suggests the DEIR states that the project applicant has an existing appropriative right for diverting water for use on the POU and cites page 2-13 of the DEIR as the source of this information. In response, the commenter is incorrect. We refer the reader to page 2-13 of the DEIR which contains no reference what so ever to appropriative rights. The discussion presented on page 2-13 addresses “riparian” rights, not appropriative.

RTC 6-20

Comment 6-20 pertains to an existing scenic conservation easement on the El Sur Ranch site. In response, we refer the reader to RTC 6-6, above.

RTC 6-21

Comment 6-21 asserts that the DEIR does not include a discussion of the *Big Sur River Protected Waterway Management Plan*.” The comment states that the plan requires depths of 0.6 feet with 25 percent of the total stream with and 10 percent of this being contiguous to allow for fish passage. In addition, the comment references Brian LeNeve’s comment regarding flows established in the CDFG sport fishing regulations and asserts that these restrictions are not included in the DEIR.

In response to Comment 6-21, we first refer the reader to page 4.3-35 in the DEIR where the passage criteria for adult steelhead are exactly the same as those described in the comment. These criteria have their source in the scientific literature prior to the development of the *Big Sur River Protected Waterway Management Plan*. For response to Mr. LeNeve’s comment about flows, we refer the reader to response to comment 8-5, below.

RTC 6-22

Comment 6-22 expresses the commenter’s opinion that development is “clearly a foreseeable impact of approving the water rights application for El Sur Ranch.” In response, we disagree with the opinion expressed in the comment and refer the reader to RTC 6-6 above.

RTC 6-23

Comment 6-23 relates that the Big Sur River is designated Critical Habitat for steelhead under the federal ESA. The comment states that the DEIR “...fails to adequately discuss what impact such designation has on the Project and/or future permit requirements. Although Critical Habitat designation does not directly impose restrictions on private landowners, federal agencies are prohibited from taking actions that could result in the destruction or ‘adverse modification’ of the designated critical habitat.” The comment asserts that the DEIR does not discuss impacts on critical habitat regardless of the likelihood that some federal permit could be required.

The comment concludes with the statement that the DEIR should evaluate impacts to critical habitat regardless of the federal nexus. There are five primary constituent elements (PCE) of critical habitat for steelhead (70 FR 52488):

- 1) Freshwater spawning areas with water quality and quantity along with suitable substrates that support successful spawning of adults.
- 2) Freshwater rearing areas with water quality and connectivity that maintain habitat and support juvenile growth and movement ability.
- 3) Freshwater migratory corridors free of obstruction with water quality and quantity that allow and support juvenile and adult movement.

- 4) Estuarine areas free of obstruction with water quality and quantity that support juvenile and adult transition between fresh and saltwater.
- 5) Nearshore marine areas with suitable habitat with appropriate prey items.
- 6) Offshore marine areas with water quality and suitable prey base to support growth.

Although the DEIR does not address the PCEs specifically, it does cover all the potential impacts of the proposed project to steelhead. Spawning areas are located upstream of the ZOI and are therefore not impacted or addressed. The DEIR discusses potential impacts to the freshwater rearing and migratory corridors PCEs through a discussion of habitat connectivity and changes in water quality. The DEIR discusses potential changes in the lagoon water quality, habitat, and connectivity with the river thus addressing the estuarine PCE. The nearshore and offshore marine areas are not affected by the proposed project and therefore not discussed.

RTC 6-24

Comment 6-24 addresses the DEIR's treatment of existing riparian water rights in its assessment of the water availability analysis. In response to this comment, we refer the reader to RTC 3-30, above.

RTC 6-25

Comment 6-25 addresses the issue the DEIR's treatment of the designation of upstream portions of the river a "wild and scenic." The comment also refers to SWRCB policy to designate "designating federal and state Wild & Scenic Rivers" as fully appropriated streams (Order WR 98-08, section 5j, pg 26)."

In response to Comment 6-25, we refer the reader to RTC 6-3 which discusses the portion of the Big Sur River designated as Wild & Scenic. We also refer the reader to RTC 6-24 which addresses the commenter's contention that the Big Sur River is fully appropriated.

Further, Comment 6-25 states, "The EIR fails to consider how the proposed water rights allocation will impact the federally reserved water right (in this case, held by the U.S. Forest Service)." The DEIR did not evaluate the project's potential impacts on the USFS's rights because the USFS right is upstream and beyond the geographic scope of any potential environmental impacts. Independent of CEQA, the SWRCB will consider the protection of prior rights under its statutory authority in determining whether and how to approve the water right application.

RTC 6-26

Comment 6-26 expresses the commenter's opinion that the environmental baseline presented in the DEIR is inappropriate. In response to the comment, we disagree with this contention and refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 which support the validity of the environmental baseline used in the DEIR.

The comment further states, "The DEIR's use of such a high baseline diversion level renders an evaluation of environmental impacts useless when compared to a "no project" situation, for the "no project" situation assumes the unpermitted diversions will continue unchecked." In response to this portion of the Comment 6-26, we find the statement to be somewhat confusing. We assume that the commenter's reference to the "no project situation," in fact refers to the "No Project/No Permit Alternative" described and evaluated in Chapter 6 of the DEIR beginning on page 6-2. As discussed in Chapter 6, the No Project/No Permit Alternative assumes that the requested appropriative water right is not granted, in which case ongoing diversions that are currently subject to the pending

appropriative water right would be discontinued. As described in previous RTCs, the DEIR distinguishes between the environmental baseline conditions used in the DEIR's impact evaluation and the No Project Alternative, as appropriate under CEQA.

RTC 6-27

Comment 6-27 addresses the proposed project's compliance with Art. 10, Section 2 of the California Constitution as it pertains to reasonable and beneficial water use.

To the extent Comment 6-27 addresses the reasonableness of the proposed water diversion, it does not raise significant environmental issues, but instead raises issues that the SWRCB will consider under its statutory, constitutional, and regulatory responsibilities, independent of CEQA, in evaluating whether and how to approve the water right application.

RTC 6-28

Comment 6-28 addresses the issue of alternative water sources for the El Sur site and states, in part, "A separate reasonable use issue is why the applicant requires appropriated water from these wells, period, when the pastureland in question is already connected to the groundwater well irrigation system as well as the Three Springs source." In response to the comment, we note that the irrigated pasture contained within the POU for the proposed water right is currently connected to only one water supply: underflow of the Big Sur River accessed via the Old Well and New Well described in the water right application and in Chapter 2 (Project Description) of the DEIR. Regarding the "Three Springs source," we refer the reader to RTC 6-8, above.

RTC 6-29

Comment 6-29 discusses illegal diversions by the project applicant and requests SWRCB, "conduct an investigation into bringing an enforcement action and, if appropriate, to issue a Draft Cease-and-Desist Order and Proposed Penalty as soon as possible." In response, the request is noted and hereby forwarded to the project decision-makers for their consideration.

RTC 6-30

Comment 6-30 suggests that the inclusion of water to which the project applicant is currently entitled via the applicant's existing riparian right, in the current water right application amounts to requesting "water for the same use twice." In response to the comment, the interpretation presented in Comment 6-30 is inaccurate. Water Right Application 30166 does not include a right to divert water that is already allocated to the applicant under the applicant's riparian right. Riparian water, however, would be subject to diversion conditions contained in Water Right Application 30166. Riparian water in combination with appropriated water comprise "water uses regulated by conditions," but the diversion of riparian water does not require a permit. Therefore, the use of riparian water does not occur twice in the quantification of proposed diversions under the proposed water right.

RTC 6-31

Comment 6-31 again notes that the DEIR does not address the "Three Springs source." In response, we refer the reader to RTCs 6-8 and 6-28.

RTC 6-32

Comment 6-32 questions the irrigation efficiency and beneficial use of the proposed diversion rates under Water Right Application 30166. In response to the comment, we refer the reader to RTC 2-46, above. The comment is noted and hereby forwarded to the project decision-makers for their consideration.

RTC 6-33

Comment 6-33 states, “The DEIR’s discussion of leaching correctly identifies increases in salinity in the water. DEIR p.2-22. This increase can endanger plant and animal life, yet this impact is ignored in the “leaching requirement” description, particularly in regards to how changing salinity levels can impact steelhead spawning.”

In response to Comment 6-33 it is important to realize that the discussion of leaching in the DEIR (page 2-22) is in relation to the application of irrigation water to the POU. Over time, the ranch has to ensure that salt levels in the pasture soils do not reach levels that are harmful to the growth of forage. The only plant and animal life potentially affected by an increase in salt levels would be the non-native grasses of the pasture and the cattle that graze on this grass. The application of salt-free water to leach salts from the soils would occur on the POU. There is no connection between this water and steelhead spawning habitat. All water would be applied to the POU and either naturally percolate into the groundwater or be captured in the tailwater pond. In the event of storm-caused overflow of the tailwater pond, that overflow will be discharged directly to the Pacific Ocean.

RTC 6-34

Comment 6-34 refers to “multiple ground wells already drawing irrigation water on the property” and suggests the proposed diversions contained in the proposed project are unnecessary. In response to the comment, the Old Well and New Well are the only existing sources of irrigation supply for irrigated pasture on El Sur Ranch. The comment’s suggestion that other “ground well sources” or that a “Three Springs source” currently exist on the project site is unsupported by any evidence provided by the commenter. We refer the reader to RTC 6-8, above, which addresses alternate sources of groundwater for the project site.

RTC 6-35

Comment 6-35 states:

Although the EIR mentions several reports that were supposed to assess the impacts of the diversions on the Big Sur River, these reports lack sufficient historical comparisons to provide any real insight into the status of the river before and after the pumping. Along with setting a baseline too high to consider actual harm, these reports serve to confuse and mislead.

In response to the comment, as evidenced in the DEIR references, DEIR Technical Appendices, and references cited within appendices, the review of existing literature, technical studies, and previous evaluation of Big Sur River aquatic resources was extensive and meets CEQA criteria of using the best available information in assessing potential project impact. Unless the commenter is aware of literature or prior studies that further define conditions within the Big Sur River prior to the initiation of pumping at El Sur Ranch (studies that are not included in the DEIR or related documentation), it is difficult to respond more substantively. If it is the suggestion of the commenter that the DEIR should speculate as to what conditions existed in the river prior to the commencement of pumping 50 years ago, and to further speculate on what, if any, impact that pumping had on the fishery, we would

consider this to be inconsistent with the requirements of CEQA which 1) reject undue speculation [see CEQA Guidelines Section 15187(d)] and 2) require the evaluation of potential impact relative to existing conditions at the time the NOP was circulated [see CEQA Guidelines Section 15126.2(a)].

The DEIR addresses the *cumulative* impact of the proposed project on Big Sur River fish resources and, in doing so, addresses the proposed project's contribution to the cumulative impact of "past, present and foreseeable future projects" (see pages 4.3-49 through 4.3-52). As noted in RTC 5-25, the cumulative impact to which the project's contribution is assessed, includes the effects of historic and ongoing diversions from the Big Sur River, including historic and ongoing diversions at El Sur Ranch.

We disagree with the commenter's contention that the environmental baseline is "too high" or that the impact assessments presented in the DEIR are intended to "confuse and mislead," and we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 which further explain the validity of the environmental baseline used in the DEIR.

RTC 6-36

Comment 6-36 is made in reference to the steelhead numbers reported in the DEIR from surveys in 2004 and 2007 and asserts that those population numbers include operation of the wells. The comment states that the populations should be compared to before and after the ranch began pumping. The comment questions the assumption in the DEIR that the results of the studies remain valid even at higher levels of use and states that "the EIR passes off the addition of 400+ AFY above any historical withdrawal by concluding that years in which there was 'high irrigation efficiency' were actually years of 'under-irrigation' DEIR p 2-22."

Comment 6-36 is correct in noting that the reported steelhead numbers from 2004 and 2007 represent conditions found during pumping. We note however, that the DEIR does not represent these as populations of steelhead but rather as fish observed in the lower river during snorkel surveys. The proposed project is the incremental increase in pumping, not the installation and operation of a new diversion. Because of this, the existing fish densities are an appropriate data set to use when evaluating the potential impacts of the proposed project. In addition, please refer to RTC 6-32 which addresses irrigation efficiency.

RTC 6-37

Comment 6-37 states that "The amount of water above and below the point of diversion is not a useful measure of the steelhead spawning run. The fact that some fish appear numerous and healthy below the point of diversions likewise does not analyze the loss of the endangered steelhead spawning run, nor assesses the potential to mitigate the impacts and restore the run to its pre-pumping condition."

In response to Comment 6-37, we note that the only references project affects to steelhead populations are made in the cumulative impacts analysis (Impact 4.3-9, DEIR page 4.3-49) and in the basin plan discussion (Appendix F, page F-6). The text referenced by the commenter on page 2-18 of the DEIR, text that states the population of steelhead in the Big Sur River is large and healthy, is taken from the Water Availability Analysis prepared by the project applicant contained in Appendix D of the DEIR as clearly stated in the DEIR and evidenced by the section heading "Water Availability Analysis." The statement is highly subjective. The discussion in this portion of the EIR was in relation to the POU and not the river as a whole and has been edited to reflect this (see Chapter 2 of this Final EIR). As discussed in Chapter 4.3 of the DEIR, data to describe the population within the river as a whole is somewhat limited and we concur that the information presented in the WAA is subjective. The DEIR is required to mitigate for the potentially significant

impacts of the proposed project, not for all water extraction from the Big Sur River that has occurred over the period of record. Mitigation measures are required to be proportional to the impact and requiring a restoration of the run to 'pre-pumping condition' would not be proportional to the impact of the proposed project if it were even feasible.

RTC 6-38

Comment 6-38 refers to comments made by Brian LeNeve of the Carmel River Steelhead Association who did not agree with the conclusion regarding adequate water for steelhead passage. The comment goes on to quote Mr. LeNeve.

In response to Comment 6-38, we refer the reader to Comment 6-39 where the quote attributed to Mr. LeNeve was reported in detail and responded to as appropriate. Mr. LeNeve's actual letter of comment on the DEIR is Letter 8.

RTC 6-39

Comment 6-39 is a quote attributed to Brian LeNeve of the Carmel River Steelhead Association (see Comment 6-38). The comment is broken into two parts. The first comments on the adult passage analysis (Impact 4.3-1) and asserts that the passage criteria used in the DEIR are "...unworkable because after every heavy rain event the stream bed changes so you cannot use a particular cfs as a minimum unless you measure the stream bed after each storm and then on pumping days." The comment indicates that CDFG has stated that 40 cfs is required to move adult fish safely upstream and that therefore, no pumping should occur when the USGS gage is below 40 cfs. The comment indicates that the adult steelhead migration season should be extended to October to May. The comment goes on to indicate that at 12 cfs many passage transects did not meet the riffle passage criteria and even flows of 24 and 21 cfs in October 2006 were not adequate to meet the criteria. "Yet under the baseline allowable pumping the ranch could still operate the pumps, remove more water and lower the riffle even more. This would result in 'take' under the ESA by altering a stream bed."

The second part of Comment 6-39 relates to juvenile steelhead passage. The comment asserts that "...no pumping should occur when the USGS gauging station is below 36 cfs. As most of the ranch pumping occurs in the summer this is critical." The comment goes on to state that pumping dried the river in 1990 and that "...summer pumping must relate to juvenile passage and not to some pre-determined amount." It continues to state "In dry and critically dry years between the months June, July, August, and September under the baseline pumping regime the ranch would be allowed to pump an average of over 28% of the flow. This is the worst time to divert water from fish and unacceptable." "Page 6-7 and 6-8 state that baseline pumping...lowers the river by 2" and enough that the shallower riffles did not meet the criteria of 0.3 feet." "The only alternative that meets the fish passage limits is the 'No Pumping alternative'." The comment concludes by stating that no pumping should be allowed under ESA rules when juvenile fish cannot migrate. The comment states that this value appears to be around 36 cfs.

The following response to Comment 6-39 is separated into two parts. The first deals with adult passage and the second with juvenile passage.

Adult Passage. The comment asserts that the depth threshold used by the DEIR is "unworkable" because after every heavy rain the profiles of the critical riffles would change. While this is certainly possible, it is not important to the analysis or the mitigation measure. The proposed project is the incremental increase in pumping above the established baseline. The analysis indicates that passage could be impaired by the proposed project. There is no need to re-measure the passage transects and conduct a passage analysis on a regular basis and the DEIR does not suggest such an action. In the 2008-2009 freshwater sport fishing regulations CDFG indicated that the Big Sur

River would be closed to fishing when flows are inadequate for passage of migrating steelhead (CDFG 2008)¹⁶. No minimum flows were set in these regulations which were in place when the DEIR was prepared. In the 2010-11 sport fishing regulations CDFG has established a minimum flow of 40 cfs at the USGS gage before the river is open to sport fishing (CDFG 2010).¹⁷ The new regulations make no comment about fish passage. While 40 cfs is likely more than adequate for upstream movement of adult fish, CDFG is managing for sport fishing and not simply for passage of fish. When flows are low, but passage is feasible, steelhead would be more vulnerable to harvest by anglers. It is this situation and the excessive harvest of fish that CDFG is managing for by setting a minimum flow of 40 cfs. In response to the last part of the comment about pumping being allowed under baseline conditions, it is important to remember that the proposed project is the incremental increase in pumping, not all pumping conducted by El Sur Ranch.

Juvenile Passage: The second section of the comment relates to juvenile passage. While the comment confuses the passage criteria for adults and juveniles, it does correctly state that most pumping would occur in the summer and that this is the critical time for juvenile steelhead. This is the period for which passage was analyzed in the DEIR. The comment asserts that no pumping should occur when flows are below 36 cfs at the USGS gage, but does not indicate how this value was chosen. The comment asserts that pumping in the months of June, July, August, and September would take about 28 percent of the flow under baseline conditions. As was mentioned above, the proposed project is the incremental increase in extraction, not baseline pumping. Also, although pumping rates could reach 5.84 cfs (DEIR page 4.1-6), the corresponding reduction in instream flows is a fraction of this (approximately 1.8 cfs). If 1.8 cfs is 28 percent of instream flow, then the corresponding flow would be about 6.3 cfs; flows of this level only occur in the driest of years (DEIR Table 4.3-9, page 4.3-30).

The comment asserts that different depth thresholds are used in the DEIR for passage of juvenile steelhead: 0.5 feet (DEIR page 4.3-29) and 0.3 feet (DEIR page 4.2-40; this is a typo in the comment and should be 4.3-40). The 0.5 ft depth that is discussed on DEIR page 4.3-29 is in relation to juvenile steelhead rearing, not passage and was established by the *Big Sur River Protected Waterway Management Plan* (Monterey County 1986). The standards of significance developed for the DEIR correctly indicate that passage of juvenile steelhead would be considered impacted at depths of less than 0.3 feet (DEIR page 4.3-35). The value used on DEIR page 4.3-40 and in the rest of the analysis is correct. The portion of the comment relating to baseline pumping lowering water levels in the river such that passage is impaired is correct (DEIR page 6-7 and 6-8). The recommendation that the No Pumping alternative is the only alternative that meets the passage limits is hereby conveyed to the project decision-makers for consideration. Baseline pumping is not part of the proposed project and therefore the final element of the comment asserting that no pumping should occur when flows are below 36 cfs is not applicable to the proposed project. However, the comment is noted and hereby forwarded to the project decision-makers for consideration.

RTC 6-40

Comment 6-40 states that two site visits were conducted by biologists (November 2, 2005 and July 21, 2006). Because both of these visits are outside the flowering and avian breeding season, the comments states that “additional visits should be conducted during flowering plant season and avian breeding season (March through June)...” and that without visits during these periods biological surveys are incomplete.

16 CDFG 2008. 2008-2009 Freshwater sport fishing regulations: Effective March 1, 2009-February 28, 2009.

17 CDFG 2010. 2010-2011 Freshwater sport fishing regulations: Effective March 1, 2010-February 28, 2011.

In response to Comment 6-40, we note that while the PBS&J site visits were outside the flowering season and perhaps near the end of the avian breeding season, the work conducted by Miriam Green and Associates (2007) occurred during the flowering and breeding season. The botanist conducted site visits on May 30-31 and June 19-21, 2006 and March 20-23, 2007. PBS&J's site assessments revealed that site conditions were essentially unchanged from when this work was conducted and that there was no reason to doubt the results provided in the 2007 Green study. It is common and accepted practice in CEQA documents to assess the habitat of a project area and the suitability of that habitat to support sensitive species. Should suitable habitat exist within the project area, sensitive species are typically assumed to be present and impact evaluated as if this were the case. In relation to the comment, the proposed project is the incremental increase in pumping with all water applied to the designated POU. There are no terrestrial construction components and the existing pastures are not being expanded into areas that could support sensitive plant species. Because of this, while the coast scrub could support sensitive plant species and communities (DEIR Table 4.3-4, page 4.3-15), the proposed project has no impact on these areas.

RTC 6-41

Comment 6-41 states that the California Natural Diversity Database is "...only as accurate as its input..." and asserts that the inputs for El Sur Ranch would have been made by the ranch. The comment suggests that because of the diversity of records from areas adjacent to the ranch, "...it is highly questionable whether there have been thorough and timely biological surveys conducted by qualified biologists." The comment suggests that "Surveys for known listed species that could occur on El Sur Ranch should be conducted by qualified biologists, and the results included in both the CNDDDB and the EIR."

Comment 6-41 correctly asserts that the data contained in the CNDDDB is only as complete as the information submitted to it. The assertion that inputs for El Sur Ranch would have been made by the ranch is not accurate; most private landowners are unaware that the database even exists. Depending on the contractual arrangements between the landowner and their consultants, the data collected by the consultants may be the property of the landowner and submission of rare species information would require the permission of the landowner. Because of this, the CNDDDB is never considered to be an exhaustive or even complete inventory of species on a particular site. It is also for these reasons that it is standard practice to query the database for not only the USGS 7.5-minute quadrangle that contains the project area, but the surrounding eight quadrangles for a total of nine quadrangles. Because El Sur Ranch borders the Pacific Ocean, total of eight quadrangles were searched for a total query area is of about 480 square-miles. The results of this query are used to develop the list of sensitive species that have some potential to occur on within the project list (DEIR page 4.3-12). Site visits by PBS&J staff included a qualified botanist, herpetologist, and fisheries biologist. Work by Hanson Environmental included qualified fish biologists and surveys by Miriam Green were conducted by a qualified botanist.

RTC 6-42

Comment 6-42 states that "The DEIR fails to include the biological reports by prior consulting agencies (Hanson Environmental, 2004, 2006, 2007 and M. Green and Associates, 2007), both of which the current DEIR relies upon." The comment goes on to state that because biological surveys were not conducted at the correct time of year, "reliance on applicant-supplied information in the CNDDDB, and lack of supporting documentation..." the determinations made relating to the potential for a species to occur within the project area are arbitrary.

In response to Comment 6-42, we note that the comment correctly states that the DEIR did not include, presumably as appendices, the technical reports prepared by a variety of consultants working for the applicant. All of these reports have been submitted by the applicant to the SWRCB

and are part of the administrative record. The studies are available for review at SWRCB offices upon request to:

Mr. Paul Murphey
 Engineering Geologist
 State Water Resources Control Board
 P.O. Box 2000
 Sacramento, CA 95812-2000
PMurphey@waterboards.ca.gov

In relation to the portion of the comment asserting that the reliance on the CNDDDB data, please refer to RTC 6-41. The likelihood of species to occur within the project area are based on available scientific information relating to the species' preferred habitats and the assessment of the site carried out by qualified biologists.

RTC 6-43

Comment 6-43 indicates that the endangered California condor requires detailed consideration in the DEIR relating to potential use of local foraging habitat. The comment asserts that the Ventana Wildlife Society was not included in distribution of the DEIR and this omission calls into question the completeness of the evaluation in relation to endangered species.

In response to Comment 6-43, we would first note that the USFWS and NMFS have the authority for managing species listed under the federal Endangered Species Act. The CDFG has similar authority for species listed under the California ESA. All three of these agencies have been involved in the background data collection that formed the basis of the DEIR section on biological resources. The USFWS supplied a list of federally-listed species within the area that was used in preparation of the DEIR that included all NMFS-managed species (page 4.3-12).

In relation to the California condor, the DEIR notes that the species may fly over the ranch (DEIR page 4.3-18) but that nesting habitat is not present. The DEIR does not discuss the condor in detail because there are no avenues through which the proposed project could impact this species. There are no changes to terrestrial habitats or agricultural practices that would alter the landscape as used by the condor.

RTC 6-44

Comment 6-44 indicates that impacts to Western pond turtles are not adequately addressed in the DEIR. The reasons for this statement are the same as previously presented for other sensitive resources and include: outdated records, lack of species specific surveys, and "self-supplied information in the CNDDDB." The comment recommends that additional research and surveys be conducted to determine the impacts of diversion on this species. Impacts should address upland habitat modification in addition to diversion.

In response to Comment 6-44, we first refer the reader to the previous responses regarding the need for protocol surveys (Comment 6-40) and adequacy of the CNDDDB (comment 6-41). Presumably the comment about self-supplied information relates to the previous comments about a dearth of information for El Sur Ranch in the CNDDDB but could relate to the work conducted by SGI and Hanson Environmental under contract to the applicant. The work by Hanson and SGI was reviewed by specialists at PBS&J before any of it was used in the DEIR. There are cases where extensive analysis was prepared in these reports, but not used in the DEIR because the DEIR authors disagreed with how the analysis had been conducted. The basic data collection in these documents is generally sound.

The comment asserts that the analysis for potential impacts to western pond turtles is inadequate and that additional surveys and research should be conducted to allow a more accurate assessment of impacts. In response to the suggestion that additional surveys be conducted, we note that the instream snorkel surveys for steelhead required two biologists in the water throughout the entire ZOI. Turtle escape behavior is to drop from their basking locations into the water and swim into deeper areas or undercut banks to hide. Had they been present in the snorkel survey areas, it is likely that they would have been observed. Regardless, because they have been reported from a short distance upstream, the DEIR assumes that they could be found within the ZOI.

The proposed project is the incremental increase in diversion. The potential avenues of impact to pond turtle would be limited to creation of habitat conditions unsuitable for turtles. This could occur through extensive drawdown of the river such that pool volume was extremely reduced potentially exposing turtles to increased rates of predation. Turtles are extremely tolerant of a wide array of water quality conditions and because they breath air, reductions in DO or increases in temperature would not impact them. The incremental increase in diversion would relate to a drop in the water surface level of about 0.17 feet (SGI 2008). As discussed in the DEIR, this would not substantially reduce pool volume (DEIR page 4.3-47).

RTC 6-45

Comment 6-45 indicates that "...inadequate research and surveys have been conducted for the presence and potential effects to known bat species in the vicinity of the project."

In response to Comment 6-45, we concur that there has been limited research regarding bats in the area. Information is so limited that there are no reports from the CNDDDB or CDFG for the project or the surrounding areas. As with the condor discussed in RTC 6-43 above, there is no avenue by which the proposed project could impact bats. They roost in terrestrial habitats. Species forage over a variety of habitats from woodlands to open water. There are no terrestrial components to the project that could impact roost sites. While the proposed project does include the extraction of water, the Big Sur River will remain and provide suitable foraging habitat. There would be no impact to sensitive bat species should any be found in the area.

RTC 6-46

The first line of Comment 6-46 states, "The DEIR claims that a series of reports funded by the project applicant serve to allay concerns about the ongoing damage to public trust resources." In response, we disagree with this characterization of information and analysis presented in the DEIR. As noted in previous responses to comments, the DEIR recognizes the potential for impact of the proposed project on public trust resources and the obligation of the SWRCB to protect against impact on those resources. As stated on page 2-2, second paragraph, of the DEIR:

In addition to its statutory responsibilities, the SWRCB has an independent obligation to consider the effect of the proposed project on public trust resources and to protect those resources where feasible. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419 [189 Cal.Rptr. 346].) This CEQA document is intended to support the SWRCB decision process in making the necessary water rights findings and determinations related to the protection of public trust resources.

As noted in previous RTCs (see RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28 which address the issue of public trust resources protection). This EIR addresses potential project impacts on conditions as they exist at the time of circulation of the NOP as discussed in RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 concerning environmental baseline conditions used in the DEIR. The purpose of the studies referred to in the comment was to assess the potential project impacts on public trust resources in

keeping with CEQA requirements and case law. Comment 6-46's refers to "ongoing damage to public trust resources," dewatering of the river by irrigation diversions, and destruction of the steelhead spawning run, are inaccurate and unsupported by substantial evidence.

RTC 6-47

Comment 6-47 states that the DEIR acknowledges limitations of technical studies used in preparing the DEIR's impact analysis and suggests these studies provide inadequate support for the impact conclusions presented in the DEIR.

In response to this comment, we note that the comment refers to the section of the DEIR presented on pages 4.2-46 through 4.2-48 under the subheading "Study Limitations." As that text describes, data availability and the limits on conclusions that can reasonably be reached by the technical hydrological analysis used in the DEIR. As noted in the DEIR, because of identified limitations of previous studies, the effects of the pump tests using both the Old and New Wells were used to assess the effect of pumping on pre-pumping conditions in the river, because it provides the data with minimum artifacts in the pre-diversion compared to diversion conditions, and it maximizes the potential diversion effects because of an identified higher extraction rate. As noted in the DEIR, this means that this impacts analysis relies on effectively one data point. While this qualitatively, demonstrates that pumping indeed does result in a reduction in surface elevation in the river, albeit a relatively small one, a statistically defensible quantification of pumping impacts taking into account all external variables apart from pumping, is not possible given the current extent of best available information. The analysis does however, allow the use of the best available data within these studies, to identify certain trends that are useful to the impact evaluation presented in the DEIR.

RTC 6-48

Comment 6-48 contends the DEIR does not correctly account for cumulative impacts because, "...the document does not consider the impacts of the full amount of appropriated water requested, but rather considers only the impacts of the difference between the amount already diverted illegally, and the amount it could deliver under the permit." The comment expresses the opinion that the DEIR is fundamentally flawed as a result.

In response to Comment 6-48, we refer the reader to Section 15064(h)(1) which states:

(h)(1) When assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project's incremental effect, though individually limited, is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Further Section 15064(h)(4) states that, "The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable."

The DEIR assess the potential project impact relative to environmental baseline conditions in keeping with the requirements of CEQA (see RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 which support the validity of the environmental baseline used in the DEIR). This impact, appropriately, is used to determine whether the project's contribution to the cumulative impact of other diversions from the Big Sur River is cumulatively significant.

RTC 6-49

Comment 6-49 concerns the DEIR delineation of the cumulative context for hydrology in the DEIR and notes that the DEIR lacks a complete listing of riparian diverters. In response to the comment, please refer to RTCs 3-30 and 8-13

RTC 6-50

Comment 6-50 reiterates the commenter's position that the environmental baseline used in the DEIR is incorrect. In response we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 which support the validity of the environmental baseline used in the DEIR.

RTC 6-51

Comment 6-51 is in relation to cumulative impacts and asserts that "low flow, low dissolved oxygen and high temperatures are clear proximate and cumulative impacts that must be discussed together for their combined effects on habitat and steelhead fish passage." The comment goes on to state that regardless of the cause of low flows and low DO, the impacts should be analyzed and mitigated.

In response to comment 6-51 we refer the reader to response to comment 8-11 and 8-12.

RTC 6-52

Comment 6-52 suggests the DEIR should take into account future "expected residential and commercial development in the area spearheaded by El Sur". In response we refer the reader to RTC 6-6 above.

RTC 6-53

Comment 6-53 states the "DEIR neither evaluates the probability of development nor transfer of the water as a growth-inducing impact." In response, please refer to RTC 6-6, above. In addition, we note that the transfer of water is not allowed under the proposed water right and is therefore not evaluated in the DEIR.

RTC 6-54

Comment 6-54 re-iterates that the DEIR acknowledges low flows caused by pumping that impair movement of steelhead. "Instead of mitigating this impact, however, the document merely acknowledges what the government agencies have been arguing for years: that low flows mean 'large segments of the steelhead population could be at risk.'"

In response to comment 6-54 we note that in critically dry periods, passage through the lower Big Sur River by adult or juvenile steelhead likely extremely difficult regardless of pumping. As correctly noted in the comment, the DEIR the analysis of the proposed project concluded that pumping would make passage more difficult and therefore considers this a significant impact. Because the proposed project is the incremental increase in pumping mitigation for this impact is to reduce pumping to baseline conditions. This mitigation would effectively prevent project pumping and prevent the incremental impact of the proposed project.

RTC 6-55

Comment 6-55 states that the "DEIR's discussion of temperature changes are also rendered useless by setting an inappropriate baseline for measurement. If the actual 1600 AFY were measured, then

the analysis would reveal significant temperature changes in low-flow periods due to the project applicants' diversion.”

In response to comment 6-55 we first refer the reader to a complete discussion of the baseline and responses to comments 1-5, 1-6, 1-7, 1-8, 2-10 and 2-11. The DEIR analyzes the potential impacts of an incremental decrease in flow attributable to the increase in pumping that is the proposed project. The temperature analysis indicates that there is a statistically significant relationship between an increase in water temperature and pumping (DEIR page 4.3-43). However, the increase is small (0.3 °C) and measured water temperatures never exceeded the thresholds established in the DEIR (mean daily temperature of 20°C, hourly temperatures over 24°C, DEIR page 4.3-35) to be considered a significant impact.

RTC 6-56

Comment 6-56 presents the opinion that the No Project Alternative is “inappropriate.” The first line of the comment states, “The alternatives analysis in Chapter 6 of the DEIR is fundamentally flawed because of the presumption that under a ‘No Project’ situation the ranch would continue to pump at its previous rates. In response to Comment 6-56 we note that the commenter misrepresents the description of the No Project/No Permit Alternative presented in Chapter 6 of the DEIR. As stated on page 6-2 of the DEIR, second paragraph:

The No Project/No Permit Alternative represents the scenario that could reasonably be expected to occur in the event that the proposed project (i.e., the water right application) is not approved. If the water right application were to be denied, it is assumed that under this alternative, all future water diversions occurring at El Sur Ranch would be limited to the applicant's existing riparian water right, which would only allow for the use of that water on the 25 acres of the property located within the Big Sur River watershed (see Figure 2-2), leaving 242 acres of currently-irrigated pasture without irrigation under an appropriative water right.

From the above excerpt, it is clear that under the No Project/No Permit Alternative, the project applicant would not be allowed to pump at previous rates as suggested in Comment 6-56. In fact, the applicant would be allowed to pump at a rate consistent with the applicant's existing riparian water right, which is substantially less than historical pumping rates.

RTC 6-57

Comment 6-57 states:

The DEIR omits a critical alternative in its analysis that would only deliver the riparian allowance already determined by the SWRCB, and would rely on groundwater and Three Springs sources for the rest. This omission makes the alternatives analysis incomplete, as it is the only alternative that correctly balances the riparian rights of the ranch with the interests of Molera State Park.

In response to the comment, we refer the reader to RTC 6-8, 6-28, and 6-34, which address the issue of the “Three Springs source” and onsite groundwater wells.

RTC 6-58

Comment 6-58 contains the heading, “Misleading Discussion of Project Goals,” and describes the commenter's concerns about the rates of diversion that would be allowed under the proposed water right, in light of the purported availability of an alternate water supply: namely the “Three Springs

source. Further the comment questions the validity and efficiency of flood irrigation of pastures at the rates requested by the applicant.

In response, we note the information provided by the commenter and hereby forward it to the project decision-makers for their consideration. Further we refer the reader to RTC's 6-8, 6-28, and 6-34 which address the issue of a Three Springs water source. Lastly, we note that the DEIR does provide a proposed project alternative that presents a methodology for implementing higher irrigation efficiency for irrigated pasture on El Sur Ranch. This analysis begins on page 6-9 of the DEIR.

RTC 6-59

Comment 6-59 states, "The DEIR makes no mention of the decades-long struggle by the Hill family to create residential and hotel development on its El Sur Ranch property." In response, we refer the reader to RTCs 6-6, 6-28, and 6-34 which address this EIR's treatment of the prospect of future development on the proposed project site.

RTC 6-60

Comment 6-60 states, "This omission [the omission of an analysis of future development on the El Sur Ranch site] is particularly important since fire suppression requirements are the most likely reason that El Sur would need guaranteed GPM's as specified in the EIR." In response, we refer the reader to RTC 6-9. It is also important to note that, a specific condition is included in the proposed water right application that would preclude use of diverted water for any purpose other than irrigation. Any proposed future change to this use would require compliance with applicable procedures. In general, this process requires that the petitioner include all information reasonably available to the petitioner, or that can be obtained from the Department of Fish and Game, concerning the extent, if any, to which fish and wildlife would be affected by the change, and a statement of any measures proposed to be taken for the protection of fish and wildlife in connection with the change. In addition, the petitioner would be required to include sufficient information to demonstrate a reasonable likelihood that the proposed change would not injure any other legal user of water. (Wat. Code § 1701.2). A request for a change of place of use or purpose would likely require additional CEQA review. Further, the seasonal restrictions on diversions contained within the application (restrictions that would halt diversions for extended periods under specified conditions), would preclude any "guaranteed GPM's."

RTCs 6-61 and 6-62

As with Comment 6-60, above, Comments 6-61 and 6-62 also refer to fire suppression for development on the El Sur Ranch site. In response, we refer the reader to RTC 6-60.

RTC 6-63

Comment 6-63 presents the commenter's opinion that mitigation presented in the DEIR is inadequate. In part, the comment states, "While offering nothing to the State Park to actually offset the diversions, the proposed project's 'mitigation' is to cut-off of [sic] pumping in extreme low flow conditions. DEIR p. 3-6. This does not offset the withdrawals' long-term, sustained impacts on the Big Sur River, and thus does not qualify as mitigation."

In response to Comment 6-63, we first note that the comment appears to imply that proposed project diversions in some way infringes upon State Park water supply, thus requiring some form of "offset." We disagree with this interpretation and refer the reader to RTC 6-4 which describes the proposed project in relation of the Andrew Molera State Park in greater detail.

Relative to Comment 6-63's contention that the DEIR does not provide adequate mitigation, we assume this again refers to the commenter's contention that the environmental baseline used in the DEIR is inappropriate and thus the DEIR's resulting impact determinations (and mitigation measures designed for those impacts) are also inappropriate. In response to this contention we refer the reader to RTC's 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 which support the validity of the environmental baseline used in the DEIR. The mitigation measures presented in the DEIR are feasible and demonstrably effective in reducing the impacts presented in the DEIR to levels of insignificance in keeping with the requirements of CEQA.

RTC 6-64

The first part of Comment 6-64 states:

The El Sur diversions have caused low flows in the Big Sur River that have historically impeded Steelhead spawning. Mitigation measures should therefore function to improve year-round adult and juvenile fish passage in Big Sur River, but fail to do so."

In response, we note that the comment is somewhat misleading. As detailed in section 4.2 of the DEIR, low flows in the Big Sur River occur seasonally irrespective of El Sur Ranch diversions. As discussed in Section 4.2, irrigation diversions to the ranch result in a slight decrease in surface water elevation which can exacerbate naturally occurring obstructions to steelhead passage. Historical obstructions to steelhead passage and obstructions that occur under environmental baseline conditions described in the DEIR would be further exacerbated by the proposed project increases in diversions relative to baseline conditions. Measures to effectively mitigate the impacts associated these increases are contained in the DEIR. This issue is addressed in greater detail in RTC 6-39 above.

Comment 6-64 further states:

The requirement that pumps reduce pumping when the river reaches a certain level is a too-little, too-late approach that does nothing to promote recovery of the steelhead spawning run in the Big Sur River. DEIR p.3-5; impact 4.2-2.

The comment is correct. It is not the intended purpose of the DEIR to present a recovery plan for steelhead in the Big Sur River. In keeping with CEQA requirements, the intended purpose of the EIR to identify proposed project impacts and provide feasible and effective mitigation measures to reduce those impacts to levels of insignificance.

RTC 6-65

Comment 6-65 states, "A proper mitigation measure in this instance would be to provide State Parks with veto control over any withdrawals subject to successful spawning of steelhead in the river."

In response Comment 6-65, we have several concerns regarding the effectiveness and feasibility of the mitigation measure suggested by the commenter. Chief among these concerns, is the lack of connection or "nexus" between the proposed measure and the reduction of any impacts presented in the DEIR. In addition, the suggested measure's threshold criteria of "successful spawning of steelhead in the river" is exceptionally broad and impossible to monitor. Steelhead currently successfully spawn in the river. Does the measure suggest that implementation of diversion restrictions by State Parks would occur only when there is no longer a successful run? We doubt that this is the intention of the comment but, again, the comment does not provide adequately specific information.

We also question the feasibility of placing State Parks in a position of authority to make decisions concerning fisheries resources in the Big Sur River. We question whether State Parks has the technical expertise or even the desire to accept this responsibility. For these reasons, this measure does not meet CEQA criteria for feasible and effective mitigation and is not recommended for inclusion in the EIR.

RTC 6-66

Comment 6-66 states, “The DEIR incorrectly assumes that no mitigation is required for impacts to the lagoon, when losing the lagoon is and has been a very significant impact.”

In response to Comment 6-66, we are confused about the meaning and intent of the comment. The DEIR recognizes the key role of a properly functioning lagoon for the continued health and survival of the Big Sur River steelhead fishery and it is a key element in the DEIR’s consideration of potential project impacts related to both hydrology and steelhead. We refer the reader to page 4.2-43 of the DEIR which lists as a criterion of significant impact the following:

Substantially decrease the amount of streamflow such that there would be a potential for impacts to other public trust resources such as river functions, riparian vegetation, lagoon functions;

We also refer the reader to discussions of the lagoon characteristics contained on pages 2-13, 4.2-4, 4.2-8, 4.2-21, 4.2-33, 4.2-36, 4.2-43, 4.2-49, 4.2-57, 4.2-63, 4.3-12 of the DEIR, and to the discussions under Impacts 4.2-3, 4.2-7, 4.2-8, 4.3-2, 4.3-8, 4.3-9, 4.3-10, and 4.3-12. The lagoon is an important element in each of the impact discussions listed above, along with mitigation measures associated with those impacts identified as potentially significant, i.e., Impacts 4.2-8, 4.3-2, 4.3-10, and 4.3-12. This is contrary to Comment 6-66’s contention that the DEIR contains no measures to mitigate impacts affecting the lagoon.

The reference to “losing the lagoon is and has been a very significant impact,” is also unclear and unsubstantiated by the commenter. From the limited information presented in the comment we cannot know what the commenter means by “losing the lagoon” or by the reference to past and future impacts on the lagoon, thus precluding us from providing a more substantive response. We do, however, acknowledge the comment and forward it to the project decision-makers for their consideration.

RTC 6-67

Comment 6-67 contends measures to mitigate proposed project impacts on erosion will not be effectively monitored or reported and that there are no incentives for the project applicant to comply with conditions of the water right permit. As explained in Chapter 1.0 of the DEIR, any mitigation measures adopted by the SWRCB as conditions of approval for the proposed project will be included in a monitoring and reporting program to verify compliance. These measures are also likely to be included as conditions of permit approval by the SWRCB.

RTC 6-68

Comment 6-68 relates potential use of the proposed water right allocation for fire suppression. This issue was raised in previous comments and we refer the reader to RTCs 6-60 through 6-62.

RTC 6-69

Comment 6-69 suggests the SWRCB bring an enforcement action in the form of a cease and desist order for “nearly three decades of illegal diversions and systemic delays.” In response, we note the suggestion and forward it to the project decision-makers for their consideration.

The comment also states, “Because the El Sur Water Rights Application requests permitting only for diversions above and beyond its (unpermitted) historical diversion rate dictates that the baseline diversion level remains unpermitted regardless of the outcome of the WRA.” In response, we note that this statement is fundamentally incorrect in a number of ways. First and foremost, Water Right Application 30166 does not request permitting only for diversions above historical diversion rates. The water right would permit all diversions requested above and beyond the project applicant’s existing riparian rights. The applicant’s riparian right allows for diverting water to only 25 acres of El Sur Ranch’s irrigated pasture. As described in the application, permit conditions to regulate future diversions would apply to the diversion of riparian-righted water as well as appropriated water, but the water right itself is needed for diverting appropriated water only. The appropriative water right requested in Water Right Application 30166, is needed to continue diverting at rates similar to historic rates. If the water right application is denied, the project applicant will need to cease all diversions that are over and above those allowed under the ranch’s existing riparian water right. For further clarification, we refer the reader to the discussion under the subheading “Project Description” beginning on page 2-16 of the DEIR.

RESPONSES TO COMMENT LETTER 7: MONTEREY COASTKEEPER

Response to Comment (RTC) 7-1

Comment 7-1 provides background information on those preparing Comment Letter 7 and states in part:

We urge the Board to reject the Proposed Project and instead conditionally approve the Environmentally Superior Alternative as identified in the Draft Environmental Impact Report (DEIR): No change in Existing Practices/Historical Diversions Alternative (Alternative 2).

In response to Comment 7-1, we note the commenter's recommendation and hereby forward it to the project decision-makers for their consideration.

RTC 7-2

Comment 7-2 addresses the "environmental baseline" described in the DEIR and states that, "We believe the environmental baseline for this project is as stated in the No Project Alternative, Alternative 1." Further, the comment expresses concern about the DEIR's use of the baseline given studies that demonstrate that pumping operations have drawn down surface water levels in the Big Sur River to a condition that restricts fish passage.

In response to Comment 7-2, we note that the validity of the environmental baseline in relation to California Environmental Quality Act (CEQA) Guidelines and CEQA case law is discussed in detail in a number of previous responses. We refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19. RTCs 1-7 and 2-19 are particularly detailed in their explanation of why we view the DEIR's environmental baseline as appropriate and consistent with CEQA requirements.

The comment is correct in its assertion that historical pumping practices draw down surface water elevations in the Big Sur River and that this can affect fish passage, primarily for south central California steelhead. As described in section 4.3 of the DEIR, during periods of naturally occurring low river flow that coincide with steelhead migration, reductions in surface water elevations in key locations of the river caused by irrigation diversions, albeit slight, could temporarily exacerbate passage. Proposed project increases in historical diversion rates will slightly exacerbate this effect unless mitigated. Effective and feasible mitigation for this impact is proposed in Section 4.3 (Biological Resources) of the DEIR. In addition, we refer the reader to RTC 6-39 which further discusses the DEIR's treatment of fish passage.

RTC 7-3

Comment 7-3 states:

Finally, studies have shown that pumping contributes to extremely low – in fact lethal to steelhead – levels of dissolved oxygen. See the following pages in the DEIR.

The above comment is followed by several excerpts of text from Sections 4.2 (Hydrology and Water Quality) and 4.3 (Biological Resources) of the DEIR that address the effects of irrigation diversions on conditions in the Big Sur River.

In response to Comment 7-3 we concur with the accuracy of the comment. As described in sections 4.2 and 4.3 of the DEIR, and as illustrated in the excerpted text from the DEIR presented in Comment 7-3, during periods of naturally occurring extremely low river flow, reductions in surface

water elevations in key locations of the river caused by irrigation diversions, albeit slight, exacerbate poor water quality conditions in the lower Big Sur River and lagoon. As discussed in the DEIR, proposed project increases in historical diversion rates will exacerbate this effect unless mitigated. Effective and feasible mitigation for project effects on dissolved oxygen conditions is proposed in Section 4.3 (Biological Resources) of the DEIR [see Mitigation Measures 4.3-4 (a) and (b) on pages 4.3-44 and 4.3-45 of the DEIR, with revisions shown in Chapter 2 of this Final EIR].

RTC 7-4

Comment 7-4 states:

Given the considerable evidence that pumping at historic levels is impacting hydrology, water quality and passage of ESA threatened steelhead, it seems entirely appropriate for the Board to seriously consider the No Project Alternative. Or, given the repeated study and volume of evidence, it seems the Board has every right and obligation to place conditions on the “business as usual” historical practice.

In response to Comment 7-4, we note the commenter’s recommendation to the Board and hereby forward it to them for their consideration. In addition, we note that, any permit issued by the Board will have detailed conditions regarding any future diversion practices: conditions that were not in place for historical and ongoing El Sur Ranch pumping practices.

RTC 7-5

Comment 7-5 cites a portion of Article X, Section 2 of the California Constitution and states, “This section of the California Constitution restates riparian rights but concludes that the use must be reasonable. Only approximately 25 acres of the project area are entitled to riparian use.” Further, the comment presents two excerpts from the DEIR concerning reasonable water use and historic irrigation practices, respectively. Lastly, the comment states:

No data or evidence appears to have been presented supporting the need for additional water. It appears the applicant wants more water, but the Ranch foremen think they are doing alright with the water they have, and at times they even over water.

In response, we note that the project applicant’s rationale for requesting diversion allowances that, in some instances, exceed historical diversion rates is presented on page 2-16, last paragraph, of the DEIR. To clarify those comments by the ranch foremen presented in the DEIR, the reference states that historic levels of irrigation are considered to be “generally adequate” according to ranch foremen. This statement is, of course, subject to interpretation and may or may not mean that the foremen “think they are doing alright” as stated in the comment.

RTC 7-6

Comment 7-6 accurately reproduces an excerpt from page 4.2-70 of the DEIR. The comment also presents the commenter’s opinion that “there is no strong claim for additional water.” In response to Comment 7-6, the comment is noted and hereby forwarded to the project decision-makers for their consideration.

RTC 7-7

Comment 7-7 reproduces Table 2-2 from the DEIR and states, “The DEIR is at times contradictory stating the irrigation efficiency is around 65% and at other times around 85%.” In response to

Comment 7-7, the commenter is incorrect. As seen in Table 2-2, “60 to 70 percent (65 percent typically)” refers to actual irrigation efficiency on El Sur Ranch. The “85%” shown in Table 2-2 does not refer to “actual efficiency,” it refers to optimal efficiency. As the numbers represent different things, their use in the DEIR is not “inconsistent” as stated in the comment.

Comment 7-7 further expresses the commenter’s opinion that additional pumping proposed by the project applicant is unnecessary. In response, the comment is noted and forwarded to the project decision-makers for their consideration.

RTC 7-8

Comment 7-8 notes that the DEIR does not reference the Marine Life Protection Act in the regulatory setting discussions presented therein, and presents a brief description of the Act. The comment states in part:

Because California’s network of marine protected areas is so new, regulators have yet to interpret exactly what “shall be maintained to the extent practicable in an undisturbed and unpolluted state” really means. We believe that new or expanded discharge should not be permitted.

In response, the DEIR has been revised to include a reference to the Marine Life Protection Act. We refer the reader to Chapter 2, page 2-13 of this Final EIR. In addition, we note the commenter’s suggestion that new or expanded discharge should not be permitted and forward this suggestion to the project decision-makers for their consideration. It is important to note, however, implementation of the proposed project would result in very little change in historic operations at the ranch. The DEIR evaluates potential water quality impacts associated with the project. Relative to project runoff, we refer the reader to revisions to page 4.2-73 of the DEIR, and included in Chapter 2 of this Final EIR. The revised text is as follows:

~~The proposed project would not be subject to any WDRs. CCRWQCB Order No. R3-2004-0117, Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands. The Irrigated Lands WDR is a mandatory program for all commercial, irrigated farming operations in the Central Coast Region. All applicants must submit and Notice of Intent (NOI) and additional information on operations, responsible parties, management practices, and water quality plan, if applicable. Additionally, monitoring is a mandatory part of the Irrigated Lands WDR. Operations that have not submitted an NOI and are not participating in a cooperative monitoring or other monitoring program are subject to enforcement including fines and hearings. The CCRWQCB conducts on-farm inspections throughout the region, both on a random basis to verify submitted information, to better understand what farmers are implementing, and in response to complaints or identified problems. Currently there are no required best management practices or discharge limitations. However, the CCRWQCB has prepared this WDR to be protective of water quality from irrigated lands. Existing operations and drainage of the POU already prevents substantial erosion and runoff from the POU. Additionally, i Implementation of Mitigation Measure 4.2-4 would further control erosion and minimize the potential for runoff. Therefore, the incremental increase in proposed project diversions, compared to baseline, would not substantially increase the amount of polluted runoff and impacts would be **less than significant with incorporation of Mitigation Measure 4.2-4**. Continued irrigation under baseline conditions would also be subject to existing regulations that would serve to minimize potential effects on polluted runoff.~~

RTC 7-9

Comment 7-9 states:

The proposed project increases both take of public water resources and discharge of polluted water beyond acceptable levels. We believe the proposed project should be rejected.

In response, we disagree with the commenter's opinion that the proposed project would discharge of polluted water "beyond acceptable levels." The comment is unsupported by evidence and inconsistent with the analysis and conclusions presented in the DEIR (see RTC 7-8, above). We concur that the proposed project, i.e., a water right application, would allocate water for private use that would otherwise be available for public use. The commenter's opinion that the project should be rejected is noted and forwarded to the project decision-makers for their consideration.

RTC 7-10

Comment 7-10 expresses the commenter's difficulty in interpreting studies of Big Sur River and lagoon hydrology and biological resources. The comment also notes that "1977 was preceded [sic] by a year of unusually wet conditions." In response to the latter comment, we note that 1976 was actually one of the driest years on record for the Big Sur River watershed. In fact, 1976 and 1977 were the driest and third-driest years in a century of measuring rainfall at Big Sur.¹⁸

The comment also presents information from the DEIR including "Table A: Extreme Critical Dry and Critical Dry Flow Rate Limitations on Project Diversions." The comment states that, "According to Table A, in the driest summer months, even during critically dry years, the applicant apparently would be allowed to pump at high levels." In response to this comment we note that diversions allowed in June through September are 2.89 cfs, 2.48 cfs, 2.32 cfs, and 2.60 cfs, respectively. This is compared to 5.34 cfs maximum monthly average diversion that would be allowed under the proposed water right.

Lastly the comment notes that the California Department of Fish and Game has undertaken a streamflow requirement study on the Big Sur River and suggests the Department could produce streamflow requirements in 2010. The comment suggests that, "The applicant should be required to stop irrigating if flows drop below the requirement."

In response to the comment, we note that it is our understanding from Comment Letter 2, that CDFG estimates conclusion of its Instream Flow Methodology Study of the Bid Sur River in 2011. In addition, the objective of this EIR is to assess potential project impact on significant environmental resources relative to the environmental baseline conditions. Based on this evaluation, adequate mitigation of identified impacts is presented in the DEIR, which do not call for the complete cessation of pumping when, as yet undefined, minimum flow conditions are exceeded. We refer the reader to RTC 2-28 which addresses the issue of adequate mitigation for streamflow reductions. Nevertheless, we acknowledge the commenter's opinion and forward it to the project decision-makers for their consideration.

18 Hecht, B. *Sediment Yield Variations in the Northern Santa Lucia Mountains*. Double Cone Quarterly. 12/21/2001. Accessed at link: <http://www.ventanawild.org/news/ws01/sedyield.html> on 7/2/2010.

RTC 7-11

Comment 7-11 quotes a statement from the DEIR pertaining to minimum flow and states in part, "We could find no justification for the 1 cfs number and it seems arbitrary especially in light of the fact that the proposed project can reduce flows by as much as 1.28 cfs.

In response to comment 7-11, please refer to RTC 3-155. Additionally, the project as stated in the DEIR on page 4.2-56, each cfs of flow would only reduce flow in the surface expression channel by 0.24 cfs. The maximum sustained pumping rate, could reduce flow by 1.28 cfs. However, the project effects are compared to baseline conditions. Thus, the maximum project effect on flow in the surface expression would only be, at most, about 0.8 cfs (assuming a maximum sustained rate of 5.34 cfs compared to a baseline seasonal monthly average of 2.21 cfs. In actuality, the more appropriate comparison would be a comparison of the project maximum sustained rate of 5.34 and the seasonal monthly maximum of 4.52, or an 0.2 cfs flow reduction in the surface expression channel). However, there is an error in the DEIR text on page 4.2-66 that causes confusion regarding project effects. The second paragraph on page 4.2-66 of the DEIR is amended as follows:

A reduction in flow rate within Zones 4 through 2 of the Big Sur River caused by increased diversions would be critical during extreme low flow conditions. The sustained maximum diversion rate of 5.34 cfs could ~~increase~~ result in flow losses by an average of 1.28 cfs, while the average irrigation season diversion rate could be up to 3.09 cfs, with average flow losses of 0.74 cfs However, these diversions do not constitute a project effect as project effects are compared to baseline conditions. If these diversions cause flow in the river to drop to zero more often than under baseline conditions, this would be considered a substantial effect on river hydrology. Moreover, if flow drops below a minimum flow rate necessary to maintain aquatic habitat and riparian vegetation more often than baseline conditions, this would also be a substantial effect on river hydrology. Because no minimum flow has been established, a flow rate of at least 1 cfs was used to estimate potential proposed project effects on maintaining minimum flows. As for bankfull flow and flood flows, the proposed project diversions were applied to the baseline period of record flows at the USGS gage to determine the frequency with which these conditions occur (0 flow or 1 cfs of flow). Table 4.2-9 lists the effects of proposed project on critical flows through the Big Sur River Zones 4 through Zone 2.

Comment 7-11 presents two excerpts from DEIR text and states:

According to Table A the proposed project reduces diversion to a sustained rate of between 2.32 and 2.89 cfs during the summer months during critically dry years. These diversions would leave little more than one-quarter of one cfs in the lower reaches. We find it difficult to understand how these reduced flows could be less than significant.

In response, we reiterate that mitigation measures presented in this EIR are designed to reduce impacts associated with increased diversions above and beyond environmental baseline conditions. The measures are not intended to mitigate any potential impacts that occur or have occurred as a result of the baseline conditions. As detailed in section 4.2 of the DEIR, low flows in the Big Sur River occur seasonally irrespective of El Sur Ranch diversions. As discussed in Section 4.2, irrigation diversions to the ranch result in a slight decrease in surface water elevation which can exacerbate naturally occurring impediments to Big Sur River resources such as obstructions to steelhead passage. Historical obstructions to steelhead passage and obstructions that occur under environmental baseline conditions described in the DEIR would be further exacerbated by the proposed project increases in diversions relative to baseline conditions. The DEIR presents

measures designed to effectively mitigate the impacts associated with these increases. This issue is addressed in greater detail in RTC 6-39 above.

RTC 7-12

Comment 7-12 states:

We note that the DEIR consistently considers impacts at a sustained diversion rate of 5.34 cfs but instantaneous rates of diversion of 5.84 and 6.0 cfs are actually permitted. No analysis is offered of the responsiveness of the flow to these peak diversions.

In response to Comment 7-12, 5.84 cfs is the maximum instantaneous diversion rate contained in Water Right Application 30166 as amended. The maximum 5.84 cfs diversion rate close to the maximum pumping capacity when operating both pumps (about 6.05 cfs) identified as the environmental baseline condition for the historical maximum instantaneous diversion rate. The responsiveness of flow to peak diversions is addressed in RTC 3-23, above, and stated on page 4.2-59 to 4.2-60 of the DEIR, complete recovery of subterranean flows occurs within about 4 days following pumping. About 89 percent recovery occurs near the new well, where maximum effects are experienced, within one day after cessation of both pumps pumping (Figure 3-2b. JSA-04 Recovery Curve Post Two Well Pumping Test, SGI 2007). Because river flow conditions cannot be predicted in advance, there will be a lag in recovery of surface water elevation and flow following cessation of project pumping. Also, as noted in RTC 3-74, there is a lag before an effect is demonstrated in the surface expression channel. An instantaneous peak diversion would not be sustained such that equilibrium conditions or maximum effect conditions would occur in the surface expression; instantaneous diversions would be extremely short-lived and have limited to no effect on the surface expression because of the lag in response. There is no provision in the project for either a sustained or instantaneous diversion rate of 6.0 cfs; 6.0 cfs is the maximum that has occurred during baseline conditions.

RTC 7-13

Comment 7-13 provides the Monterey Coastkeeper's recommendation for adopting Alternative 2 (with identified conditions) instead of the proposed project. In response, we acknowledge this recommendation and hereby forward it to the project decision-makers for their consideration.

RESPONSES TO COMMENT LETTER 8: CARMEL RIVER STEELHEAD ASSOCIATION

Response to Comment (RTC) 8-1

Comment 8-1 expresses the commenter's concerns in regards to the DEIR. The comment states the commenter's belief that the DEIR is, "critically flawed, inaccurate, biased and not in conformance with the CEQA guidelines." In response to Comment 8-1, we disagree with the comments contention that the DEIR is critically flawed or not in conformance with the State CEQA Guidelines and we refer the reader to responses to specific instances of flaws and nonconformance raised by the commenter in comments presented below.

Regarding the issue of inaccuracies, Draft EIRs by their nature are intended to present information and analysis regarding proposed project's potential for environmental for public review and comment. In doing so, the Lead Agency can respond to comments and make corrections to any inaccuracies identified in public comments or detected by the Lead Agency after public circulation of the DEIR. We refer the reader to Chapter 2 of this Final EIR, which contains revisions to the DEIR made as a result of public comments or at the discretion of the Lead Agency. Regarding the issue of bias, we again restate our disagreement with the commenter's contention of bias. The DEIR was prepared as an objective, informational document in accordance with the requirements of CEQA to support an informed decision by the Lead Agency with regard to potential environmental effects of the proposed project. Without any information, evidence or documentation supporting the comment's claim of bias, we are precluded from attempting a more detailed response.

Comment 8-1 further states the commenter's strong concern regarding the continued practice of irrigation diversions on the project site following the 1992 determination that a water right was required for diversions that exceeded the project applicant's existing riparian right. The comment states in part:

If the State Water Resources Control Board (SWRCB) knowingly allowed the Ranch to pump an average of 857 AF of water for the last 17 years, the SWRCB in fact gave the Ranch a water right without permit process, without public comment, and without regard to the environmental consequences and would be liable, along with the Ranch, in a suit based on the Endangered Species Act, illegal take provisions,. CRSA insists that the SWRCB immediately issue a Cease and Desist notice to the Ranch and hold hearings.

In response to the above, we refer the reader to Chapter 2 of the DEIR 2-12 through 2-18 beginning with the subsection titled "Project History" which describes much of the permitting process that has occurred since the original determination of the need for an appropriative water right. This process has included filing of the original water right application, the receipt of protests to the application, three subsequent amendments to the water right application prepared in response to the water right protests, and the preparation of a variety of detailed technical studies designed, in large part, to respond to concerns raised protests to the water right application. The comment does not raise a significant environmental issue under CEQA, but instead questions the exercise of the SWRCB's enforcement authority. The SWRCB has broad discretion over whether to take enforcement action against an unauthorized diversion of water. The SWRCB exercises that discretion when it prioritizes enforcement actions and it may exercise its discretion to waive or defer enforcement action while a diverter is working to get a water right permit.

Regarding project compliance with the Endangered Species Act and illegal take, we refer the reader to RTCs 1-2, 1-5, 1-6, 6-39, and 2-3, above.

Comment 8-1 further states, "...this DEIR should be set aside and a new DEIR issued by a company competent in dealing with CEQA requirements." In response, we disagree with the commenter's general contention that the DEIR should be set aside, and we refer the reader to responses to comments below that address specific concerns of the commenter regarding the adequacy of the DEIR relative to CEQA requirements. Regarding the competency of the DEIR preparer, PBS&J was selected to prepare the EIR because it is one of the most highly experienced and qualified firms in California in the preparation of CEQA documentation with a statewide reputation for preparing thorough, objective, and CEQA-compliant documentation.

Lastly, Comment 8-1 (under item 1) objects to the use of the historical pumping average of 857 AFA as the environmental baseline. In response to the comment, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the rationale for the DEIR's use of historical pumping rates to define the environmental baseline, as well as the statutory and legal basis for this approach.

RTC 8-2

Comment 8-2 states that the DEIR is "...flawed and inaccurate in stating that the steelhead population is large and healthy." It goes on to state that the DEIR only provides data from 2004 and 2007 to support this statement and that a population cannot be considered healthy based on two years of data. The comment goes on provide reasons as to why the population should not be considered healthy. It concludes with a statement that the pumping by El Sur Ranch "...makes the Ranch subject to an Endangered Species Act (ESA) lawsuit for illegal 'take.' Illegal 'take' can result from habitat alteration."

In response to Comment 8-2, we refer the reader to RTC 6-37, which addresses the DEIR's reference to a "large and health" steelhead population. The comment is correct in stating that "take" of an endangered species can occur through alteration of designated critical habitat. For a discussion of the potential "take" of steelhead under the ESA please refer to RTC 1-2.

RTC 8-3

Comment 8-3 states in part;

The DEIR is flawed and misleading on page 2-18.1 [sic] when it says the flow below the POD is greater than the flow above the POD.

In response to the comment, we note that the statement refers to the discussion of the "Water Availability Analysis presented on page 2-18 of the DEIR. This section is provided as a summary of the results of the Water Availability Analysis (WAA) submitted by the project applicant and a variety of technical studies completed on which the assessment is based. We acknowledge that, as a summary, the information presented in Section 2 is not as detailed or explanatory as the WAA, hydrological technical studies or the hydrology chapter (Section 4.2) of the DEIR. As such, it is also more subject to interpretation. To address the issue that the DEIR is flawed and misleading concerning flows above and below the POD, this was not the intent of the DEIR. We refer the reader to the discussion presented in Section 4.2 of project area hydrology, particularly the discussion under the subsection titled "Alluvial Aquifer" beginning on page 4.2-17 and under the subsection titled "Surface Hydrology" beginning on page 4.2-25, which detail the surface and subsurface conditions of the Big Sur River and the impact discussions presented in Sections 4.2 (hydrology) and 4.3 (biological resources). The discussion about streamflow above and below the POD is intended to illustrate that, in the zone of influence of project pumping operations, the river is a "gaining reach." This information is presented in the context of explaining the results of the WAA. It was not intended to imply that ranch diversions somehow result in an increase in river flow. This would be clearly inconsistent with information presented throughout the DEIR.

RTC 8-4

Comment 8-4 states, in part, that, “The DEIR is flawed in the amount of water needed to irrigate the pasture land.” The comment cites several examples of information from the DEIR concerning irrigation efficiency and concludes by stating, “As there are 262 acres of land to be irrigated, then 786 AF of water is all that should be used, yet the DEIR is requesting an average of 1,200 AF or approximately an increase of 35% over what the SWRCB said was reasonable.”

Comment 8-4 makes a number of distinct points. In responding to each point, we first note that the comment’s reference to a determination made by SWRCB of what irrigation amount “was reasonable” is not cited by the commenter and we could find no such reference to such a determination in the DEIR. This limits our ability to respond in a substantive way without resorting to undue speculation.

In reference to the comment’s contention that, “The DEIR is flawed in the amount of water needed to irrigate the pasture land,” we note that, in keeping with the requirements of CEQA, the DEIR defines and assesses the proposed project as presented by the project applicant. The DEIR does not determine the amount of water requested in the application. The proposed project, as described in the DEIR, reflects the project description presented in the Water Right Application 30166 as amended. The DEIR cannot be “flawed” for accurately describing the proposed project.

The purpose of the EIR under CEQA is, in large part, is to define the proposed project; assess direct, indirect and cumulative impacts on the existing environment; present measures to mitigate impacts found to be significant; and to evaluate a reasonable range of alternatives, which could serve to reduce identified impacts. In carrying out these tasks, we note that the DEIR addresses the issue of irrigation efficiency in Chapter 6: Alternatives, by developing an assessing the Alternate Irrigation Efficiency Alternative (see page 6-14).

RTC 8-5

Comment 8-5 relates to flow levels established in CDFG’s sport fishing regulation. The comment indicates that the DEIR states that CDFG lists rivers where minimum flow needs to be established to ensure viability of stream-related wildlife resources. The comment goes on to state that “the requirement in the DFG fishing regulations on page 61, which states that the Big Sur River will be closed to fishing when flows are inadequate to provide safe fish passage. The regulations then set the flow limit on the Big Sur River as 40 cfs...” at the USGS gage. The comment asserts that CDFG has already set a minimum flow and that any diversion below this would be a violation of CDFG regulations.

In response to comment 8-5 we first note that the current sport fishing regulations make no mention of fish passage as a reason for setting minimum flows (CDFG 2010). The comment is referring to the 2008-2009 sport fishing regulations where in Section 8.00(c) CDFG stated that “During December 1 through March 7 the following streams (subsections (1) through (7)) will be closed to fishing when the Department determines that stream flows are inadequate to provide fish passage for migrating steelhead trout and salmon.” Subsections 1-7 do not include the Big Sur River, which is subsection 9. There is no minimum flow or gage referenced in the 2008-2009 sport fishing regulations (CDFG 2008). While this is likely an editorial oversight on CDFG’s part, it is important to note that in the 2010-2011 regulations, the reference to flows being inadequate to pass steelhead have been removed. As was noted in RTC 6-39, while 40 cfs is likely more than adequate for upstream movement of adult fish, CDFG is managing for sport fishing and not simply for passage of fish. When flows are low, but passage is feasible, steelhead would be more vulnerable to harvest by anglers. It is this situation and the excessive harvest of fish that CDFG is managing for by setting a minimum flow of 40 cfs. Finally, the CDFG regulations relate to angling, not pumping, and therefore

pumping when flows are below 40 cfs would not be a violation of the CDFG regulations as asserted in the comment.

RTC 8-6

Comment 8-6 focuses on surveys conducted for rare plants. The comment relates that the DEIR "...relied on another report (Miriam Green and Associates) for the complete list of plants, "...along with information from the CNDDDB and from the California Native Plant Society. The comment presents a list of categories from which plants are considered sensitive (CNPS List 1A, 1b, and 2, etc). The comment goes on to discuss how the DEIR does not discuss the "...nature of the Miriam Green report, what the expertise of the botanist...is, or what the reported study area was." The comment relies on the CDFG protocol for surveys to evaluate special status plant populations and natural communities. The comment states that because the Miriam Green report was not included in the DEIR, it was not possible to review this document or assess its validity. The point of the comment is that "Because of no adequate descriptions of the site visits, because of inadequately timed visits, and because of the nonfloristic nature of the report, the surveys for special status plants are unacceptable."

In response to comment 8-6 we refer the reader to the RTCs 6-40, 6-41, and 6-42, which address the botanical survey work conducted for the project by a variety of qualified botanists. While it is certainly possible that sensitive plant species occur within the general project area that were not documented in any of the survey work, there are no terrestrial components of the proposed project that could alter these habitats. The infrastructure required to get water from the wells to the fields already exists. The water would continue to be applied to the existing pastures as it has been historically. There is no avenue for the proposed project to impact sensitive species of plants.

RTC 8-7

Comment 8-7 states, "The DEIR is flawed in Impact 4.2-1, ground water to surface water gradient, by not evaluating conditions of the no pumping alternative." Further the comment states:

The DEIR allows pumping in Critically Dry years to continue at the "baseline" rate. There is no permit for the 857 AF of water included in the baseline rate and therefore the analysis is not valid. To evaluate the effects of this DEIR, comparisons only to legal diversions can be used.

In response to Comment 8-7's reference to a "no pumping alternative," we refer the reader to pages 6-2 through 6-9 of the DEIR, under the subheading No Project/No Permit Alternative. Therein, the DEIR does in fact evaluate an alternative that would not allow diversions beyond the applicant's current riparian right. This alternative would allow some continued diversion to serve 25-acres of riparian-righted land on the project site, and thus does not meet the comment's request for an alternative that eliminates all pumping. However, because the applicant currently holds a right to divert for purposes of irrigating the riparian portion of the project site, an alternative that would, in essence, cancel this right would not meet CEQA criteria for the "no project alternative" [see Section 15126.6(e) of the State CEQA Guidelines].

The comment, "The DEIR allows pumping in Critically Dry years to continue at the 'baseline' rate," appears to misrepresent the purpose of the DEIR document. As discussed in RTC 8-4 above, the purpose of an EIR, in part, is to describe the proposed project, assess its impacts, and present mitigation measures and project alternatives to reduce potentially significant impacts. It is incorrect to suggest the DEIR "allows pumping in Critically Dry years." We assume the comment is meant to express concern over the DEIR's approach to the evaluation of impact relative to the environmental baseline as defined in the DEIR. Using historic pumping practices as a means to define the project

baseline, the proposed project would indeed have no impact relative to those past practices, if those practices are unchanged under the proposed project. As noted in previous RTC's, the use of the baseline presented in the DEIR is consistent with the requirements of CEQA and in keeping with relevant CEQA case law and we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54.

RTC 8-8

Comment 8-8 asserts that "The DEIR is flawed in Impact 4.3-1...by allowing 'baseline' pumping to continue below legal depths for adult fish passage and by not using DFG regulations." The comment asserts that there is no legal right to the baseline diversions in the first place and so requiring them as mitigation is not valid. The comment states that the "impact is still there, the DEIR just ignores impacts resulting from 'baseline' rates as well as rules by Monterey County and DFG." The comment incorporates the passage criteria from the *Big Sur River Protected Waterway Management Plan* and references the CDFG sport fishing regulations where CDFG indicates that "...the Big Sur River shall be closed to fishing when flows are inadequate to provide safe fish passage." At which point the CDFG regulations set 40 cfs at the USGS gage as the minimum flow. The comment asserts that the values presented in the *Big Sur River Protected Waterway Management Plan* are not functional because the critical riffles shift with every storm. The comment asserts that someone would have to re-measure each riffle after each storm. The comment goes on to cite DEIR pages 4.3-36 and 4.3-37 where passage transects are discussed in relation to flows and passage criteria. The conclusion drawn by the commenter in relation to passage is that "...the only way to insure safe fish passage is to set the standard for diversion at 40 cfs, before any diversions could be used including 'baseline' diversions, and then diversions could not lower the river to below 40 cfs." The comment concludes by questioning the migration season for adult steelhead, which the DEIR states begins in December, by citing two PBS&J visits in 2004 and 2007 during which time an adult steelhead was observed in October on one of these visits.

In response to Comment 8-8, we first refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address baseline conditions used in the DEIR. In reference to the 40 cfs minimum flow established by CDFG in the sport fishing regulations, please see RTCs 2-41 and 8-5, above. The critical riffle analysis was conducted by selecting the most restrictive riffles within the ZOI. Typically these are relatively stable features and while they would certainly change as they are subject to high flows, they are not likely to suddenly become a run or pool where passage is not a problem. Additionally, critical riffle studies typically use a set of bottom contours for a location and then apply a minimum flow required to provide passage as was done in the DEIR. Re-measuring of these riffles on a regular basis is not conducted, nor is it a requirement of any of the mitigation measures in the DEIR.

The final point about the PBS&J observation of an adult steelhead in the lower river is only partially correct. As noted, the DEIR includes reference to one adult fish being observed in the lower river in October 2007 in surveys conducted by Hanson Environmental (DEIR Table 4.3-5, page 4.3-22), not PBS&J. Regardless of who saw the fish, it was observed holding in a lateral scour pool well above the ZOI near the abrupt bend in the river (Hanson 2008). The observers did not believe the fish had spawned because the tail fin was not eroded from digging (Hanson 2008). The fish appeared to be in poor condition because it was emaciated. Because it is emaciated it has not been feeding well. Post-spawn adults that remain in fresh water often are in very poor condition before the return to the ocean. The observation does not indicate if this fish is male or female. Female fish do all the redd digging and exhibit the worn fins the report discusses. While males often get damaged during spawning they do not dig and would not be expected to exhibit severely worn tail fins. Also, if spawning had occurred the previous spring, there had been ample time for the tail to regenerate. Simply stating that the fish did not have a worn tail fin and therefore was a new spawning adult fresh in from the ocean is not reasonable. This fish could have been holding in upstream pool habitat in

the Gorge and moved downstream in response to the early October rains mentioned in the biology report. It is more likely that this fish is a holdover adult from the previous spawning season than a fish fresh from the ocean. Because of this, the migration season has not been adjusted in the EIR.

RTC 8-9

Comment 8-9 follows a similar pattern to 8-8. It asserts that the DEIR is flawed in its analysis of potential impacts to juvenile steelhead migration by allowing baseline pumping to occur “below legal depths.” The comment indicates that the DEIR uses the *Big Sur River Protected Waterway Management Plan* as the source for passage criteria. It indicates that there is some confusion about minimum depths required for juvenile fish passage with 0.5 feet being stated and 0.3 feet on page 4.3-40. The comment indicates that while the DEIR notes that passage criteria are not met at passage transect 11 regardless of pumping, the DEIR “allows baseline rates” to continue. The comment goes on to state that “Lowering the water depth by 2” when it is already below both DFG and County standards is criminal.” The comment suggests that if 40 cfs is adequate for adult passage and the criteria is 0.6 feet, then the 20 percent reduction of 0.6 to 0.5 feet for juveniles (as referenced in the BSPWMP) would equate to a minimum flow of 32 cfs. The comment concludes by stating that, “One cannot prevent juvenile fish from passage without being in violation of DFG codes, County ordinances, and the Endangered Species Act” and that “baseline” diversion caused the river to go dry in 1990.

In response to Comment 8-9 we first refer the reader to RTCs 1-6, 3-73, and 6-39 where the passage criteria and resultant thresholds are discussed in detail. The proposed project is an incremental increase over baseline pumping. For a complete discussion of the baseline conditions, please see RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54. Third, we note that passage criteria are an element of the *Big Sur River Protected Waterway Management Plan*, and this plan has been adopted by the County under their Local Coastal Plan. The *Big Sur River Protected Waterway Management Plan* states that through its authority to grant Coastal Development permits, the County will require compliance with this plan (Big Sur River PWMP, page 4). Because there are no terrestrial components of the proposed project, there are no project elements that meet the criteria to be considered a project under the Coastal Act. Because a permit would not be required for the proposed project, the *Big Sur River Protected Waterway Management Plan* would not apply and the water depths within the ZOI would not be considered “illegal.”

In 1990, there was a report of discontinuous river flow. However, this discontinuity in flow occurred well above the ZOI, near the Andrew Molera State Park, in response to diversion of the channel as part of a stream restoration project. The river was diverted into a channel overlying coarse gravel deposits that immediately infiltrated all stream flow entering the area. Once the river was returned to the channel, flow continuity resumed (SGI 2005, page X).

RTC 8-10

Comment 8-10 states that “The DEIR is flawed in Impact 4-3-4...in that the mitigation measures are unacceptable and untested.” The premise of the comment is that allowing baseline pumping is not acceptable mitigation. The other main point is that the proposed aeration system is unproven and not possible to implement given limited ranch labor.

In response to Comment 8-10, we refer the reader to response to comments 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54 for a complete discussion of the baseline conditions. Because the proposed project is an incremental increase in extraction, mitigation that effectively prevents that increase, thus prevents the impact. In response to the assertion that Mitigation Measure 4.3-4(b) is not feasible, please see RTC 9-3, below.

RTC 8-11

Comment 8-11 indicates that the “DEIR is flawed in Impact 4.3-11...in that it did not consider the cumulative impact of low flows combined with high temperatures.” The comment states that the DEIR “...did not analyze the effect of increased temperatures when flows were low enough to prevent juvenile fish from migrating back upstream to cooler water. This affect must be analyzed.”

In response to Comment 8-11, we disagree with the comment’s contention that the DEIR is flawed for the following reasons. We first point out that the temperature data collected within the river took place under conditions when past and present diversions were likely occurring. Because of this, the data could be considered to represent an evaluation of the cumulative impact of the proposed project. The temperature data from 2007 was collected during an extremely low flow period and shows that even when flows at the USGS gage were less than 10 cfs temperatures did not exceed the thresholds established for the proposed project. The snorkel surveys conducted by Hanson in 2004 and 2007 indicate that fish numbers in the downstream portion of the study area, especially the lagoon, increased while those in the mid-reaches decreased. An increase in fish numbers in the lagoon between surveys, this indicate that fish leave these areas before passage conditions become too difficult, water temperatures too high, or DO levels too low, and move downstream into more suitable areas, not upstream as asserted by the comment.

RTC 8-12

Comment 8-12 relates to the cumulative impact analysis and asserts that the analysis failed to take low flows into account when those flows may combine with periods of low DO. The comment states that “...fish must be able to migrate upstream when low dissolved oxygen levels make it unhealthy in their existing habitat.”

In response to Comment 8-12, the comment is correct in that the cumulative analysis did not explicitly discuss changes in flows when evaluating cumulative effects on DO. The collected data for DO indicate that DO levels are at their lowest when flows are also lowest. The passage data collected during this same period of time indicates that passage is also difficult. Snorkel surveys indicated that steelhead are most abundant in the lagoon and densities decline upstream (DEIR page 4.3-22). Surveys in 2004 attributed the lack of fish in Reach 2 to low levels of DO that forced their movement into the lagoon (DEIR page 4.3-22). Because fish numbers increased in the lagoon between surveys, this would indicate that fish leave these areas before passage conditions become too difficult or DO levels too low. For these reasons, the conclusion of the cumulative impact analysis presented in the DEIR remains the same.

RTC 8-13

Comment 8-13 states, “The DEIR is flawed in the list of existing and potential water rights, in that Table 5-1 did not list riparian water rights and that omission is deceptive.”

In response to the comment, the commenter is correct in that Table 5-1 presented in the DEIR was inaccurate. These inaccuracies were inadvertent and a revised Table 5-1 is included in this Final EIR. Please see Chapter 2, page 2-14. The revisions to Table 5-1 do not substantively change the conclusions presented in Chapter 5 of the DEIR. Also, please refer to RTC 3-30.

RTC 8-14

Comment 8-14 states that the opinion that, “The DEIR is flawed by omitting pertinent information.” The comment lists the Ranch’s commitment to a conservation easement with the state of California, a coastal development agreement with the California Coastal Commission, and an agreement with

the Department of Parks and Recreation that “would allow use of water from the ‘Three Springs’ location on the north end of the property” as examples of “pertinent information” omitted from the DEIR.

In response to Comment 8-14, we refer the reader to RTCs 6-6, 6-12, and 6-53, which address the Ranch’s conservation easement and the coastal development agreement and the prospect of future use of allocated water to support onsite development. Regarding the “Three Springs” water source, we refer the reader to RTCs 6-8, 6-28, and 6-34.

Comment 8-14 further states:

Even if this DEIR is considered by the SWRCB, CRSA believes the only alternate that would be acceptable under CEQA would be alternate 1: No Project/No Permit Alternative. CRSA believes this because “Significant” and “Potentially Significant Impacts” to Steelhead can not be mitigated to “Less than Significant” as stated in this DEIR. Other reasons will become apparent when a proper DEIR is issued.

In response to the comment, we disagree with the commenter’s opinion that “the only acceptable alternative under CEQA would be alternative 1: No Project/No Permit Alternative” and refer the reader to Section 15126.6(e) of the state CEQA Guidelines: “No project” alternative. Section 15126.6(e) states, in part:

The specific alternative of “no project” shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative is not the baseline for determining whether the proposed project’s environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish the baseline (see Section 15125).

As described above, the purpose of evaluating the no project alternative under CEQA is to allow the comparison between environmental conditions that will result without the project and those that will result from the project. In most EIRs, the no project alternative does not meet the criteria for a feasible project alternative under CEQA because, in most cases, the no project alternative will not “feasibly attain most of the basic objectives of the project” [see Section 15126.6(a) of the state CEQA Guidelines]. In order for an alternative to warrant evaluation as a feasible alternative in an EIR, it must meet most of the basic project objectives. This clearly is not the case with the No Project/No Permit Alternative (Alternative 1) in the El Sur Ranch Water Right DEIR. The No Project/No Permit Alternative would not meet most of the basic project objectives as defined by the project applicant and presented in Chapter 2 of the DEIR on page 2-19, and therefore would not qualify as a feasible alternative under CEQA. For this reason, we disagree with Comment 8-14’s contention that Alternative 1 is “the only alternative that would be acceptable under CEQA” because, 1) Alternative 1 does not meet the criteria for a feasible alternative, and 2) there are other alternatives evaluated in the DEIR that do meet CEQA criteria. Specifically, Alternatives 2 through 4 presented in the Chapter 6 of the DEIR each meet most of the basic project objectives and avoid or substantially lessen any significant impacts of the project.

We disagree with Comment 8-14’s contention that impacts identified as “significant” or “potentially significant” for steelhead in the DEIR cannot be mitigated, and we refer the reader to Section 4.3 and the discussions of mitigation measure effectiveness presented in that section in support of our conclusion that those measures do in fact reduce potential project impacts to a level of insignificance. The commenter provides no supporting evidence for the contention. This limits our ability to respond in a more substantive way without resorting to undue speculation.

Lastly, Comment 8-14 states that, “CRSA further believes that this DEIR proves the Ranch has pumped illegal water for years further damaging the federally listed Steelhead Trout and that a Cease and Desist Order should be issued and an investigation into ESA violations conducted.” In response to the comment’s reference to illegal pumping, we refer the reader to RTC 1-7. Regarding the comment’s reference to ESA violations, we refer the reader to RTC 1-2. Lastly, we note the comment’s recommendation that the SWRCB issue a Cease and Desist Order is hereby forwarded to the project decision-makers for their consideration.

RESPONSES TO COMMENT LETTER 9: MR. HANK SMITH (CARMEL RIVER STEELHEAD ASSOCIATION)

Response to Comment (RTC) 9-1

Comment 9-1 states the commenter's general concerns about the adequacy of the El Sur Ranch Water Right Application 30166 DEIR and states:

Because the applicant continues to illegally divert Public Trust resources resulting in damage to environmental and public trust resources, I request that the State Water Resources Control Board (SWRCB) immediately issue a Cease and Desist Order to the applicant and hold hearings on the application.

In response to Comment 9-1, we note that the commenter does not provide specifics in this particular comment as to why exactly the commenter believes the DEIR is "seriously flawed, inaccurate, and does not conform to CEQA guidelines." Thus a specific substantive response to the comment is not possible without undue speculation. However, we note that Comment Letter 8 (also submitted on behalf of the Carmel River Steelhead Association) identifies various specific perceived flaws in the DEIR, and we refer the reader to responses to those comments that address each of these perceived deficiencies.

Regarding the comment's reference to "public trust resources," we again, we find the comment to be somewhat vague, making a more substantive response impossible without undue speculation. Nevertheless, we refer the reader to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address various aspects of the issue of public trust resources protection.

Regarding the comment's request for a Cease and Desist Order and hearings, this request does not raise a significant environmental issue under CEQA, but instead asks the SWRCB to initiate an enforcement action. As explained above, the SWRCB has broad discretion over whether to take enforcement action against unauthorized diversions. The SWRCB exercises that discretion when it prioritizes enforcement actions and it may exercise its discretion to waive or defer enforcement action while a diverter is working to obtain a water right permit.

Comment 9-1 further states that, "The DEIR is flawed by not noting the requirements of minimum flow as set by the California Department of Fish and Game (DFG)." In response, we refer the reader to RTCs 2-41 and 6-39, and 8-5, above, which address this issue.

RTC 9-2

Comment 9-2 states in part:

The DEIR is flawed in Impact 4.3-1 (Adult fish passage) by allowing baseline pumping to continue below legal depths for adult fish passage and by ignoring CDFG regulations relating to minimum flow rates.

In response comment 9-2, we disagree with the comment's contention that the DEIR is flawed and refer the reader to RTCs 2-41 and 6-39, and 8-5 above, which address the issue to this EIR's treatment of fish passage and CDFG regulations pertaining to minimum flow. Further, we believe some additional clarification is needed related to the comment's statement that, the DEIR "allows" baseline pumping. The DEIR is an informational document that assesses potential project impacts in relation to existing baseline conditions. It is beyond the authority and intent of the DEIR to "allow" any actions by the project applicant (see RTC 8-7). For further information on the DEIR's definition

and use of the environmental baseline, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19 above.

RTC 9-3

Comment 9-3 states that “the DEIR is flawed...in that the mitigation measures are untested and contradictory.” It asserts that baseline pumping does not mitigate for impaired water quality and that poor water quality is impaired by pumping. The comment states that the DEIR fails to support the feasibility of aeration of the river using pumps and pipes. The comment points out that the DEIR indicates that available ranch labor is limited and thus requiring a labor intensive mitigation measure is not feasible.

In response to Comment 9-3, we first refer the reader to response to comments 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54 for a complete discussion of the baseline conditions. While the statement, “baseline pumping does not mitigate for impaired water quality,” is literally correct, it is somewhat misleading. Baseline diversions do not require “mitigation” under CEQA. Baseline diversions were part of the existing environment at the time that the DEIR’s Notice of Preparation was circulated to the public. Mitigation is required in this EIR for impacts of the project on that baseline, not for “impacts” related to the baseline itself. Because the proposed project would result in an incremental increase in baseline diversions, a mitigation measure that effectively prevents that increase would mitigate the impact. In other words, while water quality may still be poor even with implementation of the Mitigation Measure 4.3-4, the proposed project would no longer contribute to this condition and therefore the project impact would be adequately mitigated.

Aeration of water bodies is a relatively standard practice and has been shown to improve DO levels. Often low DO levels are associated with wastewater discharge and resultant biological oxygen demand (Lin et al. 2007).¹⁹ Jones and Stokes (2003)²⁰ studied the feasibility of providing aeration to the Stockton Deepwater Ship Channel. The statement in the DEIR regarding the feasibility of a stream-based aeration system is accurate although additional research conducted in the process of responding to this comment indicates that there is more support for the feasibility of this approach than originally thought (Corps 2006).²¹ Once the system is properly planned, the design could take into account the labor constraints of the ranch. The lack of feasibility would likely be made from an engineering standpoint, not a ranch staffing point of view. Further, the implementation of MM 4.3-4(b) is contingent on demonstrating its feasibility. If it is found to be infeasible, for whatever reasons including labor availability, MM 4.3-4 (a) would be implemented in its place to reduce the impact to a level of insignificance.

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- 19 Lin, S.H., L.T. Fan, and C.L. Hwang 2007. Water quality control by artificial aeration of stream receiving thermal and organic waste discharges. *Journal of the American Water Resources Association*. Vol 9, issue 5. ABSTRACT: The purpose of this work is to study the installation of artificial aerators for water quality control of a stream which receives thermal and organic waste discharges. The location and number of diffuser type aerators to be installed along the stream are determined so as to maintain the stream DO content above a certain minimum requirement (4 mg/l or 5 mg/l) for normal aquatic life. Effects of the stream velocity, upstream BOD concentration and rates of thermal and organic waste discharges to the stream are examined.
- 20 Jones and Stokes 2003. Evaluation of Aeration Technology for the Stockton Deep Water Ship Channel. January. (J&S 01-418.) Prepared for CALFED Bay-Delta Program. Sacramento, CA.
- 21 Corps (US Army Corps of Engineers) 2006. Upper Mississippi River system environmental design handbook. Chapter 6: aeration. St. Paul District. Available at: <http://www.mvp.usace.army.mil/environment/default.asp?pageid=74&subpageid=429>

RTC 9-4

Comment 9-4 states that the DEIR "...is flawed and inaccurate in stating the steelhead population is large and healthy." The comment goes on to state that the DEIR only offers data from 2004 and 2007 to support this statement and asserts that this is counter to the listing of steelhead as threatened under the ESA. The comment asserts that the pumping is "illegal" and "...would be subject to an Endangered Species Act lawsuit for illegal 'take' as a result of habitat alteration." The comment concludes that continued pumping would only continue to degrade habitat and adversely impact the health of this population.

In response to Comment 8-2, we refer the reader to RTC 6-37, which addresses the DEIR's reference to a "large and health" steelhead population. The comment is correct in stating that "take" of an endangered species can occur through alteration of designated critical habitat. For a discussion of the potential "take" of steelhead under the ESA please refer to RTC 1-2.

RTC 9-5

Comment 9-5 states that, "The DEIR is flawed in using historic use of 857 AFA as the basis for evaluating the DEIR."

In response to Comment 9-5, we first refer the reader to response to comments 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54 for a complete discussion of the baseline conditions. This baseline includes historic and ongoing diversions by El Sur Ranch. We also refer the reader to RTC 2-46, which addresses the issue of "beneficial use" of water that would be diverted under the proposed water right.

Comment 9-5 concludes by stating:

It is clear this DEIR provides evidence the Ranch has pumped water illegally from the Big Sur River for years and has contributed to the potential "take" of listed species under the ESA and an immediate Cease and Desist Order should be issued together with an investigation conducted into the specifics of ESA violations.

In response to illegal pumping, we refer the reader to RTCs 1-7 and 2-19. Regarding the comment's contention that El Sur Ranch diversions, "contributed to the potential "take" of listed species under the ESA" we note that this is an opinion expressed by the commenter and is unsupported by any substantial evidence provided in the comment. We also refer the reader to RTCs 1-2, 1-4, 1-6, and 1-9, which address various aspects of the issue of illegal take and project compliance with the federal Endangered Species Act.

RESPONSES TO COMMENT LETTER 10: HELPING OUR PENNINSULA ENVIRONMENT (HOPE)

Response to Comment (RTC) 10-1

Comment 10-1 expresses the commenter's concern that water allocated under the proposed water right would be used to support future residential development and that the DEIR does not evaluate the potential impact of such development.

In response to 10-1, we refer the reader to RTCs 6-6, 6-12, and 6-53, which address the use of water allocated under the proposed project for purposes other than irrigated pasture. As evidenced in the RTCs noted above, we disagree with the commenter's contention that "the project would greatly facilitate this [commercial and residential] development." In fact, use of water diverted under the proposed water right for any purpose other than irrigation would be prohibited. In addition, given existing constraints on future development, and previous denials of proposals to develop ranch property (as discussed in RTC 6-6), to assume potential development of the project site would highly speculative.

RTC 10-2

Comment 10-2 appears to suggest that the DEIR uses "tortured logic, tortured data and tortured conclusions to support or justify" the proposed project. In response to Comment 10-2, we note that this opinion is not accompanied by any evidence in support of the comment's contentions. This limits our ability to respond in a substantive way without resorting to undue speculation. While we disagree with the characterization of the DEIR presented above, we note the commenter's opinion and hereby forward it to the project decision-makers for their consideration. We further note that the purpose of the DEIR is not to support or justify the proposed project, but to identify and analyze the project's potential impacts on the environment.

Comment 10-2 further suggests the DEIR is legally inadequate, that it should be rewritten and recirculated and that the recirculated draft clearly identify "all arguments which have been refuted." Again, the comment expresses an opinion that is not supported by any specific examples or evidence. As noted previously, this limits our ability to respond in a substantive way without resorting to undue speculation. We refer the reader to RTC 4-7, however, which generally addresses requirements under CEQA for DEIR recirculation, and we note that we disagree with the commenter's contention that the DEIR is legally inadequate and requires recirculation. Nevertheless, the opinion expressed in Comment 10-2, is hereby noted and forwarded for consideration by the project decision-makers.

RTC 10-3

Comment 10-3 states that, "HOPE respectfully objects to the proposed project itself as a colossal, shameless and baseless overreach for water and requests that it be denied." The comment does not raise any significant environmental issues. In response to Comment 10-3, the commenter's objection is noted and hereby forwarded to the project decision-makers for their respectful consideration.

RTC 10-4

Comment 10-4 states in part, "Ambiguity is not allowed in an EIR: We find the project description is legally inadequate because it obscures the intent, locations, and legal characterizations of the proposed water use."

In response to Comment 10-4, we note that the comment is nonspecific and lacking any supporting evidence, again making a more substantive response to the commenter's concerns impossible without resorting to undue speculation. However, it is important to note that the project description as presented in the DEIR and as refined in this Final EIR, precisely reflects information contained in the Water Right Application 30166 as amended. This information is unambiguous, accurate, and in keeping with the requirements of Section 15124 of the State CEQA Guidelines that dictate the content an EIR project description.

It is reasonable to assume that the comment's reference to obscuring the intended use of the water right, is in regard to the commenter's previous concerns about diverted water eventually used for residential and commercial use. If this is a correct assumption on our part, we refer the reader to RTC 10-1, above, which addresses this issue.

RTC 10-5

Comment 10-5 respectfully requests that letters submitted by the California Department of Fish and Game be included as part of the administrative record. These letters are referenced in this Final EIR (see Comment Letter 2) and, as such, are included as part of the administrative record. In fact, all correspondences from trustee agencies received as part of the Water Right 30166 application process are part of the administrative record necessarily.

RTC 10-6

Comment 10-6 states that, "HOPE find that the DEIR did not respond to each concern, raised by Department of Fish and Game in the NOP." In response to Comment 10-6, we refer the reader to RTC 2-6, above.

RTC 10-7

Comment 10-7 again expresses the commenter's belief that water made available under the proposed water right would be used for residential and/or commercial use. In response, we refer the reader to RTC 10-1, above.

The comment further states that, "this property once had an application to develop a hotel/resort and mansions that was unanimously rejected by the state Coastal Commission." In response, we note that this statement seems to contradict previous statements by the commenter regarding the potential for the proposed water right to serve future residential/commercial development. Specifically, if commenter recognizes the past denial of applicant's development application, in combination with the existence of a conservation easement for the project site (see RTC 6-6) and clear restrictions on use of the water for agricultural purposes only contained in the proposed water right, it is unclear to us why the commenter considers future development of urban uses on the site to be "likely" and "foreseeable." In the absence of any justification or evidence in support of the commenter's contention that water made available under the proposed water right will be used to support development, the evaluation of the impact of such development is inappropriate for the this EIR and inconsistent with the requirements of CEQA and CEQA case law.

RTC 10-8

Comment 10-8 states, "HOPE respectfully requests the actual Findings of denial by the Coastal Commission and the Commissioner's packets for that proposal, be made a part of this administrative record, and hearings considered."

In response to the comment, for reasons presented in RTC 10-7 above, the only relevance we can see for the inclusion on the requested Findings and packet information in this environmental review process would be to provide further support to the position taken in this EIR that the proposed project will in no substantive way increase the prospect of future development of urban uses within the POU. Without further explanation or evidence supporting the contention that the requested information is relevant to this review process, we see no compelling reason to devote the substantial time and effort required to carry out the commenter's request.

RTC 10-9

Comment 10-9 states, "HOPE respectfully requests the DEIR adequately recognize the potential for the conversion of the use of the water for development." In response to the comment, we refer the reader to RTCs 6-6, 6-12, 6-53, 10-1, and 10-7, above.

RTC 10-10

Comment 10-10 refers to the fictional character, Harry Potter, and his fictional school, Hogwarts, and expresses concern about the DEIR's contention that recorded flow rates in the Big Sur River can be lower above the project points of diversion than below the points of diversion. The comment requests an explanation of how this can occur in terms that the commenter can understand.

In response to the Comment 10-10, please refer to RTC 8-3, above. Further, the statement to which the commenter refers appears in the discussion of the "Water Availability Analysis" presented on page 2-18 of the DEIR. This section is provided as a summary of the results of the Water Availability Analysis (WAA) and a variety of technical studies completed on which the assessment is based. As a summary, the information presented in Chapter 2 is not as detailed or explanatory as the WAA itself, the hydrological technical studies, or the hydrology chapter (Section 4.2) of the DEIR. The information presented in the WAA section of Chapter 2 is accurate, but presented in a simplified manner. In response to the commenter's request, we present the following explanation of how there can be more water in the river below El Sur Ranch's points of diversion than occurs upstream of those diversions without defying "conventional physics and hydrogeology."

We refer the reader to the discussion of Big Sur River stream flow under the subheading Surface Hydrology beginning on page 4.2-25 of the DEIR. It is often difficult to convey technically complex issues such as hydrogeology in plain and simple terms, but, at risk of compromising some of the nuances of stream behavior, we attempt here to simplify the discussion presented on page 4.2-26 of the DEIR that speaks directly to the behavior of stream flow in the vicinity of El Sur Ranch's points of diversion.

As discussed in the DEIR, the river was divided into five zones for purposes of assessing project impact on the hydrology of the Lower Big Sur River near the project site. These zones were defined because each zone represents a distinct change in hydrologic conditions. For example, one zone may reflect an area where the river goes from a "gaining reach" to a "losing reach." A "gaining reach" is a stretch of river where flows actually increase as one moves downstream. This gain is due to inflow into the surface channel of the river from groundwater or "subterranean" sources. A reach of the river in which surface water flow is lost to groundwater is called a losing reach.

Other zones identified in the vicinity of the project include a reach where river flows are influenced by well pumping, and a zone where river flows are highly influenced by tidal action or lagoon opening/closing.

As discussed on page 4.2-26 of the DEIR, Zone 1, is the lowermost reach. It is just upstream from the lagoon and highly influenced by tidal action and lagoon opening/closing. Zone 2, is the lower

portion of the area that may be affected by well pumping, Zone 3 is the mid-reach area that may be affected by pumping, Zone 4 is the upper area that may be affected by well pumping, and Zone 5 is the area that is likely outside of the area that may be affected by well pumping. The locations of these zones are shown in Figure 2-4 of the DEIR.

As discussed in the DEIR, streamflow in the five zones was monitored to better understand river behavior in these areas. During these studies, river flow upstream of the project site was always higher than flow adjacent to the area of diversions indicating that the river loses flow to groundwater within this section. River flow measured just before the upper lagoon was almost always **higher** than the river adjacent to the area of diversions indicating that this section of the river gains water from groundwater inflows.

In summary, the “paradox” of how river flows can be higher below the points of diversion than above them is explained by the fact that the river below the points of diversion is a gaining reach which means that the flow is substantially supplemented by groundwater inflow. The behavior of the river is not substantially altered by El Sur Ranch diversions (that is to say, the river below the points of diversions is not changed from a gaining reach to a losing reach) because the influence of the diversions on the overall hydrology is relatively slight as discussed in Section 4.2 of the DEIR and as addressed in RTC 1-5, which states in part:

Based on extensive hydrological information presented in the DEIR, we conclude that the operation of El Sur Ranch irrigation pumps (Old Well and New Well) at maximum capacity, historically, has a very slight influence on subterranean flow rates in the area of influence of the wells and, subsequently, a very slight influence on surface water elevation and stream flow in the Big Sur River. As presented in the DEIR, surface water elevation in the river could be reduced by as much as 0.17 feet under worst case conditions (see page 4.3-32 of the DEIR).

RTC 10-11

Comment 10-11 states:

HOPE respectfully requests the DEIR discuss in numbers and percent how close to “Fully Appropriated” the Big Sur river is – the statement that it is not yet “Fully Appropriated” is inadequate to understand. It appears a large number of upstream appropriators were left out.

In response to Comment 10-11, we refer the reader to the Water Availability Analysis presented in Appendix C of the DEIR. In addition, we refer the reader to RTC 3-30, which addresses the potential future intensification of water use by riparian water holders upstream of El Sur Ranch.

RTC 10-12

Comment 10-12 states:

What year/date did SWRCB initially find that the water was underflow from the Big Sur river? Pg 1-1 Please revise footnote.

In response to the comment, please refer to page 2-13, third paragraph, of the DEIR which states:

The SWRCB subsequently conducted a field investigation in 1991 to determine whether the Ranch’s diversion of water from the Big Sur River was subject to the SWRCB’s permitting authority. SWRCB staff determined the Ranch was diverting

subterranean streamflow from the alluvium of the Big Sur River and, therefore, the Ranch's diversion was subject to SWRCB permitting authority under the Water Code. As noted above, technical studies supported the SWRCB's conclusion that the Ranch was diverting water from a subterranean stream

In response to the comment, footnote 2 on page 1-1 of the DEIR has been revised as requested and the revision is included in Chapter 2 of this Final EIR on page 2-1.

RTC 10-13

Comment 10-13 requests an explanation of why grazing is considered a beneficial use and what constitutes "waste" as opposed to beneficial use.

Although the comment does not identify a significant environmental issue, we will provide a brief overview of beneficial use and the reasonableness doctrine. The SWRCB's regulations identify certain beneficial uses of water including, but are not limited to, domestic, municipal, irrigation, and industrial uses; power generation; recreation; stock watering; and preservation and enhancement of fish, wildlife, and other aquatic resources. (See Cal. Code Regs., tit. 23, § 659 et seq. [identifying beneficial uses of water].) Thus, water used for irrigation is considered a beneficial use.

The California Constitution, article X, section 2, and Water Code section 100 prohibit the waste, unreasonable use, unreasonable method of use, and unreasonable method of diversion of water. The California Constitution also declares that the general welfare requires that the State's water resources be put to beneficial use to the fullest extent to which they are capable. (Cal. Const., art. X, § 2.) Therefore, in determining the reasonableness of a particular use of water or method of diversion, other competing water demands and beneficial uses of water must be considered. What constitutes a reasonable water use depends on the entire circumstances presented and varies as current conditions change.

RTC 10-14

Comment 10-14 states in part that, "Cattle Grazing has a broad range of severe environmental impacts." The comment goes on to present several examples and refers to research in support of this statement covering a broad range of adverse effects that cattle grazing can have on the natural environment. In response to Comment 10-14, we acknowledge that initiation of grazing on undisturbed lands does have the potential for causing impacts related to increases in soils erosion and water quality degradation as described in Comment 10-14. It is important to note, however, that the proposed acquisition of the proposed Water Right 30166 would support ongoing grazing operations that have occurred on the project site for several decades, and would not introduce grazing into new areas. As such, implementation of the proposed project would not substantially alter historic and ongoing grazing practices on the project site, and, therefore, would not substantially alter the existing physical environment on the project site. Similarly, the proposed project would not substantially alter conditions in off-site areas that may be affected by runoff from the project site. Because the proposed project would simply allow the continuation of existing practices, any potential effects of those practices would be unchanged and, therefore, not considered an impact under CEQA requiring mitigation.

RTC 10-15

Comment 10-15 states:

The exclusive, sole, and only reason given for the permit is cattle grazing. This means that if any part of the permit is granted the Water permit must be void when the water is no longer used for cattle grazing.

In response to Comment 10-15, under Water Right Application 30166, use of water diverted under the water right must be used within the POU and for the identified purpose, i.e., pasture irrigation.

RTC 10-16

Comment 10-16 requests clarification of the statement in the DEIR, "Tadpoles are less mobile than steelhead and would be less able to avoid this area." In response to Comment 10-16, we note steelhead are generally much stronger swimmers than tadpoles. Based on this observation, it is reasonable to assume that steelhead would be better able to move from areas of low DO than would tadpoles, as described on page 4.3-34 of the DEIR.

RTC 10-17

Comment 10-17 notes that red-legged frog were likely contestants at the Calaveras County jumping frog contest as written about by Mark Twain. In response, the comment is hereby forwarded to the project decision-makers for their consideration.

RTC 10-18

Comment 10-18 states:

This native California frog ("CRLF") is now gone from the Sierras including Calaveras County, but it still hangs on in a very few places. One of those few places is the El Sur Rancho project.

In response to Comment 10-18, we note that the DEIR (see page 4.3-24, first paragraph) states:

California red-legged frogs are the largest native frogs in California. They have suffered from a dramatic decline in available habitat, competition from non-native bullfrogs, and predation from introduced fish species. Accordingly, the USFWS listed the California red-legged frog as federally threatened in 1996 (61 FR 25813). Although the USFWS has designated critical habitat for this species, the designation does not include the project area.

The comment is correct in that dramatic declines have occurred in red-legged frog populations. These declines have resulted in the extirpation of the species from much of its former range within the Sierra Nevada range. As of 2009, however, six recently-discovered populations are known in the Sierra Nevada, but these were all discovered after 1997.²²

22 <http://www.californiaherps.com/frogs/pages/r.dr Daytonii.html>. Accessed 7/20/2010.

RTC 10-19

Comment 10-19 presents information concerning movement and habitat requirements of CRLF. In response to the comment, we acknowledge the comment's accuracy and note that it is largely consistent with information on CRLF presented on page 4.3-24 of the DEIR, which states, in part:

Dispersal from breeding habitats occurs when adults have completed breeding and when tadpoles complete the metamorphosis into juvenile frogs. Adults will spend the entire year in freshwater, although not necessarily the breeding areas, when suitable habitat is available. Studies of tagged adult frogs in a coastal area near Santa Cruz indicated that most frogs remain in aquatic habitat throughout the year and those that do move to upland locations, are generally found within 60 meters from their breeding sites (Bulger et al. 2003). In areas where summertime water sources are not stable, adults spend the dry part of the year in riparian habitats or subterranean burrows where there is sufficient moisture to prevent desiccation. Upland habitat used by red-legged frogs includes grasslands with small mammal burrows and riparian habitats with an abundant understory and structure.

Comment 10-19 concludes by stating:

A US-FWS letter to Monterey County in Mar 1998 on the "September Ranch" FEIR states "Concluding the CRLF does not occur on the project site because the site does not have ponds or other wetland habitat with riparian vegetation is erroneous because this species exhibits complex temporal variations in behavior and habitat."

Though we are unsure of the commenter's intent for including the above reference, we note that the El Sur Ranch Water Right DEIR recognizes the presence of CRLF on the El Sur Ranch project site and explains that the species can occur in upland habitat as well as riparian and aquatic habitat. As noted on page 4.3-25 of the DEIR, first paragraph:

California red-legged frogs are present on the project site and in the vicinity of the project. They have been reported as recently as 2007 from near Pt. Sur about 1.5 miles northwest of the POU (CNDDDB 2008). In July 2006, PBS&J biologists along with representatives from El Sur Ranch, SWRCB, and Hanson Environmental observed 12 adult frogs and numerous tadpoles in the lower portion of Swiss Canyon. Within the Big Sur River, red-legged frogs were reportedly observed during fisheries studies conducted by CDFG in 1993 and 1994 (Biosystems 1995). No red-legged frogs were observed in the Big Sur River during any of the work conducted for the proposed project, but staff were generally not on-site during the breeding season. Overall, there is suitable breeding habitat along the Big Sur River, within the tailwater pond at El Sur Ranch, and within SC.

RTC 10-20

Comment 10-20 requests a map of "potential habitat" of the CRLF on the proposed project site. In response to the comment, in the sense of the term "potential habitat" here seems to refer to all portions of the project site on which CRLF could possibly occur, we note that all areas of the POU contain "potential habitat" in that, as stated in the DEIR, CRLF can occur in riparian, aquatic and upland habitat. This is consistent with species information and impact assessments presented in the DEIR pertaining to CRLF.

RTC 10-21

Comment 10-21 suggests that increased flooding and use of the proposed project POU would significantly increase predation on CRLF by causing a substantial increase in bullfrog populations that prey on CRLF. In response to the comment, we note that while the proposed project would allow for small increases in annual diversion in some years, flood irrigation practices on the project would not substantially change relative to historical practices. In the absence of substantial evidence to the contrary, it is reasonable to conclude, therefore, that under these conditions, no substantial increase in predator populations would occur.

RTC 10-22

Comment 10-22 requests that the EIR find that a significant and unavoidable impact on CRLF be found due to increased predation resulting from project-caused increases in bullfrog occurrences on the project site. In response to the comment, we disagree with the commenter's conclusion of impact for reasons presented in RTC 10-21, above, and we refer the reader to discussions of Impacts 4.3-6 and 4.3-7 beginning on page 4.3-36 of the DEIR, which address potential project impacts on amphibians, including CRLF.

RTC 10-23

Comment 10-23 states, "Perhaps stronger, California Coastal Act requires avoidance of any activity that would potentially cause the loss of a single individual of a listed species." In response, we note that the comment, taken at face value is incorrect in that it misstates the authority imparted on the California Coastal Commission to require the "avoidance of any activity that would potentially cause the loss of a single individual of a listed species." As noted in the DEIR on page 4.3-28:

The California Coastal Act (Public Resources Code, §§ 30000-30900) was created in 1976 to protect, maintain, and enhance the state's nature and scenic coastal resources. The Coastal Act created the California Coastal Commission, which is charged with managing the resources in the coastal zone (as defined by the Act). The Act also establishes a planning and development process in which a permit is required for most development within the coastal zone. In the El Sur Ranch vicinity, the coastal zone extends from the shoreline to the top of the first inland ridge. No development is contemplated under this project.

While the Coastal Commission has the authority to approve or deny development permits within the coastal zone, and require conditions for such permits, as noted above, the proposed project is the acquisition of a water right to allow the continuation of historical irrigation practices on El Sur Ranch. A development permit is not required for the project and, therefore the Commission's authority to require avoidance does not apply to the project. We also refer the reader to RTCs 10-19 through 10-22 above, which address the actual potential effect of the project on listed species.

RTC 10-24

Comment 10-24 discusses the diet of, we assume, CRLF. This assumption is necessary because the comment is not clear on this point. The comment simply provides information and does not require further analysis.

RTC 10-25

Comment 10-25 discusses the potential adverse effects on CRLF related to accidental spills of hazardous materials and instream concrete work, and instream construction. In response to the

comment, the proposed project is a water right acquisition and does not propose increased use of hazardous materials or instream construction, therefore the relevance of this comment to the proposed project is unclear.

RTC 10-26

Comment 10-26 discusses the adverse effect of nitrates used in fertilizers on tadpoles. In response, the comment is noted and hereby forwarded to the project decision-makers for their consideration. In addition, we reiterate that the proposed project is the acquisition of a water right to continue historical irrigation practices on the project site. The proposed project does not entail any substantive change in the use of fertilizers on the El Sur Ranch irrigated pasture.

RTC 10-27

Comment 10-27 requests consultation with the U. S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game. In response to the comment, notices of the availability of the DEIR for review were provided to the U. S. Fish and Wildlife Service and CDFG. We refer the reader to Comment letters 2 and 3, above, which were submitted by CDFG. The USFWS did not submit a comment letter on the DEIR.

RTC 10-28

Comment 10-29 discusses pesticide use in typical cattle grazing operations and notes that "...according to the DEIR this proposal would have ZERO runoff containing pesticide."

In response to comment 10-28, we refer the reader to the discussion of Impact 4.2-6 on page 4.2-73 of the DEIR that addresses the potential for the proposed project to increase surface runoff from the POU that could contribute additional sources of polluted runoff to Swiss Canyon, the tailwater pond, and/or the Pacific Ocean. El Sur Ranch does not currently apply pesticides on irrigated pasture within the POU and the proposed project does not entail any change in existing practices on the project site.

RTC 10-29

Comment 10-29 reiterates HOPE's objection to the DEIR "as legally (and scientifically) inadequate and requests it be re-circulated after it is re-written with the best available scientific knowledge and a full evaluation of the potential environmental impacts a clearly required by law."

In response to the comment, we refer the reader to RTCs 4-7 and 10-2 which address the general issue of recirculation of the DEIR. We disagree with Comment 10-29's contention that the DEIR is legally and "scientifically" inadequate, but, without specific examples or substantial evidence, a more substantive response is not possible. We note, however, that numerous concerns regarding specific issues addressed in the DEIR are raised by the commenter in previous comments. In response, we refer the reader to responses to these comments.

RTC 10-30

Comment 10-30 provides information concerning the rejection of a previous application to develop the project site, and the comment states the commenter's opinion of the proposed project. In response, we note the comment and hereby forward it to the project decision-makers for their consideration. As the comment provides only information and opinion, no further response is warranted.

RESPONSES TO COMMENT LETTER 11: CALIFORNIA NATIVE PLANT SOCIETY

Response to Comment (RTC) 11-1

Comment 11-1 expresses the concern of the Monterey Bay Chapter of the California Native Plant Society regarding “the adverse impacts on the plant and animal habitats of the Big Sur River by over-pumping from wells on State Park lands by the El Sur Ranch. Because the DEIR for the expanded operation omits many important facts that have direct bearing on these issues, we urge the application be denied.”

In response to the comment, we note the concern expressed above and forward the comment to the project decision-makers for their consideration. The comment does not explain what the commenter means by “over-pumping” therefore a specific response to this statement could only be speculative. Regarding the comment’s reference to “expanded operation,” we note that the proposed project would secure a water right to continue the irrigation of pasture on the El Sur Ranch site that has occurred for several decades. As indicated in the water right application, El Sur Ranch is requesting to be allowed to divert Big Sur River underflow, at rates that would exceed historical diversion rates under some circumstances. This increase is described in the Chapter 2 of the DEIR. As stated in Chapter 2 (see page 2-22), the 30-year (1975 to 2004) average annual pumping rate for pasture irrigation on El Sur Ranch of 937 acre-feet (AF). During this period, the maximum historical diversions of 1,611 AF and 1,737 AF occurred in 1977 and 1984, respectively. The proposed project, if approved, would establish an annual average diversion limitation 1,200 AF that would be monitored based on a rolling twenty year average. Maximum annual diversion for a single year would be 1,615 AF under the proposed water right. While this represents an increase relative to historical diversions, the project applicant has stated this increase is to allow for “optimum forage production” within the water right’s place of use (POU). While approval of the water right would allow for greater quantities of diversion under some conditions specified in the application, it is not the objective of the project applicant to change historical operations on within the POU. Specifically, the proposed project does not entail increases in the number of cattle that will use the pasture, construction of new facilities, or the use of water for any purpose other than pasture irrigation.

Regarding the comment’s reference to the DEIR’s omission of “many important facts,” this reference is nonspecific, precluding a specific response on our part without undue speculation. We assume that subsequent comments speak specifically to the commenter’s concern and we refer the reader to our responses to those comments.

Comment 11-1, under the subheading “1) PLANT SURVEYS,” expresses concern that California Department of Fish and Game protocol surveys for rare, threatened and endangered plants were not conducted as part of the environmental impact review for the DEIR. In response to this comment, we refer the reader to RTC 6-40, which states:

In response to Comment 6-40, we note that while the PBS&J site visits were outside the flowering season and perhaps near the end of the avian breeding season, the work conducted by Miriam Green and Associates (2007) occurred during the flowering and breeding season. The botanist conducted site visits on May 30-31 and June 19-21, 2006 and March 20-23, 2007. PBS&J’s site assessments revealed that site conditions were essentially unchanged from when this work was conducted and that there was no reason to doubt the results provided by the 2007 report by Green. It is common and accepted practice in CEQA documents to assess the habitat of a project area and the suitability of that habitat to support sensitive species. Should suitable habitat exist within the project area, sensitive species are typically assumed

to be present and impact evaluated as if this were the case. In relation to the comment, the proposed project is the incremental increase in pumping with all water applied to the designated POU. There are no terrestrial construction components and the existing pastures are not being expanded into areas that could support sensitive plant species. Because of this, while the coast scrub could support sensitive plant species and communities (DEIR Table 4.3-4, page 4.3-15), the proposed project has no impact on these areas.

We also refer the reader to RTCs 2-3, 2-29, 2-63, 2-65, 6-38 and 8-6, which address various aspects of the DEIR's handling of potential project impacts on listed plant species.

Comment 11-1 states that the DEIR did not contain a copy of the Miriam Green report. In response, please see RTC 6-42, above.

Lastly, Comment 11-1 states that:

DFG protocol requires surveys of Special Status Communities that have critical values and protections, such as the riparian and wetland communities that exist along the Big Sur River. The DEIR is woefully lacking in meeting these requirements.

In response to the comment, we refer the reader to RTC 2-65, which specifically addresses the issue of project effect on riparian vegetation on the Big Sur River and RTCs, 2-66, and 2-68, which address the issue of direct project effects on surface water elevation in the river and indirect effects of that reduction on plant and animal resources.

RTC 11-2

Comment 11-2 states:

The Big Sur River above the point of diversion, officially listed as a Wild and Scenic River, is intimately affected by El Sur Ranch pumping that dewateres the lower portion of the river, reducing the survival of both plant and fish habitat within the protected area.

In response to the above statement, we refer the reader to RTC 6-3, which states in part:

[t]he portion of the Big Sur River designated as "wild and scenic" does not occur within the area affected by the proposed project. The designation applies to the South and North forks of the river from headwaters to confluence with the rivers mainstem.²³ The designation covers the mainstem of the Big Sur River from the confluence of the North and South forks downstream to the Ventana Wilderness boundary in the Los Padres National Forest. The designation does not apply to the reach of the Big Sur River downstream of that boundary which includes the reach of river directly affected by the proposed project.

While the project would have no potential hydrological effects on areas of the river that occur in National Forest or within the reach designated as wild and scenic, the project could indirectly affect fish resources that migrate through the project area to

23 California Department of Transportation. *Chapter 19 – Wild and Scenic Rivers: Environmental Handbook, Volume I: Guidance for Compliance*. <http://www.dot.ca.gov/ser/vol1/sec3/special/ch19wsrivers/chap19.htm>, Accessed 6/25/2010.

these specially designated reaches of the river, so indirect impacts on resources in these parts of the river are possible. As presented in Sections 4.2 and 4.3 of the DEIR, however, all potential impacts on hydrology and biological resources of the Big Sur River are mitigable to levels of insignificance.

Because the portion of the Big Sur River that could be affected by project pumping operations is clearly outside of the reach of river that is designated as “wild and scenic,” we disagree with Comment 11-2’s contention that reduced water levels due to pumping reduce the survival of plant and animal habitat in the area afforded protections under the Wild and Scenic River Act.

Comment 11-2 further states, “The over-pumping documented by other commenters has been going on for several decades without any attention to the impacts; thus there is no credible data base that would show the obvious decline in the health of the habitats over time.” In response to the comment, the commenter states an opinion that over-pumping” has led to “obvious decline in the health of the habitats” over time, but provides no substantial evidence to support this contention. Without a specific definition of what the commenter means by “over-pumping,” or evidence of habitat decline directly related to pumping, a more substantive response is impossible without undue speculation.

The comment concludes by stating:

Frankly, it is shocking that this immense amount of pumping has gone on for so long without any apparent effort by the trustee agencies to assure that the legal requirements are clearly established. The DEIR fails to identify or mitigate these serious issues.

In response to the comment we refer the reader to the “Project Background” discussion on pages 2-6 through 2-18 of the DEIR. This discussion details the history of the trustee agencies’ involvement in the determination that pumping for irrigated pasture on El Sur Ranch required an appropriate water right for areas not accommodated by the Ranch’s riparian water right, initiation of the water right application process, and key milestones related to that process leading to preparation of this EIR.

As discussed in numerous previous responses to comments in this Final EIR, the DEIR addresses project impacts (direct, indirect and cumulative) in accordance with the requirements of the state CEQA Guidelines and in keeping with current CEQA case law. Impacts found to be significant are mitigated to levels of insignificance in this EIR. Examples of responses that speak to this issue include, but are not limited to, RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the validity of the environmental baseline used in the DEIR to determine potential impact, RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address public trust resources protection, and RTC 6-39, which addresses steelhead passage. Also, please refer to RTCs 11-1 above.

RTC 11-3

Comment 11-3 suggests that the 1998 identification of the Big Sur River as a Category 1 (Impaired) Priority Watershed supports the conclusion that, “heavy over-pumping without clear entitlements has resulted in serious damage to a watershed with extraordinary natural resource, scenic, scientific, and recreational values. The DEIR fails to acknowledge and/or propose mitigations for these impacts.”

In response, we note that the commenter again states the opinion that “over-pumping” has led to serious impact over time, but provides no substantial evidence to support this contention. The comment’s contention that the 1998 designation of the Big Sur River as Impaired provides such

evidence is also unsupported making a more substantive response impossible. The comment is however, hereby forwarded to the project decision-makers for their consideration.

Comment 11-3 further states that, "The Big Sur River is clearly already a fully appropriated watershed" and suggests that, "Instead of trying to increase its pumping from this impacted resource, El Sur Ranch should be utilizing its other sources outside the watershed."

In response to the comment, we first refer the reader to the page 2-16 of the DEIR, first paragraph under the subheading "Water Availability Analysis," which states:

The Big Sur River has not been determined to be a fully appropriated stream (Water Code, § 1205) by the SWRCB. A Water Availability Analysis (WAA) was prepared to determine whether water would be available for appropriation in accordance with Water Code section 1275, subdivision (d); and to determine the potential effect of the requested diversions on streamflow in the Big Sur River to inform the fishery resources impacts analysis in this DEIR. The Water Availability Analysis is included in this DEIR in Appendix D.

Regarding the comment's reference to "its [El Sur Ranch's] other sources outside the watershed," this comment is non-specific requiring some degree of speculation on our part to provide a response. We assume the commenter is referring to an alternative source referred to in other comment letters as the "Three Springs" source. If this is correct, we refer the reader to 6-8, 6-28, and 6-34, which address this issue.

Comment 11-3 concludes by stating:

The Monterey Bay Chapter of CNPS therefore wishes to reiterate its request that this application for an increased appropriation be denied. Further, we urge the State Water Resources Board issue a Cease and Desist Order to limit El Sur Ranch pumping to existing riparian rights until these critical issues can be resolved.

In response, we acknowledge the commenter's request and hereby forward it to the project decision-makers for their consideration.

RESPONSES TO COMMENT LETTER 12-1: L. LOCKWOOD

Response to Comment (RTC) 12-1

Comment 12-1 describes the commenter's observations about the Big Sur River since 1977. The comment also asks, "Why have riparian diverters been omitted from your diverter chart Table 5-1 on page 5-3?"

In response, please refer to RTC 3-168 of this Final EIR.

The comment further describes the commenter's observations of the river as seen in Pfeiffer State Park and from the River Inn Resort. The commenter observes that fish are no longer seen in the river and that no more sea birds fly up the river because easy prey is no longer available.

In response, the entire comment is hereby noted and forwarded to the project decision-makers for their review and consideration.

RTC 12-2

Comment 12-2 states:

The 150 year old ranch historically watered by Mother Nature or the Three Springs area behind ranch headquarters as per agreement of Frances Molera with The Nature Conservancy 10 Feb. 1965, Monterey County Recorder Reel: 396, Page 866, wherein it was noted that water supplied Molera ranching north of the Big Sur River, west side of Hwy. 1. 100 years of history here. Why does Hill [the project applicant] need to appropriate ANY water. In 1984 the Ranch had a well at the Little Sur River, at the Dairy Barn, at Morro Field west of Hwy. 1 and in Swiss Canyon.

In response to the comment, the DEIR preparer requested information on the "Three Springs" source from the project applicant. In response to this request, R. Hanson of PBS&J received an email correspondence on July 13, 2010 from Mr. Mark Blum, attorney with the firm Horan, Lloyd, Karacchale, Dyer, Schwartz, Law & Cook, representing the project applicant. That correspondence included a number of attachments including a letter to Mr. Hanson dated July 13, 2010 addressing the issue of the Three Springs water source referred to in Comment 12-2. Each of the attachments contained in the July 13th email are provided in this Final EIR as Appendix 7.

The July 13, 2010 correspondence states, in part, that:

In summary, a concrete water tank, tank house enclosure and water pipelines matching the description of the Three Springs system in the 1965 Memorandum of Agreement have been located on lands previously owned by Frances Molera, now in Andrew Molera State Park. Since those lands were a part of the original 8,949 acre El Sur Rancho in 1892, it may be technically accurate that the Three Springs system once served the "150 year old ranch", but the system wasn't located on the portion of the Rancho comprising the El Sur Ranch and it did not serve those 7,000 acres.

The Three Springs system apparently only supplied water sufficient for the domestic needs of buildings, adjacent gardens and a small orchard on what is now Andrew Molera State Park. There is no historical suggestion that it ever provided water to "Molera ranching north of the Big Sur River, west side of Highway 1." Irrigation of those lands on the El Sur Ranch was historically accomplished by centrifugal pumps located in Andrew Molera State Park. Irrigation of lands within the Molera Ranch

was accomplished with a separate irrigation system constructed there. Both irrigation systems depended upon diversion of river water, not springs.

Based on the information provided above and in the attachments provided in Appendix 7, we conclude that the Three Springs source is not a feasible alternative water source to the proposed project because of its limited capacity and the fact that the project applicant does not have access to these facilities. In addition, if the contention presented in the July 13th letter from Mr. Blum is correct, the Three Springs source would draw water from subterranean flow (as would the proposed project) and not from percolated groundwater. As with the proposed project, diversion of Big Sur River subterranean flow could affect surface water elevations within the river channel.

Comment 12-2 concludes with a reference to the DEIR on the 1984 El Sur Ranch Dedication and Development Agreement with the County of Monterey, Ordinance 3030, and suggests that the project applicant is “deceptive as to use and place.”

In response to the comment we refer the reader RTCs 6-6, 6-12, and 6-53, which address the potential for use of the water made available under the proposed Water Right 30166 for commercial and residential development, and which address the 1984 agreement referenced in the comment.

RTC 12-3

The comment correctly states that a permittee can apply to the SWRCB to change the place of use or purpose stated in the permit. In general, this process requires that the petitioner include all information reasonably available to the petitioner, or that can be obtained from the Department of Fish and Game, concerning the extent, if any, to which fish and wildlife would be affected by the change, and a statement of any measures proposed to be taken for the protection of fish and wildlife in connection with the change. In addition, the petitioner would be required to include sufficient information to demonstrate a reasonable likelihood that the proposed change would not injure any other legal user of water. (Wat. Code § 1701.2). A request for a change of place of use or purpose may require additional CEQA review.

The comment also suggests that text provided in the DEIR is somehow “deceptive” or incorrect regarding this issue. Paragraph 3 on page 2-2 of the DEIR states:

Following issuance of a water right permit, a permittee can only use water as specified in the permit. The permittee must diligently pursue construction of the project and the application of water to beneficial use. Once a permittee has completed the maximum beneficial use of water, the SWRCB issues a license, which is the final confirmation of the water right. In issuing permits and licenses, or approving changes to those rights, the SWRCB may include terms and conditions to protect existing water rights, the public interest, and the public trust, and to ensure that water is put to reasonable and beneficial use.

The information presented in paragraph is entirely accurate and a straightforward description of the requirements of the proposed water right application. We disagree with the commenter’s contention that the text is in any way incorrect or deceptive.

RTC 12-4

Comment 12-4 suggests the Ranch should eliminate irrigation and reduce the size of the herd currently supported on the site. This suggestion is noted and forwarded to the project decision-makers for their consideration.

Comment 12-4 further states:

We locals know the Ranch has not only 7,000 acres with numerous pasture areas but also twenty springs and seeps. Ranch water has often closed our Old Cost [sic] Road. In fact a sign on Hwy. 1 at road entrance states Not Passable in Wet Weather.

In response to the comment, we acknowledge the availability of various sources of water on the El Sur Ranch during wet weather. Irrigation of pasture, however, is not required during periods of precipitation as discussed in Chapter 2 (Project Description) of the DEIR. The proposed water right is intended to provide the ranch with a reliable water source under all climatic conditions including years defined as “dry” and “critically dry.”

The comment further states that Table 2-1 of the DEIR “provides yearly Ranch unpermitted, illegal, diversion quantities. These years coincide almost 100% with fish and habitat decline.” In response, we note that Table 2-1 lists El Sur Ranch diversions from 1975 through 2004. Diversions to El Sur Ranch irrigated pasture have occurred since the 1950s. We do not agree with the comment’s implication that there has been an almost 100% decline in fish and habitat decline. This is contrary to fish surveys conducted as part of the water right application process, field surveys conducted as part of the environmental review and described in Section 4.3 (Biological Resources) of the DEIR, and comments submitted on the DEIR by the National Marine Fisheries Service, one of which states, “One of best remaining streams for the S-CCC steelhead is the Big Sur River, which is considered to maintain important refugia habitat important for the long term persistence of the species”(see Comment Letter 1: Comment 1-3, above). While we trust the commenter’s concerns and observations are sincere, without evidence supporting the general declarations presented in the comment, a more substantive response is not possible. The comment, however, in its entirety is hereby forwarded for consideration by the project decision-makers.

RTC 12-5

Comment 12-5 again refers to Table 5-1 of the DEIR. In response, we refer the reader to RTC 3-168, above.

RTC 12-6

Comment 12-6 notes that previous pumping activities on the ranch site occurred in low water years such as 1977 and 1997. The comment further states that “This flagrant self-destructing act alone should be enough to deny Hill’s application as they admit that controlling irrigation is beyond their control because of limited available labor.” In response, we note that the commenter is correct in that historical irrigation practices on El Sur Ranch and practices that would occur if the proposed water right is approved are dictated, in part, by the availability of labor resources. These limitations are described on page 2-2 of the DEIR under the discussion of “Numerical Diversion and Rate Limits Assumptions” and are illustrated in Table 2-2 on that same page. Labor constraints are also discussed in the “Irrigation Efficiency discussion on page 2-21 of the DEIR and the Monthly Diversion Limitation discussion beginning on page 2-25 of the DEIR. Lastly, the effect of labor availability is also discussed under the “Irrigation System Operating Practices” section beginning on page 2-27 of the DEIR.

The comment further asks, “Where are plans for drought year ranching?” In response, we refer the reader to Mitigation Measures 4.3-1 and 4.3-2, which would establish diversion limitations during critical dry conditions.

Comment 12-6 also asks, “Where are the professionally trained hydrologists needed to monitor the wells?” In response, we refer the reader to the mitigation monitoring and reporting plan included as Chapter 4 of this Final EIR. This describes specific actions needed to carry out and monitor proposed mitigation measures. It should be noted also that we do not agree with the comment’s contention that compliance with the conditions of the proposed water right application and mitigation measures will require monitoring of the wells by professionally trained hydrologists.

The comment concludes by stating an opinion about the project applicant’s interest and actions but provides no evidence to support this. The comment is noted, however, and forwarded for consideration by the project decision-makers.

RTC 12-7

Comment 12-7 lists a range of impacts the commenter believes to be caused by El Sur Ranch diversions, but these conclusions are not supported by evidence and are contrary to studies conducted as part of the application and environmental review processes. It is important to note that scope and magnitude of the effects listed in this comment do not reflect that actual effect of project pumping on the hydrology of the Big Sur River. To attempt to put this in clearer perspective, we refer the reader to RTC 1-5. As noted in that response, based on extensive hydrological information presented in the DEIR, the operation of El Sur Ranch irrigation pumps (Old Well and New Well), even at maximum historical capacity, has a very slight influence on subterranean flow rates in the area of influence of the wells and, subsequently, a very slight influence on surface water elevation and stream flow in the Big Sur River. As presented in the DEIR, surface water elevation in the river could be reduced by as much as 0.17 feet under worst case conditions (see page 4.3-32 of the DEIR), which is roughly a 2-inch decrease in surface water elevation under worst case conditions.

RTC 12-8

Comment 12-8 states, “I believe health and riparian corridor borders, ground recharge should remain your primary concerns.” In response, we acknowledge the commenter’s opinion and forward the comment to the project decision-makers for their consideration.

RTC 12-9

Comment 12-9 suggests the DEIR’s use of existing conditions as a means of determining future impact is “ludicrous.” In response, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10 and 2-19, which address the rationale for the environmental baseline used in the DEIR.

The comment also expresses the commenter’s concerns about the project applicant and suggests the SWRCB suspend El Sur Ranch diversions for a period of ten years and study “Protected River and State Park Trust obligations after the ecosystem has been given the opportunity to restore itself.” In response, we note that comment in its entirety and forward it to the project decision-makers for consideration. While we are somewhat uncertain about the commenter’s reference to “Protected River and State Park Trust obligations” we refer the reader to RTCs 1-8, 2-12, 2-13, 2-14, 2-18, and 2-28, which address the issue of public trust resources protection and RTC 6-3, which discusses the Big Sur River’s Wild and Scenic River designation.

RTC 12-10

Comment 12-10 suggests Water Right Application 30166 is deceptive and that the project applicant “has destroyed the ecosystems the SWRCB, Molera State Park, Protected Big Sur River Management Plan were created to protect.” In response to the comment, we note the commenter’s opinion that the project applicant intends to use the water appropriated under the proposed project

for uses other than irrigated pasture and we refer the reader to RTC 12-2 above. The commenter's opinion that the project applicant has destroyed ecosystems is inconsistent with information presented in the environmental settings discussions provided in Sections 4.2 and 4.3 of the DEIR and is not supported by evidence.

Comment 12-10 concludes by stating:

Since we moved here in '77, it's been catch and release and since the 90's going, going gone dear river. Is it truly impossible to determine the total water available and total currently diverted? In this space world?

In response, we acknowledge the sincere concerns voiced by the commenter, and forward these to the project decision-makers for their consideration. Regarding the comment's reference to the timing of their arrival in the area and their observation of river decline since the 1990s, we note that diversions at El Sur Ranch have occurred since the 1950s and that the extent of the effects of that pumping on the river hydrology are limited to reaches of the river west of Highway 1. It is reasonable to assume that any declines in river conditions upstream of Highway 1 that have occurred since 1990 are not related to ongoing ranch diversions. With regard to the impact of past ranch pumping activities on Big Sur River fish resources, please refer to Section 4.3 of the DEIR, revisions to that Section 4.3 contained in Chapter 2 of this Final EIR, and responses to Comment Letters 1, 2, 3, 6, 8, and 9, above, which focus on issues pertaining to fish resources.

Regarding the question concerning total water available and "total currently diverted," we refer the reader to Appendix D of the DEIR (Water Availability Analysis) and Section 4.2 of the DEIR (Hydrology, Geohydrology and Water Quality) that address water availability in the El Sur River and river hydrology, which, of course, is widely variable depending on climatic conditions. Also we refer the reader to RTCs 3-30 and 8-13. In addition, please note that Big Sur River flows vary widely annually due to wide variations in rainfall. Diversions also vary annually, making it difficult if not impossible to precisely answer the question posed in the comment.

Lastly, we assume the question "In this space world?" is rhetorical in nature and we do not attempt a substantive response.

RESPONSES TO COMMENT LETTER 13: ROBERT WILLIAM LOCKWOOD

Response to Comment (RTC) 13-1

Comment 13-1 provides information about the commenter's experience during a visit to the Monterey Bay Aquarium and the impression that visit made on the commenter. The comment refers to the Central California trout stream exhibit as being "beautiful."

In response, we note that the information provided in Comment 13-1 will be forwarded to the State Water Resources Control Board that will ultimately be responsible for deciding whether or not to approve the proposed water right to allow continued irrigation of pasture on El Sur Ranch. Because the comment is informational in nature, no further response is needed.

RTC 13-2

Comment 13-2 states, "I hope the lagoon on our river looks that same soon. We visit it often when we go to Nana's house."

In response to Comment 13-2, we assume the comment refers to the lagoon that forms at the entrance of the Big Sur River to the Pacific Ocean at El Sur Ranch. We also assume that the commenter hopes the lagoon will look like the trout stream seen in the Monterey Bay Aquarium to which the commenter refers in Comment 13-1. We acknowledge the commenter's sincere desire for the lagoon to look like the artificial trout stream created at the aquarium, but we must point out that a trout stream and the lagoon are different systems in some very important ways. First and foremost, the trout stream created at the aquarium is not directly affected by the ocean. Flows in the trout stream come from rain and groundwater that flow into the stream channel. This influences the way the stream looks and the vegetation that grows around it as well as the fish and other animals that live in it. The lagoon, on the other hand, is not just influenced by flow from the Big Sur River; it is also affected by the ocean waves and tides. In part because of the ocean's effect, the lagoon will never quite look the same as the trout stream described in 13-1.

RTC 13-3

Comment 13-3 recommends that SWRCB try steelhead trout for its good taste. The comment also notes that farmed steelhead is imported from Canada and is expensive. In response, this recommendation and information is hereby forwarded to the SWRCB for their consideration.

Comment 13-3 also asks, "How long must I wait to fish my river." In response, the fishing season for the Big Sur River west of Highway 1 (the area that includes the lagoon to which the commenter refers in Comment 13-1) is December 1st through March 7th,²⁴ but only on Saturday, Sunday, Wednesday, legal holidays and the opening and closing days. The Big Sur River west of Highway 1, all of Limekiln Creek, and the portions of all other Big Sur Coast streams west of Highway 1 in Monterey Co., from Granite Ck. south to Salmon Ck., are, however, closed to all fishing when the California Department of Fish and Game determines that the flow at the USGS gauging station on the Big Sur River is less than 40 cubic feet per second. Please note that the gauging station on the Big Sur River is well upstream of El Sur Ranch and that flows at that station are in no way affected by irrigation activities on the ranch.

24 Information provided on the Central Coast Fly Fishing, <http://www.centralcoastflyfishing.com/LocalFishing/index.cfm/Name/Big%20Sur%20River.htm>, accessed 9/30/2010.

**RESPONSE TO COMMENT LETTER 14: AMANDA R. GARCIA OF SHUTE,
MIHALY & WEINBERGER, LLP. ON BEHALF OF TROUT UNLIMITED****Response to Comment (RTC) 14-1**

Comment Letter 14 is dated June 3, 2010 and was received by SWRCB on June 8, 2010, which is over 6 months beyond the close of the public comment period that occurred on December 16, 2009. For this reason, individual substantive comments were not bracketed and responded to as was done for letters received before the close of the public comment period. We do however note that the focus of Comment Letter 14, in its entirety, is on the issue of the environmental baseline conditions presented in the Draft EIR and whether or not those conditions form a valid basis under CEQA for determining the impact of the proposed project. In response, we refer the reader to RTCs 1-5, 1-6, 1-7, 1-8, 2-10, 2-19, 3-9, and 3-54, which address the DEIR's use of environmental baseline conditions as the basis for determining potential project impact: particularly RTCs 1-7 and 2-19, which go into considerable detail addressing this issue.

COMMENT LETTERS

Letter 1: National Marine Fisheries Service (Dick Butler)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southwest Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404

December 14, 2009

Mr. Paul Murphey
Division of Water Rights
State Water Resources Control Board
Post Office Box 2000
Sacramento, California 95812

Dear Mr. Murphey:

This letter is in regard to NOAA’s National Marine Fisheries Service (NMFS) review of the California State Water Resources Control Board Division of Water Rights’ (SWRCB) October, 2009, draft Environmental Impact Report (DEIR) for the El Sur Ranch Water Right Application No. 30166. The DEIR analyzes the effects of the SWRCB issuance of a permit for a proposed project to divert water from the Big Sur River for flood irrigation. The project is proposed for existing cattle pastures located west of State Route 1 in coastal Monterey County, California, approximately 1.5 miles south of the Point Sur Lighthouse. The project could exceed past (and unpermitted) water diversion quantities. The issuance of the permit is a discretionary action on the part of the SWRCB and is subject to review under the California Environmental Quality Act (CEQA).

1-1

The proposed project site is located on approximately 292 acres within the 7,000 acre El Sur Ranch (the appropriative water right applicant). Approximately 267 acres of the 292 areas are subject to flood irrigation practices. Of the 267 irrigated acres, approximately 25 acres are located within the Big Sur River watershed and are served by the El Sur Ranch’s existing riparian water right. The remaining 242 acres of irrigated pasture comprise the area that the appropriative water right is being requested. However, water diverted under the proposed water right would be applied to all 267 acres. For the purposes of the application and analyzed in the DEIR, irrigated acreage would include 25 acres of the adjacent riparian land served under the Ranch’s existing riparian right.

Water is diverted to the pastures from underflow from the Big Sur River via two existing wells. The wells, referred to as the Old Well and the New Well, have a maximum collective diversion capacity of 3,567 gallons per minute. Water from the wells is conveyed through a 14-inch pipeline system (with valves placed 28 feet apart) to flood irrigate the pasture for the purpose of providing forage to an average of 400 head of cattle (up to a maximum of 700 head) per annum.

In the past, the El Sur Ranch has been diverting water to flood irrigate pasture land without a water right. Between 1975 and 2004, the Ranch diverted an average of 937



AFA with a maximum diversion of 1,430 acre feet diverted during the drought year of record in 1977. The current water right application seeks to increase the amount of water diverted from the Big Sur River with a maximum direct diversion of 1,615 acre feet per annum (AFA) with a 20-year rolling average not to exceed 1,200 AFA. This water right would legally allow a maximum quantity of water to be diverted beyond the quantity of water historically diverted under extreme drought conditions.

1-1
(cont.)

In this letter we focus on four areas not adequately addressed in the DEIR: (1) legal status of South-Central California Coast (S-CCC) Distinct Population Segment (DPS) steelhead (*Oncorhynchus mykiss*) and implications of unauthorized take, (2) ecological context of the Big Sur steelhead population and the importance of lagoon habitats, (3) juvenile passage, and (4) rationale used to establish of baseline conditions.

1. Legal Status

NMFS administers the federal Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), for S-CCC steelhead which are present in Big Sur River. NMFS listed S-CCC steelhead as a species threatened with extinction on August 18, 1997, (62 FR 43937). The species' listing status was reaffirmed by NMFS on June 28, 2005, (70 FR 37160) and it remains listed as a threatened species. The Big Sur River was designated as critical habitat for S-CCC steelhead in September, 2006 (70 FR 52488).

1-2

Under the ESA, it is unlawful for any person subject to the jurisdiction of the United States to "take" any species of fish or wildlife listed as endangered within the United States. 16 U.S.C. § 1538(a)(1)(B). The term "take" is defined by the ESA to mean harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such activity. 16 U.S.C. § 1532(19). "Harm" has been defined by NMFS to mean:

... an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding or sheltering. 50 C.F.R. § 222.102.

Under section 4(d) of the ESA, 16 U.S.C. § 1533(d), the Secretary is required to adopt such regulations as he deems necessary and advisable for the conservation of species listed as threatened. Such regulations may include application of the prohibitions contained in section 9(a) of the ESA, 16 U.S.C. § 1538(a), which apply to endangered species. Protective regulations for S-CCC steelhead issued pursuant to section 4(d) of the ESA became effective on September 8, 2000, (65 Federal Register 132 (July 10, 2000)); (50 C.F.R. § 223.102(a)(5)). With certain limited exceptions, these regulations apply the section 9(a) prohibitions, including the "take" prohibition, to S-CCC steelhead. The prohibition against unauthorized "take" of S-CCC steelhead applies equally to persons engaged in activities that are not intended or designed to take species listed under the ESA, but may do so incidentally.

The protective regulations for S-CCC steelhead describe certain activities that are most likely to cause “harm” resulting in a violation of the ESA. These activities, which may pertain to the diversion of water from the Big Sur River, include, in part:

“Removing water or otherwise altering streamflow when it significantly impairs spawning, migration, feeding, or other essential behavioral patterns . . .”

1-2
(cont.)

Even though the SWRCB may issue a diversion permit to the El Sur Ranch for this proposed action and has evaluated the impacts pursuant to the CEQA with proposed mitigation measures, NMFS believes this project may take listed S-CCC steelhead. Authorization for take of federally listed species cannot be achieved through CEQA mitigation measures.

Issue 2: Ecological Context

The S-CCC steelhead DPS includes all naturally spawned steelhead populations in streams from the Pajaro River watershed (inclusive) to, but not including, the Santa Maria River, (62 FR 43937) in northern Santa Barbara County, California. During the past 30 years steelhead populations within the S-CCC DPS have declined dramatically from estimated annual runs totaling 25,000 adults to less than 500 returning adult fish (Busby *et al.* 1996). Of the 36 watersheds in the S-CCC DPS historically supporting steelhead most continue to support runs, although run sizes are significantly reduced, or no longer exist, in many sub-watersheds. This is illustrated by the fact that the four largest watersheds (Pajaro, Salinas, Nacimiento/Arroyo Seco, and Carmel Rivers) have experienced declines in run sizes of 90 percent or more and steelhead are extirpated from many of their subwatersheds. Present population trends within individual watersheds continuing to support this species is generally unknown, but may vary widely between watersheds. One of the best remaining streams for S-CCC steelhead is the Big Sur River which is considered to maintain important refugia habitat important to the long term persistence of this species. Ensuring all components of this species habitat, including the lagoon, in the Big Sur River are at a properly functioning condition is essential to the long-term persistence of steelhead in the Big Sur biogeographic region.

1-3

Recent studies on California’s Central Coast highlight the role that lagoons and estuaries serve in steelhead growth and survival. Smith (1990) and Bond (2006) documented high rates of juvenile growth in the estuary/lagoon systems in coastal San Mateo and Santa Cruz County streams. In Scott Creek, Bond (2006) found that estuary-reared steelhead show a large survival advantage over stream-reared fish and comprised 85 percent of the returning adult population despite being between 8 and 48 percent of the juvenile population. Due to the importance of this habitat we are concerned that the DEIR does not provide sufficient information regarding the effects of increased water extraction on the lagoons’ steelhead habitat. The lagoon provides essential habitat for juvenile steelhead¹ and by reducing freshwater inflow into the lagoon, there is a direct decrease in lagoon habitat quality and function, such as reduced thermal mass leading to increased

1-4

¹ Typically juvenile fish migrate into the lagoon in June and July (Shapovalov and Taft, 1954).

water temperatures, greater diurnal sways in dissolved oxygen (DO), and greater interaction with the anoxic environment. These changes result in greater stress to rearing steelhead and reduced rearing success. The DEIR states that "...the proposed project would not substantially alter lagoon conditions". However, based on evidence of low DO presented in the DEIR we do not concur with the DEIR's conclusions. A further analysis of the interaction of lagoons and the impacts of reduced freshwater inflow could show a significant impact. The relationship between the productivity of freshwater lagoons and steelhead viability is evolving. Reduction of freshwater inputs into lagoons has an exponential adverse effect to the quality of habitat conditions for fish. A condition known as meroximism, a seasonal inverse of temperature stratification that occurs in lagoons during the late-summer due to poor water circulation and solar radiation, would reduce habitat availability within the lagoon itself for juvenile S-CCC DPS steelhead. The combined effects of the proposed project, impeding passage of juveniles from July to October and decreased water quality in the form of DO, juvenile steelhead would be exposed to greater stresses from the proposed project than historic conditions. We do not believe there are any minimization measures that could be employed to offset the reduction in the productive value of the lagoon to threatened S-CCC steelhead, other than maintaining greater inflow during summer months.

1-4
(cont.)

1-5

Issue 3: Passage

Based on the information provided in the DEIR, NMFS recommends the SWRCB further evaluate the impacts of the proposed action to juvenile steelhead passage. Evidence in the DEIR suggests the reduction in surface and subterranean flows may have severe impacts to S-CCC steelhead. The ability for fish species to migrate, forage, and seek shelter are vital elements to the survival of the species. The significant impacts to reduced flows, inhibiting the migration timing and impeding passage at certain critical flows, and impairments to water quality will limit the productivity and carrying capacity of the species. For instance, passage criteria for juvenile steelhead between June and October were not met for critically dry years. In normal years, the proposed project would reduce daily mean surface flows by as much as 5 to 10 percent during low flow periods. It is uncertain how the baseline water withdrawals have impacted the species. Maintenance of instream flows is particularly critical for threatened steelhead. An increase in the amount of diversion by as much as 51 percent over the current baseline, could result in the passage impediments for juvenile fish in some areas even in normal years. Additionally, the reduction in water quantity will have a direct correlation to water quality; which already exceeds criteria. By limiting the opportunities for juvenile fish to migrate through the system, the impacts are more significant as fish become stranded in unsuitable habitat conditions. NMFS does not believe the proposed mitigation measures in the DEIR are suitable to avoid "take" or "harm" to steelhead.

1-6

Issue 4: Baseline

In CEQA impact analysis, potential impacts are assessed against environmental baseline conditions. An EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the Notice of Preparation was

1-7

published (June 2, 2006). The SWRCB has interpreted the CEQA baseline for the DEIR as the environmental setting as June 2, 2006, against which impacts of the proposed action will be evaluated even though water was illegally diverted from the analysis area at this time. The SWRCB asserted that as part of identifying baseline conditions, they had to consider the Ranch’s historical water diversions (both legal and illegal), which are part of the existing environment. The SWRCB provides no further information regarding this assumption and leaves the reader to speculate as to their rationale for including a long history of unauthorized diversion in the baseline². NMFS strongly disagrees with the SWRCB’s interpretation of baseline for this project, particularly in light that a number of mitigation measures specifically developed to try and address impacts to steelhead are predicated on “baseline” instream flow conditions. NMFS reminds the SWRCB that the entire purpose of producing an EIR is to fully disclose – not obfuscate – potentially significant environmental effects of a proposed project in order to clearly evaluate the impacts of a proposed action.

1-7
(cont.)

NMFS recommends the SWRCB to effectively evaluate the impacts of this project to rearing steelhead in the Big Sur River Lagoon (such as conducting a Public Trust Analysis). The analysis should evaluate impacts to steelhead rearing conditions and anticipated population response in the Big Sur Lagoon through two simple scenarios: project approval and project denial. Unless this type of evaluation is conducted, the full impacts of the proposed action cannot be determined.

1-8

Conclusions

Based on information provided in the DEIR, NMFS concludes removing 1,615 AFA of water from the lower Big Sur River will likely result in adverse impacts to steelhead rearing conditions in the Big Sur River lagoon and juvenile passage in the lower river in most water years. These impacts will reduce steelhead abundance and impair the survival advantage afforded to steelhead juveniles that rear in the Big Sur lagoon. Periods of high water diversion would likely occur in dry water years with subsequent significant impacts to steelhead rearing habitat in the lagoon. The DEIR fails to adequately analyze these impacts due to its reliance of a faulty interpretation of baseline conditions. Based on the project description provided, and NMFS’ administrative record, it is likely the SWRCB’s issuance of a permit for the proposed action will adversely affect S-CCC steelhead. If the proposed project will adversely affect S-CCC steelhead, the El Sur Ranch will need ESA take exemption or risk being in violation of ESA section 4(d). The mechanism to obtain an exemption for an otherwise legal activity would be through either ESA section 7 or section 10(a)(1)(B) (development of a habitat conservation plan (HCP)).

1-9

² It is important to note that on August 31, 1990, during this “baseline” period, the Department of Parks and Recreation (DPR) filed a complaint with the SWRCB alleging the excessive use of water by the El Sur Ranch. The DPR claimed that a 3,000 foot section of the lower portion of the Big Sur River had dewatered and that the lagoon had reached critically low levels as a result of the El Sur Ranch operation of the two wells. Impacts from this “baseline” dewatering to rearing juvenile steelhead are obvious and do not require further elaboration.

Thank you for the opportunity to comment on the El Sur Ranch DEIR. If you have any questions regarding this letter please contact Mr. Devin Best at (707) 578-8553 or via email at devin.best@noaa.gov or Mr. David Hines at (707) 575-6098 or via email at david.hines@noaa.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Dick Butler", with a long horizontal flourish extending to the right.

Dick Butler, Supervisor
Protected Resource Division
Santa Rosa Area Office

cc: David Hines - NMFS
Roy Torres – NOAA OLE
Patricia Anderson – CDFG

Sources Cited

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Smith, J. 1990. The Effects of Sandbar Formation and Inflows on Aquatic Habitat and Fish Utilization in Pescadero, San Gregorio, Waddell, and Pomponio Creek Estuary/Lagoon Systems, 1985-1990. Rep. 84-04-324. State Univ. Calif. San Jose and Calif. Dep. Parks and Rec. 21 December.

Letter 2: California Department of Fish and Game (Jeffrey R. Single Ph.D.)

Memorandum

Date: December 14, 2009

To: Mr. Paul Murphey
Division Water Rights
State Water Resources Control Board
Post Office Box 2000
Sacramento, California 95812

From: Jeffrey R. Single, PhD 
 Regional Manager
Department of Fish and Game
Central Region
1234 East Shaw Avenue
Fresno, California 93710

Subject: El Sur Ranch Water Right Application No. 30166 Draft Environmental Impact Report

Staff of the Department of Fish and Game (DFG and the Department) have reviewed the Draft Environmental Impact Report (DEIR) for the El Sur Ranch Water Right Application No. 30166. The applicant has requested to divert water from two wells located in Andrew Molera State Park which tap into the underflow of the Big Sur River, to irrigate 267 acres of pasture land in support of the Ranch's cattle operation. The application requests that diversions be allowed year-round (January 1 through December 31). The applicant has proposed that the diversion be subject to several limitations, including 1,615 acre feet (AF) total annual diversion; 20 year running average of no more than 1,200 acre feet annually (AFA); seasonal limitations of no more than 230 AF each calendar month and no more than 735 AF total, between July 1 and October 31; and maximum diversion rates of 5.84 cubic feet per second (cfs) instantaneous and 5.34 cfs 30-day running average. The applicant's request in total is the "Project" which is being evaluated in the DEIR.

This letter provides comments on the draft document, including the *project itself as well as the project description* utilized in the DEIR; *compliance with California Environmental Quality Act (CEQA)*, and use of an appropriate *CEQA baseline*; the State Water Resources Control Board's (SWRCB) responsibilities to address *public trust resources* associated with the water sought to be appropriated, as distinct from responsibilities under CEQA; *identification of information* needed for the Board to make an informed decision on the application, which would protect public trust resources; and suggests *alternatives and conditions* which we recommend the SWRCB consider and adopt. The Department's major areas of concern follow; detailed comments regarding particular sections of text in the DEIR are included as attachments.

2-1

DFG Authorities

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 Page 2

DFG Authorities

CEQA Authority: The Department is a Trustee Agency with the responsibility under CEQA for commenting on projects that could impact botanical and wildlife resources. Pursuant to Fish and Game Code Section 1802, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. As a Trustee Agency for fish and wildlife resources, the Department is responsible for providing, as available, biological expertise to review and comment on environmental documents and impacts arising from project activities, as those terms are used under CEQA. In addition, for those projects which require a subsequent discretionary permit from the Department, it is a Responsible Agency.

2-2

California Endangered Species Act (CESA) Compliance: The Department has regulatory authority over projects that could result in the “take” of any species listed by the State as threatened or endangered, pursuant to Fish and Game Code section 2081. If the Project could result in the “take” of any species listed as threatened or endangered under CESA, the Department may need to issue an Incidental Take Permit (ITP) for the Project.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (Pub. Resources Code §§ 21001{c}, 21083, tit. 14 Cal. Code Regs. §§15380, 15064, 15065.) Significant impacts of the project must be avoided or mitigated to less than significant levels; CEQA does allow the Lead Agency to make and support a Statement of Overriding Considerations (SOC) for significant and unmitigable impacts. However, the CEQA Lead Agency’s SOC does not eliminate the Project proponent’s obligation to comply with Fish and Game Code section 2081, under which impacts to State-listed threatened and endangered species must be “minimized and fully mitigated”. In other words, a SOC cannot apply to impacts to State-listed threatened and endangered species. Compliance with CESA does not automatically occur based on local agency project approvals or CEQA compliance; consultation with the Department is warranted to ensure that the identified project meets CESA’s permit issuance criteria, and project implementation does not result in the unauthorized “take” of a State-listed species.

Incidental “take” authority is required prior to engaging in “take” of any plant or animal species listed under CESA. Plants listed as threatened or endangered under CESA cannot be addressed by methods described in the Native Plant Protection Act. No direct or indirect disturbance, including translocation, may legally occur to State-listed species prior to the applicant obtaining incidental “take” authority in the form of an ITP or its equivalent.

2-3

Fully Protected Species: The Fish and Game Code identifies several categories of species which are “fully protected,” that is, no “take” of these species is authorized, except for necessary scientific research including efforts to recover species. Any actions taken as part of specified mitigation for a project, as defined in Section 21065 of the Public Resources Code, does not qualify as “necessary scientific research.”

Fully protected species have the potential to occur on the proposed Project site. The applicant and the SWRCB should work with the Department to identify measures to be

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implemented to preclude “take” from occurring. The Department recommends that such measures be identified prior to certification of the EIR, required as Project conditions, and included in a Memorandum of Understanding between the applicant and the Department.

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2-3
(cont.)

Stream Alteration Activities: The Department, as a Responsible Agency under CEQA, has regulatory authority with regard to stream diversion activities that could adversely affect any fish or wildlife resource. For any activity that will divert or obstruct the natural flow of a river or stream, the Department may require a Stream Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code. Before issuing a SAA, the Department is required to independently make a determination of environmental effects pursuant to CEQA.

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2-4

Diversion of the natural stream flow and activities associated with installing any new or repairing existing pipelines across Swiss Canyon require El Sur Ranch to submit a notification pursuant to Fish and Game Code section 1602. The Department will review the notification and determine if there are resources at risk associated with the diversion activities, and whether an SAA will be required.

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Water Rights: The Department, as Trustee and Responsible Agency, is consulted by the SWRCB during the water rights permit application process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State’s water resources. Certain fish and wildlife resources are reliant upon aquatic ecosystems, which in turn are reliant upon adequate flows of water. The Department therefore has a material interest in assuring that adequate water flows within streams for the protection, maintenance and proper stewardship of those resources. The Department provides, as available, biological expertise to review and comment on environmental documents and impacts arising from project activities.

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2-5

The Department protested El Sur Ranch’s Water Right Application 30166 based on its proposal to divert from the underflow of the Big Sur River, 1,615 acre feet of water annually at a maximum rate of diversion of 5.84 cfs. The Department is concerned that the diversion will result in direct and cumulative adverse impacts to the resources of the river by reducing instream flow and water availability needed to maintain fish and wildlife habitat within and adjacent to the river. Dismissal terms were withheld at the time of the Department’s protest in part because an environmental document had not yet been prepared pursuant to CEQA. The Department recommended that an EIR be prepared to fully disclose the direct and cumulative effects of El Sur Ranch’s diversions from the river. Specific protest dismissal terms will be provided following review of an environmental document acceptable to the Department.

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Previous input to SWRCB from DFG

The Department previously provided input to SWRCB in response to its Notice of Preparation (NOP) in a letter dated June 30, 2006, which includes a supporting memorandum from Mr. Kit Custis dated June 28, 2006; that letter incorporates by reference the Department’s response to a previous NOP, in a letter dated November 6, 2002, which includes a supporting memorandum from Steve Reynolds of the Department of Conservation, dated October 4, 2001. That was followed by a letter requesting clarification of the CEQA baseline, dated April 21, 2003. Additionally, per the SWRCB’s request, the Department provided detailed comments to

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2-6
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an August 24, 2007 Technical Memorandum prepared by SWRCB's consultants that described the proposed project description and CEQA baseline for this project; the Department's letter with those requested comments was dated November 15, 2007. It does not appear that many of the Department's comments, which were provided to guide development of this DEIR, have been incorporated into the current CEQA document. The Department's previous letters are attached and hereby incorporated by reference. This letter may reiterate some of the major comments from the previous letters, but the letters are included in their entirety so that they are recognized as part of the record for this project, and so the State Board can answer the previously unaddressed comments.

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 2-6
 (cont.)

Additionally, the Department, at the request of the SWRCB, has provided extensive comments on the technical information provided by the applicant. The DEIR has utilized, as supporting information in preparation of this DEIR, the applicant-provided information without including the Department's comments and concerns provided to assist the SWRCB and the public evaluate the information and conclusions that support much of the impact analysis in the DEIR. The information provided by the applicant had numerous factual and interpretive errors and unsupported conclusions, some of which have been utilized in analyzing the effects of the proposed project.

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 2-7

The Department's comments are included in four memoranda to the SWRCB which are dated December 22, 2005, including a supporting memorandum from Kit Custis, Department of Conservation, dated December 16, 2005; December 7, 2005; September 16, 2005; and July 9, 2004. The Department attaches and incorporates by reference the above-mentioned letters. This letter may reiterate some of the major comments from the previous letters, but the letters are included in their entirety so that they are recognized as part of the record for this project, and so the State Board can answer the previously unaddressed comments. These comments should have been part of the application, as required by Water Code section 1260 (j) which states in part that the application should contain "*All data and information reasonably available to applicant or that can be obtained from the Department of Fish and Game concerning the extent, if any, to which fish and wildlife would be affected by the appropriation.*" It is not clear why this information was not included in the DEIR.

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 2-8

The Proposed Project and Project Alternatives

The project proposed in the DEIR is not clearly identified, and confounds impact analysis required under CEQA. The proposed project is the issuance of a water right permit to allow the appropriation of water from the Big Sur River to maintain irrigated pasture on the El Sur Ranch. The DEIR states that "[t]he total quantity and rate of water diversion requested under the water right application, as amended October 17, 2006, is for use on 267 irrigated acres within the 292-acre project site, and includes water needed to irrigate the applicant's claimed existing riparian 25 acres." The DEIR also states that "[a]lthough the pending application denotes the Ranch's claimed riparian right, the SWRCB's approval authority is limited to the appropriative water right sought in the Ranch's application."

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 2-9

Additionally, the SWRCB initially determined in their April 12, 1992 letter to the applicant regarding the overall status of their water rights, that the El Sur Ranch's riparian right was

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limited to 90 acres; this document indicates that the SWRCB may have accepted the applicant's assertion that the area subject to riparian right is 25 acres. This is a large discrepancy, and has implications for the nature and amount of the appropriative right which is being sought; the actual acreage of the applicant's riparian right should be definitively determined by the SWRCB.

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 2-9
 (cont.)

Although the project description, including Table 2-4, notes that 25 (and perhaps as many as 90) acres of the Place of Use (POU) are subject to a riparian right, the DEIR does not identify how diverted flows from the Big Sur River are allocated into a "riparian" portion and an "appropriated" portion which is subject to the terms and conditions of the permit (and, ultimately, license) granted by the SWRCB. The impact analysis does not distinguish between impacts attributed to water being diverted from the riparian portion of the POU, and those attributed to the water diverted under an appropriative right. Additionally, there is no discussion regarding how diversions exercised under the applicant's riparian right would be addressed (either included or excluded) within the terms and conditions of limits on the requested diversions under the appropriative right.

2-10

In addition to the difficulties inherent in trying to distinguish those impacts which are attributable to the appropriated water (which is the proposed action that qualifies this as a CEQA "project"), there are difficulties with other aspects of the project and project description that have resulted in the analysis of impacts being incomplete, inaccurate or inappropriate. The Department recommends that the SWRCB more clearly identify the project which is the subject of the SWRCB's action, and analyze the proposed project, and any alternatives, in consideration of applicable statutes, regulation, policy and case law. Many of the shortcomings of the DEIR lie with the failure of the document to identify those aspects of the proposed project which are not consistent with Water Code and regulations and/or would not result in protection of public trust resources; and proceeding with the analysis of a project which could not be permitted. Additionally, the discussion of alternatives should focus on alternatives to the project which are capable of avoiding or substantially lessening any significant effects of the project, "even if their alternative would impede to some degree the attainment of the project objectives, or would be more costly" (CCR, Title 14, section 15126.6(b)). The Department does not believe that the alternatives discussed in the DEIR meet the requirements of CCR, Title 14, section 15126.6(b), and that none of the alternatives, possibly including the No Project/No Permit Alternative, would reduce impacts to public trust resources and/or could be permitted under existing statutes, regulation, policy and case law.

2-11
 2-12
 2-13

Public Trust Resources

The SWRCB has an independent obligation to address public trust resources, as required by the 1983 Supreme Court decision in *National Audubon Society v. Superior Court of Alpine County*; this decision requires the SWRCB to balance potential value to society against the impact on trust resources, and, as stated in the DEIR, "the action which will feasibly protect public trust values must be implemented" (Appendix F). This obligation is independent of any baseline determination, impact analyses or mitigation which might be applied to a project subject to review under CEQA.

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The DEIR identifies as a standard of significance any project element which would “[s]ubstantially decrease the amount of streamflow such that there would be a potential for impacts to other public trust resources such as river function, riparian vegetation and lagoon functions” (page 4.2-43). Application of the SWRCB’s responsibilities to only those effects which are above CEQA does not meet the standards set forth in *Audubon*. Additionally, there does not appear to be any section of the DEIR which actually discusses what public trust resources would be subject to this independent obligation; nor any descriptions, standards, thresholds or any other such analysis or requirements which would clarify how the SWRCB actually considered such resources and identified a project or project alternative, including appropriate limits on allowable diversions, which would feasibly protect public trust values.

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The DEIR does not evaluate the significance of potential impacts to public trust resources which are below the “baseline” established by the DEIR, nor offer any specific measures which would mitigate the adverse affects. We believe that these could be significant and potentially unmitigable, except by reducing the diversion and enforcing limits on pumping, both instantaneously and on a seasonal basis. The DEIR does state that the historic use of water, some non-riparian and not permitted, and some riparian, has contributed to overall degradation of public trust resources. Sections 4.2 and 4.3, in particular, acknowledge that previous significant impacts may have occurred during past diversions, stating that “the effect of baseline pumping on stream hydrology, water quality, and, particularly, fish passage in critically dry conditions, serves to magnify any adverse cumulative effect of project pumping on aquatic resources.” The Department recommends that the SWRCB clearly identify what impacts have resulted from historic pumping, including that which is not permitted, in order to identify specific limits that would protect public trust resources.

Project Description

The project description is not described in enough detail to allow for an accurate understanding of what exactly is being proposed. The entire project description includes the applicant’s suggestions regarding limitations on maximum annual diversion amount, average annual diversion amount, seasonal maximum diversion amount, seasonal monthly maximum diversion amount, and two different maximum rates of diversion, one which is instantaneous, and one which is a 30-day running average.

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According to Water Code section 1260 et seq., the application must identify the nature and amount of the proposed use, the proposed point(s) of diversion, the type of the diversion works, and the proposed place of use, and must provide sufficient information to demonstrate a reasonable likelihood that the unappropriated water is available for the proposed appropriation. Additionally, the application must include “[a]ll data and information reasonably available to applicant or that can be obtained from the Department of Fish and Game concerning the extent, if any, to which fish and wildlife would be affected by the appropriation, and a statement of any measures proposed to be taken for the protection of fish and wildlife in connection with the appropriation.”

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The application-suggested limitations on diversion amounts and rates could be regarded as the applicant’s “statement of any measures proposed to be taken for the protection of fish

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and wildlife in connection with the appropriation”. However, the applicant, despite numerous written recommendations from the Department, did not incorporate the Department’s recommendations regarding the need for in-stream flow requirements and details of studies which would quantify instream flow requirements for the protection of fish and wildlife in connection with the appropriation. Additionally, the SWRCB has not included in the DEIR the numerous comments from the Department regarding the reliability and value of the information which was provided by the applicant in support of the application. The Department does not believe that the applicant’s suggested limits would result in meaningful protection of fish and wildlife resources. These measures are typically terms and conditions which the SWRCB determines in consultation with the Department, and requires as enforceable conditions of the permit. The Department recommends that, should a permit be issued for this application, the SWRCB adopt limits on amount and rates of diversion, based on facts related to the size of the POU and reasonable use of the water for irrigated pasture; incorporate specific terms and conditions, including required bypass flows, which would protect public trust resources; and identify specific thresholds meaningful for public trust resources which can be reasonably monitored and enforced.

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CEQA Baseline

The Department is concerned that the baseline utilized in the DEIR is incorrect and consequently, has not accurately analyzed the impacts of the proposed project. The Department previously provided extensive comments detailing alternative methods for determining the baseline as opposed to using the date of issuance of the NOP, or the baseline utilized by the DEIR, which is based on an unpermitted use by the applicant. There is relevant case law and pertinent decisions made by the SWRCB that address the issue of CEQA baseline.

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In *Riverwatch v. the County of San Diego* (1999) 76 Cal.App.4th 1428[91 Cal.Rptr.2d 322], the courts reversed a lower court decision, resulting in a ruling that the CEQA baseline should not include prior illegal activities. However, the rationale supporting that determination was based on the particular circumstances of the case: the lead agency was not the agency charged with enforcement actions to address the illegal activities, and the decision states that “[t]he real difficulty we see in requiring the development of earlier baselines is the burden it would impose on the drafters in determining the nature of any prior illegality”, because the site was the subject of enforcement actions by another agency; and that “definitive evidence of prior illegality will most likely come in the form of the acts of enforcing agencies and that use of an early baseline by a separate agency preparing an EIR may either interfere, conflict or unfairly amplify such enforcement action”.

With the proposed project, the enforcement agency would be the SWRCB, the same agency in charge of preparing the DEIR. The SWRCB, when it informed the applicant that an appropriative right was needed for at least part of the water being diverted out of the Big Sur River, asked the applicant to cease diversions not addressed under the riparian right (the actual acreage of which is in question) or file an application for the appropriative water right. The SWRCB could have, and should have, required both. The failure of the SWRCB to pursue enforcement actions which would preclude unpermitted and illegal diversions from the Big Sur

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River should not justify the use of that unpermitted activity to form the baseline for analysis of the effects of the action before the SWRCB.

Decisions by the SWRCB have supported this position. The *Garrapata decision* (Decision 1639) discusses at length the baseline to be used for determination of whether a project would be exempt from CEQA, based on various criteria which would support partial or full “vesting” of a project. The SWRCB has already determined that the current water right application is not exempt under CEQA as an existing facility, hence the development of the current CEQA document. Although *Garrapata* relates to whether a project would be exempt from CEQA, the same concepts of “vesting” apply to the determination of the CEQA baseline. In Decision 1639, the SWRCB states:

Ordinarily, the SWRCB would be reluctant to apply the existing facilities exemption in a case where facilities have been constructed and diversion of water has been initiated without first obtaining a water right permit. Applying the existing facilities exemption to existing, unauthorized diversions would encourage applicants to initiate diversions without first obtaining water right permits, undermining the policies of both CEQA and the Water Code. (See generally *People v. Shirokow* (1980) 26 Cal.Rptr.3d 301, 308-10 [162 Cal.Rptr. 30, 35-36] [the Legislature intended to vest the SWRCB with “extensive powers to safeguard the scarce water resources of the state”, but the SWRCB’s ability to carry out its statutory mandates is impaired to the extent that there are unsanctioned uses]; *Friends of Mammoth, supra*, 8 Cal.3d 247, 259 [104 Cal.Rptr. 761, 768] [“the Legislature intended [CEQA] to be interpreted in such a manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language”]. We do not believe that applying the existing facilities exemption would undermine those policies under the circumstances presented in this case, where a project construction was completed before CEQA and the applicant apparently did not know that a water right permit was required. Nor has there been any change or expansion in place of use or purpose of use since CEQA was enacted. Applying the categorical exemption under these limited circumstances would not provide any incentive for appropriators to initiate new diversions or increase existing diversion in the hopes of circumventing environmental review or undermining the SWRCB’s ability to require modifications to the project to avoid adverse affects on water resources.

This project does not meet the limited circumstances which apply to *Garrapata*: the project was not completed prior to CEQA, and there has been a change to the point of diversion, as well as a request to increase the amount of the diversion over the unpermitted level of use. Although the Old Well was completed prior to the enactment of CEQA, it was moved and rebuilt after that date; the construction of the New Well and the placement of an easement by the Department of Parks and Recreation (DPR) over state park lands was determined to be a project under CEQA, but categorically exempt. The project which was considered did not include the granting of an appropriative water right, as DPR is not the agency which has the authority to do so; only the SWRCB can approve an appropriative right. While the Department does not imply that the applicant knew that a water right was required, or that they knowingly installed new wells in the hopes of circumventing CEQA, the Department does believe that the installation and unpermitted use has resulted in “undermining the SWRCB’s ability to require modifications to the project to avoid adverse affects on the water

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resources”. The establishment of the CEQA baseline is determined by the state lead agency, and by adopting a baseline which includes the unpermitted and illegal diversion of water, the SWRCB itself is undermining its own “ability to require modification to the project to avoid adverse affects on the water resources”.

In *Salinas Valley Protestants* (WR2001-07), the SWRCB reiterated and further clarified their opinion in *Garrapata*, discussing the issue of determination of existing facilities in the context of *September Ranch*, a lower court case addressing the setting of CEQA baseline for the analysis of impacts:

In fact, the SWRCB has not used conditions as they exist at the time of approval of the CEQA baseline when considering issuance of a permit for pre-existing but unauthorized diversions. Ordinarily, the baseline for applying the existing facilities exemption is the time the SWRCB determines the CEQA applicability, not the effective date of CEQA. (*Bloom v. McGurk* (1994) 26 Cal.App.4th 1307, 1314 [3] Cal.Rptr. 914, 918].) As the SWRCB recognized in Decision 1639 (In the matter of Application 29664 of Garrapata Water Company), however, this approach would not be appropriate in cases involving after the fact permitting. “Applying the existing facilities exemption to existing, unauthorized diversion would encourage applicants to initiate diversions without first obtaining water right permits, undermining the policies of both CEQA and the Water Code.” (SWRCB Decision 1639 at 31.) The September Ranch court expressed similar concerns about setting the CEQA baseline based on water use rates that occur after a project is proposed, but before it is approved, because “[i]t was in [the applicant’s] interests to elevate water production in order to establish as high a baseline as possible.” (*September Ranch, supra*, 87 Cal.App.4th at ___[104 Cal.Rptr.2d at 346].)

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Although the discussion relates to the setting of a baseline for determination of whether a project would qualify for a categorical exemption as an existing facility, the same standards can and should be applied in determining the baseline against which the effects of the proposed project are addressed; and, in fact, *Salinas Valley Protestants* decision utilizes *September Ranch*, which applies to the CEQA baseline utilized for determination of project impacts, to support its conclusions.

For the purposes of CEQA review of this application, the CEQA baseline should be set at pre-project conditions, specifically at the point that the SWRCB determined the applicability of CEQA. The Department believes that the failure of the SWRCB to analyze the effects of the entire project, including all proposed diversions to which the applicant does not have a legal entitlement, undermines the policies of both CEQA and the Water Code, and serves to abrogate the SWRCB’s responsibilities to require modifications to the project to avoid adverse affects on the water resources.

The DEIR identifies a “No Project/No Permit Alternative”, the purpose of which is to “allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project”. The No Project/No Permit Alternative would set the amount of water available to be used within the ranch at 75AFA (based, presumably, on

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3AFA times the 25 acres of riparian land which the Ranch claims), which would be provided through the existing riparian right; and this water would only be available for use on the acres of the El Sur Ranch irrigated pasture that are located with the Big Sur River watershed (variously determined to be 25 or 90 acres). The No Project/No Permit Alternative clearly states that “[t]he denial of the water right application would require that pumping of the subterranean flow of the Big Sur River for non-riparian pasture cease” and the result of which would be that “non-riparian portions of the irrigated pasture would lose their source of irrigation water”. The No Project/No Permit Alternative does not clearly identify the mechanism by which this would happen; however, presumably this would be a voluntary action on the part of the applicant, for which the failure to act would be enforceable by the SWRCB under its existing authorities. It is not clear to the Department why the SWRCB has not exercised its enforcement capabilities to require that the El Sur Ranch not divert water to which it does not currently have a valid water right, but has instead deferred action until such time as the application is denied.

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Because the applicant does not currently have a valid right to divert flows from the Big Sur River to irrigate non-riparian portions of the irrigated pasture, and the SWRCB can cause the El Sur Ranch to cease if no permit is issued, it stands to reason that the historic non-riparian diversion is not permitted, and not otherwise legal. The Department recommends that the SWRCB utilize as the CEQA baseline that portion of the diversion which is legal, i.e. the identified riparian right to irrigate those pasture lands within the Big Sur River watershed (the actual amount of which should be determined by the SWRCB), at the rate established pursuant to Water Code section 1004, which specifies that no more than 2 ½ acre feet per year be considered “useful or beneficial” in the irrigation of uncultivated land. To utilize another baseline which includes the unpermitted historic use does not allow the SWRCB to accurately evaluate the effects of the proposed project, and undermines the policies and intent of both CEQA and Water Code.

2-21

Information Utilized to Support CEQA Analysis

Insufficient information to inform decision making: The Department has attached detailed comments on the information provided by the applicant regarding hydrology and water quality, in the form of a Memorandum from Mr. Kit Custis, who has also reviewed previous evaluations of technical information provided by the applicant; and detailed comments prepared by Department staff regarding the DEIR, including biological information which was utilized in impact analysis and determination of the significance of potential impacts of the proposed project. The information provided by the applicant, and utilized in the DIER, does not provide sufficient information to adequately characterize potential impacts to resources by the proposed project, or to public trust resources in general; does not provide sufficient information to analyze the significance of potential impacts to resources by the proposed project, or to public trust resources in general; and therefore cannot adequately identify measures that would mitigate impacts to a level of less than significant.

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The Department’s detailed comments are attached and hereby incorporated by reference. The Department is particularly concerned about the lack of information to support identification of measures which would protect instream flows sufficient to protect steelhead (*Oncorhynchus mykiss*), of which the South/Central California Coast ESU is federally listed as

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Threatened. The DEIR provides some measures intended to require sufficient flows in the Big Sur River during the lower flowing months of July to October, but focuses on historic percentiles of flow during dry and critically dry years; additionally, the Department believes that the low flow months, to which low-flow bypass flows would be applied, should include the period of June through November. The measures proposed by the applicant are not sufficient to support instream flows sufficient to protect steelhead, and other associated river resources; in particular, we do not concur with the Standards of Significance related to depths required for passage for adult or juvenile steelhead or temperature and DO thresholds. Additionally, there is no information provided to determine whether flows December to May are sufficient to support instream flows protective of steelhead, and measures proposed to do so may not be sufficient.

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Much of the information provided by the applicant, as well as measures which are proposed to be protective of public trust resources, is based on average flows, average amounts of diversion and/or average rates of diversion. For steelhead, and for a number of the resources which have the potential to be affected by the proposed diversion, an average value is much less important than the instantaneous flow, instantaneous amount of diversion and/or instantaneous rate of diversion. The Department does not believe that an impact analysis which relies on averages is sufficient to detect and describe biologically meaningful impacts to public trust resources; nor would mitigation measures which rely on daily, monthly or annual averages as a threshold for initiating corrective actions which are intended to protect such resources be effective at a level meaningful to the resources.

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Our position is supported in *County of Amador v. El Dorado County Water Agency* (1999) 76. Cal.App.4th 931., in which the EIR's discussion of baseline conditions consisted of month-end lake levels for the three lakes. It failed to explain how those lake levels were maintained, the historical duration and timing of the water releases, and the impacts on fishery resources and recreational uses. The court found that the lake level figures alone were insufficient to describe the existing water release program, and noted that "this is not a case involving conflicting expert opinions about historical operation". The court in *County of Amador* underscored the "importance of an adequate baseline description, for without such a description, analysis of impacts, mitigation measures and project alternative becomes impossible."

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The applicant provided information from an instream flow study utilizing the Thompson Method, which was the basis of the DEIR impact analysis of water and stream resources. The Department suggested, as early as 2002, to the SWRCB and the applicant that Instream Flow Incremental Methodology (IFIM) or equivalent be utilized to establish instream flows adequate to maintain habitat for steelhead. The applicant did not choose to utilize the recommended methodology, and subsequently did not incorporate recommended actions into the proposed study plan. Additionally, the information provided by the applicant, which was utilized for impact analysis for the DEIR, does not provide data on all of the parameters required to do an evaluation per the Thompson method.

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The Department's review has concluded this work is not adequate to address instream flow needs. As a result, the Department is taking the lead for field investigations related to the lower Big Sur River, and work is currently underway. The study plan, entitled Habitat and

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Instream Flow Relationships for Steelhead in the Big Sur River, Monterey County, September, 2009 (attached) outlines the approach and methods that will be used by the Department and collaborators. The primary objective of the Department’s study is to develop scientific information on the relationships between flow and available stream habitats, to determine what flows are needed to maintain healthy conditions for fish and wildlife. Relationships between flow and habitat will be developed for critical life stages of steelhead, spawning, rearing, and migration.

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Results of this study will provide instream flow recommendations to provide adequate long term protection, maintenance, and stewardship of riverine Public Trust Resources. Several stream reaches will be evaluated, including a comparison of the physical habitat characteristics of stream reaches investigated in 1994, and the lagoon reach. Specialized investigation of the lagoon and potential impacts will include salinity-based estuary inflow methods and approaches. Salinity distribution, relative to depth and substrate, is one of the primary factors determining production and distribution of lagoon flora and fauna. This study is consistent with, and undertaken to be in compliance with, requirements of Public Resources Code (PRC) sections 10000-10006. Provisions of PRC section 10002 require that the SWRCB consider streamflow requirements when acting on a water right application, per Water Code section 1257.5, once they have been submitted by the Department.

The Department’s instream flow study is anticipated to be completed in 2011. The Department recommends interim instream flows be implemented until the study is complete, and more specific flows can be recommended.

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Deferred mitigation: Three mitigation measures require development of plans in the future, which would not be subject to the public review required under CEQA, and because they are deferred to the future, it cannot be determined if they would, in fact, reduce potentially significant effects to a level of less than significant. The three plans are (1) an Irrigation Water Management Plan, identified in MM 4.2-2; (2) an Erosion Control and Operations Management Plan, identified in MM 4.2-4; and (3) a “detailed flow monitoring and operations plan, identified in MM 4.3-1 and MM 4.3-2, to be incorporated into the IWMP required by MM4.2-2. Additionally, the DEIR, in Table A of MM 4.2-2, has specified conditions, which would be incorporated in the Irrigation Water Management Plan, under which the rate of pumping would be tied to flows at the USGS gauge 7 miles upstream of the project site. There is not sufficient detail provided to fully understand how the proposed limits on pumping rates would be implemented (in particular, how the diversion rates would be measured or enforced, and the unit of time of the rate of diversion, i.e. instantaneous, daily average, monthly average, etc.), and whether the limits would in fact protect public trust resources including steelhead. The Department believes these limits are unnecessarily complicated and insufficient to protect public trust resources.

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CEQA Guidelines (Section 15126.4 (a)(1)(B)) stipulate that it is not appropriate to defer feasible mitigation measures to a future date. Additionally, the courts have repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, and/or development of mitigation measures are incomplete (*Sundstrom v. County of Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry v. City of Murrietta* (1995) 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc. v. County of Orange*(2005) 131 Cal. App. 4th 777). It is

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not clear how the SWRCB can make findings that all potential impacts to biological resources would be mitigated to a level of less-than-significant when the actual mitigation measures have yet to be developed and/or determined feasible and capable of successful implementation. The DEIR does not demonstrate that the Project's potential impacts to sensitive plants and animals can be mitigated to less than significant levels, given the absence of measures which would need to be subsequently deemed feasible.

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Subterranean stream

The DEIR should acknowledge the requirements of SWRCB's Decision 1639 that defines four physical conditions needed for a subterranean stream flowing through a known and definite channel. The DEIR should then demonstrate that these conditions are met at the point of diversion of the El Sur Ranch wells. The SWRCB should, as part of the CEQA and/or water rights permit process, make a finding that the El Sur Ranch wells divert ground water from a subterranean stream flowing through a known and definite channel.

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Proposed alternative

If a baseline were utilized which does not include the unpermitted non-riparian diversions, the Department believes that all of the proposed alternatives, with the possible exception of the No Project/No Permit Alternative, would result in significant and potentially unmitigable impacts, to the Big Sur River including associated species and habitats, and potentially to the POU. Irrespective of the standards utilized to evaluate the potential effects of the project pursuant to CEQA, the Department does not believe that any of the proposed alternatives, possibly including the No Project/No Permit Alternative, will adequately protect public trust resources. However, alternative(s) can be identified which would allow for the reasonable and beneficial use of water on irrigated pasture, if specific terms and conditions were applied to protect public trust resources, meaningful monitoring was required; and the project objectives were met, as identified in the DEIR. The project objectives are:

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- Allow for the appropriation of water from the Big Sur River for use on the El Sur Ranch through issuance of an appropriative water right permit, consistent with the SWRCB's responsibility to consider water availability, the public interest, the protection of fish, wildlife, and public trust resources, water quality, prior legal water rights, and to condition the appropriation as necessary;
- allow for the continued diversion and beneficial use of water for irrigation of 267 acres of pasture for cattle grazing (the Department notes that this amount should be verified); and
- continue economic use of the land for agricultural purposes and grazing of cattle consistent with Monterey County Zoning Ordinance, Coastal Implementation Plan, and the Monterey County General Plan.

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The water right, in particular the allowable annual diversion and the rate of diversion, as well as terms and conditions which would limit the amount and rate of diversion, should be

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predicated on several assumptions, primarily (1) the verification of the acreage which is currently irrigated pasture, not including those areas which are not suitable, including but not limited to: dunes, tailwater pond, outfall, access roads, irrigation canals and Swiss Canyon; (2) verification of what portion of the irrigated pasture is within the Big Sur River watershed, and therefore riparian and not a part of an appropriation; (3) verification that the water duty identified in regulations regarding the amount of water considered reasonably necessary is 1 cfs per 80 acres (California Code of Regulations (CCR), Title 23, Section 697(a)(1)); and (4) identification of what would constitute reasonable, useful and beneficial purposes of the diverted water when applied to the uncultivated pasture of the POU, up to a maximum of 2 ½ AFA per year. While that figure (2 ½ AFA) is less than that which has historically been diverted without permits, comparable sites in coastal Monterey typically utilize 2 AFA for irrigated pasture; cultivated crops in coastal Monterey County, including strawberries, vegetables and field flowers, use 2 to 3 AFA.

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The Department recommends that the annual diversion be based on a formula which would multiply the acres of irrigated pasture subject to the appropriated water right, multiplied by the AFA appropriate to local conditions, not to exceed 2 ½ AFA, as specified in Water Code section 1004. The Department does not support bifurcation of the allowable diversion into an “average” and a “maximum” amount; nor do we support an “average” amount, based on a 20-year rolling average, be approved for diversion (see discussion above as this applies to impact analysis). The Department recommends the SWRCB identify an annual allowable diversion amount, which is not subject to averaging over multiple years, and is the maximum allowable each and every year, subject to such limitations as may be imposed via additional terms and conditions.

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The applicant has suggested a maximum allowable rate of diversion (in cfs) and an average rate of diversion (in cfs), which could be limited by a complicated set of criteria in dry and critically dry years. The applicant appears to have assumed a duty of 1 cfs per 50 acres, and included their entire irrigated lands (not just the POU subject to an appropriated right), in requesting 5.34 cfs as the allowable average diversion (267 acres/50 acres X 1 cfs/acre = 5.34 cfs). Regulations were promulgated by SWRCB to clarify information to be submitted with a water right application, including “amounts for which to apply”; the amount of water considered reasonably necessary for most portions of California would be a duty of 1 cfs per 80 acres (CCR, Title 23, section 697(a)(1)).

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We believe the duty of 1 cfs per 80 acres is more appropriate than that proposed by the applicant. The regulations allow for a greater rate of diversion for a lesser time period for any 30-day period, so long as there is no interference with other users, and it is specified in the permit (CCR, Title 23, section 697(a)(2)). The applicant has requested a maximum rate of diversion of 5.84 cfs; however, the DEIR has indicated that the ESR pumps are capable of pumping at a combined rate of 7.9 cfs. As we have noted above, the instantaneous rate of diversion (as opposed to daily, monthly, annual rate) is critical to maintaining sufficient bypass flows; and, it is important to note, it is difficult to determine the instantaneous rate of diversion, let alone regulate it. The Department recommends that the SWRCB identify an average rate of diversion which is consistent with the duty recommended in 697(a)(1) of 1 cfs per 80 acres; additionally, that the SWRCB require a meter be installed on both wells which would measure

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and record for both wells, the time of day of pumping, and the instantaneous and cumulative diversion rates, to determine if the diversion rate(s) specified in the permit were being observed. Additionally, whatever rate is permitted (including any specified maximum rate), the Department recommends that terms and conditions be applied to require the applicant to maintain sufficient bypass flows which would be biologically meaningful to the public trust resources of the Big Sur River.

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The analysis in the DEIR compares effects of the applicant's proposed project to that which has been occurring on an unpermitted basis; the terms and conditions identified in Mitigation Measure 4.2-2 proposed to reduce diversion rates (not amounts) to address potentially significant effects. This would not address the protection of public trust resources; in fact, no information has been provided that previous, unpermitted diversions were not having a significant adverse effect on public trust resources, and the limitations which are recommended in MM 4.2-4 would not require bypass flows, or other wise insure maintenance of steelhead habitat. Additionally, the thresholds identified in MM 4.2-2 are based on an unnecessarily complicated set of criteria related to percentile of dry and critically dry flow rate percentiles; if the ever-changing thresholds were to be exceeded, the diversion rate would be adjusted, again according to an unnecessarily complicated sliding scale of allowable diversion rates.

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The Department recommends a more direct approach than is identified in the DEIR; specifically, that the allowable annual diversion (in AF), as well as the average and maximum rate of pumping (in cfs), be conditioned by criteria which would maintain bypass flows sufficient to protect fish, wildlife, and public trust resources. The specific terms the Department recommends would assume that the rate of diversion is the maximum permitted rate, and implement limitations on pumping (i.e. cessation of pumping, not just modification of the pumping rate) when the gauge indicates that habitat requirements for steelhead and other public trust resources would be impaired. The water rights permit should require cessation of diversion whenever the flows drop below the bypass requirement. The pumps would either be on or off, which can be easily monitored, rather than allowing varying rates of diversion, which could be impossible to monitor or enforce.

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The thresholds for turning the pumps off would be based on maintaining flows which would protect habitat for steelhead and other public trust resources. Ideally, a stream gauge would be located in the vicinity of the project, and IFIM or similar methodology would have determined in-stream flows sufficient to maintain habitat, which would be tied to flows as measured at the gauge. The Department recommends that the SWRCB require installation and maintenance of such a gauge, to be located above the diversion, but below the other numerous diverters in the watershed. The Department is pursuing funding for purchase and installation of a gauge to facilitate ongoing studies; but would like the applicant to maintain the gauge, and should funding not be available to the Department, provide the funds for purchase and installation. While the Department is engaged in completing studies to determine in-stream flow requirements, it is recommended that interim thresholds be tied to the existing USGS gauge. Once more specific recommendations can be made, those recommendations should be tied to flows as measured at the new gauge, and those in-stream flow requirements adopted by the SWRCB for this permit.

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Based on existing information provided by the applicant, including use of the applicant-requested maximum rate of diversion (5.84 cfs), an interim bypass flow for low flow months of June through November can be estimated. The calculations could be modified to accommodate the actual permitted rate in cfs, or the maximum based on actual pump capacity, or whatever rate is determined by the SWRCB to be most protective of resources and practicable given the difficulty of monitoring and enforcing a maximum instantaneous rate of diversion. The DEIR and supporting technical studies don't provide any information on flows needed for maintaining public trust resources during high flow months, December to May. However, an interim high flow bypass requirement can be estimated using the procedures in the December 2007 Draft SWRCB's *Policy for Maintaining Instream Flows in Northern California Coastal Streams*, updated March 14, 2008 (2007 SWRCB Instream Flow Policy). Based on information we have available at this point in time, the Department recommends that the average annual diversion and the maximum annual diversion be conditioned with interim bypass flow requirements of 40 cfs for the months of June through November, as measured at the USGS gauge; and 132 cfs for the months of December through May, as measured at the USGS gauge. Once the Department has completed our studies, we can refine the flow requirements, and calibrate to either a new gauge in the vicinity of the project, or if that is not feasible, to the USGS gauge. Additionally, we suggest that this alternative be combined with the updated infrastructure identified in the Alternative Irrigation Efficiency Alternative. Increased irrigation efficiency would allow the applicant to make better use of the more limited amount and rates of diversion which are proposed under this new alternative and could allow more optimal forage production. Although there are potentially significant effects of updating the irrigation system, the impacts are primarily related to the construction phase, and could likely be lessened over time to a level of less than significant.

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Thank you for the opportunity to comment on the DEIR; more detailed comments are attached. Should you have questions about DFG's authorities and responsibilities regarding CESA and CEQA, please contact Deborah Hillyard at (805) 772-4318 or via email at dhillyard@dfg.ca.gov; please direct questions regarding the Department's authorities and responsibilities for water rights and the Lake and Streambed Alteration program to Julie Means, at (559) 243-4014 extension 240 or via email at jmeans@dfg.ca.gov. We remain available to work with the SWRCB to address this application in a fashion which will meet the applicant's objectives, while providing protection warranted for the unique and valuable public trust resources of the Big Sur River

2-42

Attachments:

Technical Memo, from Mr. Kit Custis to Dr. Jeffrey Single, December 10, 2009

Detailed comments from California Department of Fish & Game on the DEIR for El Sur Ranch Water Right Application 30166, December, 2009

Memo from Robert Floerke, DFG to Victoria Whitney, SWRCB, dated June 30, 2006, regarding the reissued NOP; including Technical Memorandum from Kit Custis, Department of Conservation, to Linda Hanson, June 28, 2006

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December 14, 2009
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Memo from Robert Floerke, DFG to Kyriacos Kyriacou, SWRCB, dated November 6, 2002, regarding the NOP; including Technical Memorandum from Steve Reynolds, Dept. of Conservation, to Kevan Urquhart, DFG, dated October 4, 2001

Memo from Robert W. Floerke, DFG, to Edward Anton, SWRCB, dated April 21, 2003, follow up to the NOP letter, regarding the CEQA baseline and to request an on-site meeting

Memo from William Loudermilk, DFG, to Victoria Whitney, SWRCB, dated November 15, 2007, regarding the proposed project description and proposed CEQA baseline

Memos from Robert W. Floerke, DFG to Victoria Whitney, SWRCB, September 16, 2005 and December 22, 2005, reviewing technical reports submitted by applicant May, 2005; including Technical Memorandum from Kit Custis, Department of Conservation, to Linda Hanson, DFG, December, 16, 2005

Memo from Robert W. Floerke, DFG, to Victoria Whitney, SWRCB, dated December 7, 2005, which summarizes deficiencies in information requested to analyze the project as of that date

Memo from Robert W. Floerke, DFG, to Victoria Whitney, SWRCB, dated July 9, 2004, which commented on the 2004 interim monitoring plan proposed by the applicant

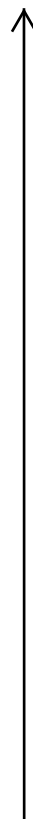
Study Plan: Habitat and Instream Flow Relationships for Steelhead in the Big Sur River, Monterey County, June, 2009

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Chapter 2 - Project description

The project description includes a general discussion about the need to address public trust resources, pursuant to *Audubon*, and other authorities, in the forms of laws and regulations, which must be address during the water right application. However, the DEIR does not, in fact, address how public trust resources would be protected, except as a standard of significance for evaluation of biological resources, in particular, steelhead; and does not identify further how other laws and regulations would be addressed. The responsibility of the SWRCB to address public trust resources and to comply with Water Code is independent of the standards applied per CEQA.

2-43

The project description used by the DEIR is based on the description submitted by the applicant; the project description reflects numerous departures from typical standards which the SWRCB routinely uses to appropriate water, departures such as the request for an annual diversion in acre feet (AF) which would be based on a 20-year “rolling average”, as well as a maximum annual diversion in AF. We do not recommend this approach, and recommend a simple annual diversion be allowed, which represents the maximum allowable diversion each and every year. As with the proposed total amount of diversion, we do not support seasonal limitations on diversion (except as they may be limited to provide appropriate bypass flows). The application also proposes an average rate of diversion which is based on a water duty (as used in CCR, Title 23, section 697(a)(1)) of 1cfs per 50 acres; the standard duty of 1cfs per 80 acres is applicable, and no justification is provided to support the use of a higher duty.

2-44

There are a number of conflicting and confusing numbers which are used in the application and environmental analysis: the DIER variously characterizes the Place of Use (POU) as 292, 267 and 242 acres; the application characterizes it as 267 acres. DFG’s calculations indicate it is 223 acres when Swiss Canyon is excluded. The riparian right is identified by the applicant as 25 acres, however the DEIR indicates that previously the SWRCB identified it as 90 acres, and further, that only 23 of the 25 riparian acres are currently irrigated pasture. The DEIR identifies in the text (p. 2-17) a maximum monthly seasonal diversion of 235 AF per month, while elsewhere in the text and on table 2-4 and the application itself, states that limit as 230 AF per month. The applicant has requested a diversion amount and rate which are not supported by pertinent sections of Water Code (§1004) or regulation (CCR, Title 14, §697(a)(1). The DEIR fails to mention in the discussion regarding the existing points of diversion (POD) that the Old Well was relocated and reconstructed, and the dates.

2-45

The application proposes to divert an average of approximately 975,000 gallons per head of livestock (325851.385 gallons/AF X 1200 AF/400 head = 977,554 gallons per head); the DEIR fails to justify the amount which is requested as being “reasonable

2-46

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and beneficial”. Additionally, the DEIR indicates that the applicant has stated that the ranch applied less water for irrigation than was required for optimal crop production; that statement is not further explained, and it would be assumed that “optimal” was based on the estimates of diversion requirements which are presented in Table 2-3. The DEIR states that the “[r]anch foremen have described the historic levels of irrigation as being generally adequate for irrigation of the pasture for ordinary grazing purposes. In a few instances, the annual diversion exceeded crop irrigation diversion requirements; such occurrences have been rare, although it can be reasonably expected that such conditions could occur again in the future.” The DEIR goes on to indicate that the record of past diversions represent past conditions “do not necessarily provide a reliable forecast of irrigation needs in the future”. In spite of increasing irrigation efficiencies over time, the applicant apparently perceives a need for an increase in their diversions over the historic levels which they have been diverting. However, there is nothing in the record, apart from the estimates in Table 4-3, which would indicate that the request is reasonable and would not lead to waste. There does not appear to be evidence to support a requested maximum annual diversion which is higher than the driest year on record (1977), and a proposed average annual diversion which is 55% more than the actual average annual diversion.

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The diversion limits proposed, as well as limits on the rate of diversion which are analyzed in the DEIR are those which have been proposed by the applicant; there is not any discussion, or more importantly, any alternative, which has proposed amounts and rates of diversion which would be responsive to other requirements of Water Code, and supporting regulation. The DEIR states on p. 2.20 that Chapter 2 “does not reflect the SWRCB’s determination or judgment as to whether the proposed diversion and use of water is reasonable and beneficial”. However, there does not appear to be a recommendation by staff of the SWRCB, and/or the preparers of the DEIR (which was ostensibly prepared under the direction of staff of the SWRCB) which would inform the determination by the SWRCB as to whether the proposed diversion and use of water is reasonable and beneficial.

2-47

The DEIR identifies the technical studies which were prepared by the ESR, and which formed the basis for the impact analysis. DFG was asked to comment on the proposed study plan prior to execution by the applicant’s consultant; DFG’s provided suggestions so that the information derived from the studies would be useful in determining standards for impact analysis as well as setting bypass flows, none of which were incorporated into the plan. Additionally, DFG has provided numerous rounds of comments on the products of the studies; many of our comments indicated that the information was not sufficient to do either an impact analysis or provide the basis for meaningful mitigation measures for steelhead. The preparers of the DEIR have not included any of DFG’s comments, or even provided a discussion of the shortcomings of the information. This is not consistent with the responsibility of the SWRCB under Water Code and per the requirements of CEQA.

2-48

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The DEIR, in the project description, identifies that portion of the water diverted which is subject to a riparian right, and that portion which is subject to appropriation. However, the balance of the DEIR does not distinguish between the effects which may be attributed to the riparian diversion, vs. that which is attributable to the appropriated portion; this makes it impossible to determine the effects of the proposed action.

2-49

This chapter includes several references to “groundwater wells” and “groundwater pumping” when referring to the points of diversion; this could lead the reader to assume that the diversions are not subject to the water right appropriation process. These references need to be clear that the water is in fact being diverted from underflow of the Big Sur River, and is subject to the appropriative water rights process.

2-50

Required Permits and Approvals

The DEIR states that no other permits or approvals are anticipated. The SWRCB, and the applicant, should be aware that the Department may require a Stream Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code, for any activity that will divert or obstruct the natural flow of a river or stream; and that the applicant must submit a notification to the Department regarding such proposed actions. Before issuing a SAA, the Department is required to independently make a determination of environmental effects pursuant to CEQA. Additionally, there may be listed and/or fully protected species which may need consultation and/or permits from the Department.

2-51

The Department, as a Responsible Agency under CEQA, has regulatory authority with regard to stream diversion activities that could adversely affect any fish or wildlife resource. For any activity that will divert or obstruct the natural flow of a river or stream, the Department may require a Stream Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code. Before issuing an Agreement, the Department is required to independently make a determination of environmental effects pursuant to CEQA. Diversion of the natural stream flow and activities associated with installing a new return pipeline or repairing existing pipeline across Swiss Canyon, require El Sur Ranch to submit a notification pursuant to Fish and Game Code Section 1602. The Department will review the notification and determine if there are resources at risk associated with the diversion activities, and whether an SAA will be required.

2-52

The Department, as Trustee and Responsible Agency, is consulted by the State Water Resources Control Board (SWRCB) during the water rights permit application process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State’s water resources. Certain fish and wildlife are reliant upon aquatic ecosystems, which in turn are reliant upon adequate flows of water. The Department therefore has a material interest in assuring that adequate water flows within streams for the protection, maintenance and proper stewardship of those resources. The

2-53

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Department provides, as available, biological expertise to review and comment on environmental documents and impacts arising from project activities.

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The Department protested El Sur Ranch’s Water Right Application 30166 based on its proposal to divert from the underflow of the Big Sur River, 1,615 acre feet of water annually at a maximum rate of diversion of 5.84 cubic feet per second (cfs). The Department was concerned that the diversion may result in direct and cumulative adverse impacts to the resources of the river by reducing instream flow and water availability needed to maintain fish and wildlife habitat within and adjacent to the river. Dismissal terms were withheld at the time of the Department’s protest in part because an environmental document had not yet been prepared pursuant to CEQA. The Department recommended an EIR be prepared to fully disclose the direct and cumulative effects of El Sur Ranch’s diversions from the river. Specific protest dismissal terms will be provided following review of an environmental document acceptable to the Department.

2-54

The Department has regulatory authority over projects that could result in the “take” of any species listed by the State as threatened or endangered, pursuant to Fish and Game Code section 2081. If the Project could result in the “take” of any species listed as threatened or endangered under CESA, the Department may need to issue an Incidental Take Permit (ITP) for the Project.

2-55

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (Pub. Resources Code §§ 21001{c}, 21083, tit. 14 Cal. Code Regs. §§15380, 15064, 15065.) Significant impacts of the project must be avoided or mitigated to less than significant levels; CEQA does allow the Lead Agency to make and support a Statement of Overriding Considerations (SOC) for significant and unmitigable impacts. However, the CEQA Lead Agency’s SOC does not eliminate the Project proponent’s obligation to comply with Fish and Game Code section 2081, under which impacts to State-listed threatened and endangered species must be “minimized and fully mitigated”. In other words, a SOC cannot apply to impacts to State-listed threatened and endangered species. Compliance with CESA does not automatically occur based on local agency project approvals or CEQA compliance; consultation with the Department is warranted to ensure that the identified project meets CESA’s permit issuance criteria, and project implementation does not result in the unauthorized “take” of a State-listed species.

2-56

Incidental “take” authority is required prior to engaging in “take” of any plant or animal species listed under CESA. Plants listed as threatened or endangered under CESA cannot be addressed by methods described in the Native Plant Protection Act. No direct or indirect disturbance, including translocation, may legally occur to State-listed species prior to the applicant obtaining incidental “take” authority in the form of an ITP or its equivalent.

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The Fish and Game Code identifies several categories of species which are “fully protected,” that is, no “take” of these species is authorized, except for necessary scientific research including efforts to recover species. Any actions taken as part of specified mitigation for a project, as defined in Section 21065 of the Public Resources Code, does not qualify as “necessary scientific research.”

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Fully protected species have the potential to occur on the proposed Project site, including ringtail (*Bassariscus astutus*); California brown pelican (*Pelecanus occidentalis californicus*); and California clapper rail (*Rallus longirostris obsoletus*), also listed as state and federally Endangered. The applicant and the SWRCB should work with the Department to identify measures to be implemented to preclude “take” from occurring. The Department recommends that such measures be identified prior to certification of the EIR, required as Project conditions, and included in a Memorandum of Understanding between the applicant and the Department.

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Additionally, two species are listed pursuant to the Federal Endangered Species Act (ESA): steelhead trout (*Oncorhynchus mykiss*) are listed as a Species of Special Concern with the Department of Fish and Game, and are listed as Threatened in the South Central California Coast ESU (Evolutionary Significant Unit); and the federally Threatened/State species of special concern, California red-legged frog (*Rana draytonii*) (RLF). The applicant may need authorization for “take” if “take” of these species, as defined by the ESA, is a likely result of implementation of the approved project. The applicant should consult with U.S. Fish and Wildlife Service (FWS) regarding RLF, and with the National Marine Fisheries Service (NMFS) regarding steelhead.

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Chapter 4 – Environmental Analysis

CEQA Baseline

The Department has provided previous written comments to the SWRCB regarding the proposed CEQA baseline utilized for analysis of environmental impacts. We do not agree that the SWRCB should use a baseline which utilizes unpermitted and therefore illegal diversions as a baseline; this position is supported in both case law and previous decisions made by the SWRCB as detailed in the cover memo to this attachment. The Department recommends that the SWRCB utilize as the CEQA baseline that portion of the diversion which is legal, i.e. the identified riparian right to irrigate those pasture lands within the Big Sur River watershed (the actual amount of which should be determined by the SWRCB), at the rate established pursuant to Water Code section 1004, which specifies that no more than 2 ½ acre feet per year be considered “useful or beneficial” in the irrigation of uncultivated land. To utilize another baseline which includes the unpermitted historic use does not allow the SWRCB to accurately evaluate the effects of the proposed project, and undermines the policies and intent of both CEQA and Water Code.

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Hydrology, Geohydrology and Water Quality

The Department’s detailed comments on this section, and the pertinent appendices, are contained in a separate memorandum, from Mr. Kit Custis to Dr. Jeffrey Single, dated December 10, 2009.

2-61

Biological Resources

The Big Sur River is designated pursuant to the Federal Endangered Species Act as critical habitat for the federally threatened, and State species of special concern, steelhead – South Central California Coast Distinct Population Segment (DPS) (*Oncorhynchus mykiss*). The river and nearby Swiss Canyon provide habitat for the federally threatened/State species of special concern, California red-legged frog (*Rana draytonii*) (RLF). This species has been extirpated (locally extinct) from 70% of its former range, and is now found primarily in coastal drainages of central California.

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According to California Water Code Section 1243.5, in determining the amount of water available for appropriation, the board shall take into account, whenever it is in the public interest, the amounts of water needed to remain in the source for protection of beneficial uses, including any uses specified to be protected in any relevant water quality control plan established pursuant to Division 7 (commencing with Section 13000) of this code. Concerning water availability for fish and wildlife, the CWC Section 1243 states in part:

“The use of water for preservation and enhancement of fish and wildlife resources is a beneficial use of water. In determining the amount of water available for appropriation for other beneficial uses, the board shall take into account, whenever it is in the public interest, the amounts of water required for recreation and the preservation and enhancement of fish and wildlife resources... for protection of beneficial uses, including any uses specified to be protected in any relevant water quality control plan...”

The Water Quality Control Plan for the Central Coast Region designates for the Big Sur River and lagoon the following beneficial uses: water-contact recreation including fishing; non-contact water recreation including hiking, camping, marine life study, sightseeing or aesthetic enjoyment associated with these activities; commercial or recreational collection of fish, shellfish, or other organisms; warm freshwater habitat; cold freshwater habitat; fish spawning, reproduction, and/or early development; migration or other temporary activities by aquatic organisms, such as anadromous fish; preservation or enhancement of aquatic, estuarine, and terrestrial habitats and associated vegetation, fish, shellfish and wildlife; preservation or enhancement of water and food sources for wildlife; and habitat for rare, threatened or endangered species; preservation or enhancement of natural resources in designated areas or habitats such as parks requiring special protection; and freshwater replenishment.

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For the preservation or enhancement of fish and wildlife resources, Big Sur River water should only be available for appropriation after adequate instream flows are dedicated to support these beneficial uses. Only after public trust resources are preserved or enhanced and beneficial uses protected may water be available for appropriation.

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The DEIR references several sources as providing information to support its biological conclusions, but none of these documents were made available to the Department or the public for review, except by request. It is therefore unclear what biological surveys of what level were performed on the site, during what year and time of year, and by whom. It is also not specified whether all necessary areas potentially affected by the Project were surveyed and included in the impact analysis. As a result, it was difficult or impossible to understand reported survey findings in the absence of the original full report.

For example, Table 4.3-2 indicates that two sensitive plant species were observed on site (source: PBS&J site visit, July 21, 2206, according to the note at the bottom of the table), namely Monterey Indian paintbrush (*Castilleja latifolia*), CNPS List 4, and coast wallflower (*Erysimum ammophilum*), CNPS List 1B.2. These species are not listed on Table 4.3-4, which includes sensitive species which have the potential o occur in the vicinity; nor is their presence reported in the text. In fact, the DEIR states that no sensitive plant species were documented within the project area. This obvious oversight would not only require additional analysis and potentially measures proposed to address these two species; it also serves to undermine the credibility of other conclusions provided in the DEIR. Other sensitive species not mentioned in the DEIR, for which there is documented or assumed presence include ringtail; coast range newt; and California horned lark. Additionally, California clapper rail (state and federally listed as Endangered, and California Fully Protected) has been documented at the mouth of the Big Sur River.

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The proposed project would substantially increase the proposed allowable diversions from the Big Sur River. As such, the Department does not concur with the conclusions reached in the DEIR regarding the possibility of the Project to result in impacts to sensitive biological resources. Specifically, it does not appear that adequate information exists to reach conclusions that impacts would be less than significant, and the conclusions themselves do not logically follow the limited information as presented in the DEIR.

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Riparian habitat: The DEIR states that under the proposed Project, from July through October the water diverted would increase, but that because groundwater rebounds quickly under existing conditions, impacts to riparian vegetation would continue to be minor. The DEIR also states that in 2006 riparian vegetation did not appear to be water-stressed, and concludes that the additional drawdown of water that is proposed would not cause the degradation of willow riparian forest. It is unclear how this conclusion can

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be reached. A one-and-a-half-fold increase in water pumping would represent a change in conditions from the baseline, and the potential impacts on vegetation should not be assumed to be less than significant because baseline conditions do not appear to have a negative effect on the habitat. Additionally, there is no discussion of the effect that increased salinity would have on riparian resources.

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 (cont.)

Western Pond Turtle: The DEIR identifies the Big Sur River and the tailwater pond as suitable habitat for the western pond turtle, and states that the Swiss Canyon creek is too small to support the species. No turtles were observed during fisheries studies, but focused surveys were not performed and it is not known if surveys of all potential areas were sufficient to detect the species. The DEIR impacts analysis focuses only on potential impacts to the Big Sur River that could impact adult turtles and concludes that a reduction in water levels would not result in increased predation of turtles, but this conclusion is not supported by existing data or research regarding risks to turtles and correlated links to increased predation. The DEIR also does not discuss any potential changes in the condition of the tailwater pond that may impact the species.

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 2-66

Red-legged Frog: RLF were identified on the Project site in 2006 during fisheries surveys, and were previously known to habitats of the Big Sur River. It does not appear that focused protocol-level surveys for the species were conducted on the Project site. The DEIR indicates that Swiss Canyon, the Big Sur River, and the tailwater pond provide suitable habitat, but none of these areas was surveyed to determine the extent of occupancy. The tailwater pond is specifically not included in any of the discussions regarding potential impacts to the species. Instead of performing protocol-level surveys to fully identify occupied areas, the DEIR identifies areas of suitable habitat and attempts to support conclusions that no significant impacts would occur to those areas. The Department does not agree with those conclusions.

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Tailwater pond and Red-legged Frog: The tailwater pond is not included in impacts analysis for RLF, although it is identified as suitable habitat and receives tailwater from the irrigated pastures. A doubling in irrigation water would likely impact condition in the tailwater pond, potentially through depth, duration of ponding, water quality, or other factors. The status of RLF in the pond needs to be determined and disclosed, and impacts that reduce the quality of the pond as a breeding site should be discussed in the DEIR. Protocol-level surveys should be conducted, and results should be submitted to the Department and the United States Fish and Wildlife Service for review.

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Swiss Canyon and Red-Legged Frog: Although the DEIR does not include any biological reports as attachments, the Department does have a December 2006 report prepared by Miriam Green Associates for Hansen Environmental Inc. This report indicates the importance of irrigation run-off in contributing to RLF habitat in Swiss Canyon. It also identifies degradation of portions of the water channel, banks, and vegetation caused by the existing ranch operation, including cattle trampling, resting, and

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browsing/razing, and wide trails created for human and cattle passage. The DEIR claims that irrigation runoff does not seep into Swiss Canyon and that erosion does not occur, and that an increase in irrigation runoff would not result in a change of flow in Swiss Canyon. As a result, no impacts such as erosion and associated impacts to amphibian resources would occur. The Department is unable to reach the same conclusion from the sparse summary information presented in the DEIR, which does not incorporate impacts of existing ranching operations in the discussion of potential Project-related impacts to aquatic resources. Regardless of baseline condition, the conclusion that a doubling of applied irrigation water to the pastures would not result in a change in runoff or erosion conditions or any potential associated impacts to breeding RLF is not supported.

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 (cont.)

Big Sur River and Red-legged Frog: The DEIR discussed a drop of two inches in the water level of the Big Sur River and concludes that such a change would not result in a significant loss of RLF breeding habitat or a significant impact to egg masses. It is unclear how a statement about impacts could be made without data regarding the use of the site by the species. Because RLF egg masses tend to be attached to emergent vegetation near the water surface, an estimated drop in water surface elevation of two inches could result in egg masses becoming closer to the surface or even exposed to air, resulting in desiccated or otherwise unviable eggs. Such an impact would be considered significant under CEQA and may require take authorization from the United States Fish and Wildlife Service. The Department disagrees with the conclusion reached in the DEIR and believes that a significant impact could occur to RLF in the Big Sur River. In order to bring these potential impacts to less than significant levels, the DEIR should propose avoidance, minimization, or mitigation measures to protect habitats during the breeding season.

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 2-70

Ringtail: The 2006 Report written by Miriam Green Associates indicates that the riparian habitats of the Big Sur River are suitable for the fully protected ringtail, which occurs in the Andrew Molera State Park. The DEIR should evaluate and address potential Project-related impacts to this species, and should include appropriate species specific avoidance and minimization measures, as necessary.

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Steelhead

Steelhead trout (*Oncorhynchus mykiss*) are present in the Big Sur River, throughout the year. Steelhead are listed as a Species of Special Concern with the Department of Fish and Game, and are listed as threatened in the South Central California Coast ESU (Evolutionary Significant Unit) under the Federal Endangered species Act (ESA), National Marine Fisheries Service.

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Populations in Central and south coast of California have declined sharply in the last 50 years, due primarily to reductions in the amount and quality of freshwater habitat (Titus et. Al 1994). Their life cycle is very complex. Adult steelhead migrate into the river to

spawn, typically in December thru March. After spawning, the eggs hatch into alevins, which emerge from the gravels, and reside and grow in the stream usually 1-2 years, before transforming into a smolt prior to returning to the ocean.

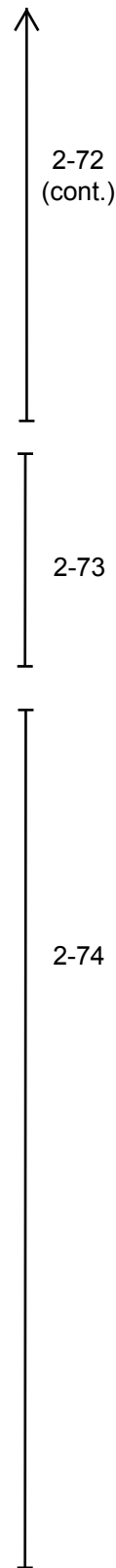
Impacts to steelhead and habitat: The amount of water flowing in the Big Sur is directly related to fishery habitat availability in terms of quality and quantity. Public Trust Resources, such as steelhead, native fish assemblages, invertebrates, and other aquatic resources are intricately connected to habitat instream flow and habitat conditions. Some important impacts were identified in the DEIR based on thresholds of significance. Impact to fish passage, dissolved oxygen and temperature will occur, based on the small increase of water diversion compared to historic diversion of applicant.

Impacts to all the important stream components of fishery habitat must be considered significant when the fishery investigation utilizes appropriate sampling methods and actual field conditions, directly related to time and place of impact. Fish and aquatic species respond to daily, instantaneous habitat conditions, **not** running cumulative means, averages, and percentages as presented in DEIR. Stream components of fishery habitat include hydrology, geomorphology, biology, water quality, and connectivity.

Impacts to all the important stream components of fishery habitat must be considered significant when investigation focuses on all water diversions by applicant, not just the smaller increase in diversion when compared to historical diversions. The impact of the decrease in water availability to instream aquatic resources, wildlife, riparian corridor, adjacent uplands, and lagoon with its incredible biodiversity of species requires more careful investigation and realistic presentation of impacts.

Some of the cumulative impacts were minimally identified by saying that impacts will be magnified when the additional increase in diversion is evaluated along with actual existing water diversion. Cumulative impacts need to be addressed at many levels, including direct, indirect, short term, long term, within the year, and between years. The impact of the proposed diversions need to be evaluated in terms of their cumulative effect on aquatic habitat conditions, combined with natural disasters, such as drought, fire, and floods.

Impacts to Public Trust Resources also need to be identified and addressed. The Big Sur River is a very significant, and the most southern, steelhead watershed in California. The many factors weighing in on this determination include, but are not limited to 1) the large size of the watershed, 2) the large percentage of low gradient good to excellent steelhead habitat, 3) the condition of the watershed, which is largely owned by the public, 4) the presence of threatened and endangered species, 4) the presence of a lagoon, one of the largest landscape features in the central coast region; lagoons are one of the richest sources of biodiversity in California. The significance of the watershed goes beyond the borders of Monterey County to the Pacific States. There are few



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unaltered lagoons where scientific research can be conducted to increase our understanding of lagoons and ecological processes. The size of the lagoon and access to the ocean contribute to the significance of the Big Sur lagoon. This watershed composed of the lagoon and river are important to perpetuating steelhead during times of natural disasters such as drought, fire, and flood, when other smaller or steeper watersheds with little or no lagoon are more adversely impacted. When steelhead access to most of the usual spawning streams is closed and instream conditions are unfavorable to steelhead, the Big Sur remains important refugia for steelhead access and rearing.

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Some of the impacts of water diversions which result in altered flows, include, but are not limited to, the following: 1) associated wetlands and riparian habitats not maintained, 2) local water tables not recharged, 3) streambar and channel areas are no longer inundated and scoured, 4) ratio of pool to riffle changes, 5) loss of connectivity with surface flow and underflow, 6) loss of year-class of steelhead because of loss of passage thru bottleneck created at diversion site or zone of influence, and 7) loss of ability to move between lagoon and mainstem for juvenile steelhead rearing.

Ongoing DFG study: Department of Fish and Game (DFG) listed the Big Sur as a priority stream for Instream Flow Assessment, pursuant to Public Resources Code (PRC) Section 10004 (August 12, 2008, list attached). This list was compiled and ranked from input of staff from DFG, State Water Resources Control Board (SWRCB), National Marine Fisheries Service (NOAA), and United States Fish and Wildlife Service (USFWS). Criteria included presence of anadromous species, likelihood that flow recommendations would provide high level of improvement, availability of relevant data, and possibility of partners and willing landowners.

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This DEIR for water right application lacks the important information required to make a determination of level of impact. The applicant provided inadequate information from an Instream Flow Study and Thompson Method resulting in the Department of Fish and Game taking the lead for field investigations related to this project. Interim instream flows are recommended until our Instream Flow Study is complete in 2011.

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DFG has already implemented the instream flow study as part of our Instream Flow Program. The Study Plan, titled Habitat and Instream Flow Relationships for Steelhead in the Big Sur River, Monterey County, September 2009 (attached) outlines the approach and methods that will be used by the DFG to conduct a specific instream flow study. The primary objective of DFG's study is to develop scientific information on the relationships between flow and available stream habitats to determine what flows are needed to maintain healthy conditions for fish and wildlife. Relationships between flow and habitat will be developed for critical life stages of steelhead, spawning, rearing, and migration. Results of this study will provide instream flow recommendations to provide adequate long term protection, maintenance, and stewardship of riverine Public Trust Resources. Several stream reaches will be evaluated, including a comparison of the

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physical habitat characteristics of stream reaches investigated in 1994, and the lagoon reach. Specialized investigation of the lagoon and potential impacts will include salinity based estuary inflow methods and approaches [Instream Flows for Riverine Resource Stewardship]. Salinity distribution, relative to depth and substrate, is one of the primary factors determining production and distribution of lagoon flora and fauna. The current status of the project is analyzing flow and habitat data collected at a riffle transect located near the diversion site. We also have collected data on critical riffles , downstream of the Molera Creek campground, according to the Thompson method.

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(cont.)

The most critical issues to address are rearing in the river and lagoon, fish passage, and changes in habitat quantity and quality. DFG’s preliminary results of a Steelhead Habitat Use Study, conducted on the Big Sur River in 1994 by Rob Titus, show juvenile steelhead with little to no growth during the drier month, late summer to early fall. This has serious implications if the carrying capacity of the river is continued to be reduced by water diversions. Juvenile steelhead, instead of maintaining their weight thru the summer, in order to smolt and migrate out to the ocean, will losing weight. This increases the mortality and reduces the percentage of successful recruitment of spawning adults to perpetuate the species through generations. DFG’s preliminary data also show a reduction in densities of fish with reductions in water flow. Reductions in water flow reduce the availability and quality of prey available to steelhead for maintenance and growth. Management of successful fisheries is a numbers game. The more steelhead that survive to migrate, thru the lagoon, to the ocean in a healthy condition, the greater the chances of successful recruitment. There are more recent fishery investigations, using more modern technology to track individual fish, conducted in central coast lagoons that show that steelhead size at time of migration is a very important factor in determining the success of returning adults. The larger steelhead smolts have a more successful rate of return. Lagoons are well know to provide important rearing habitat for salmonids, showing growth rates in steelhead that are much higher than growth rates in the stream reaches. Successful recruitment of steelhead from the Big Sur river may be the population that provides recruitment (straying) to other watersheds, both north and south, during times of drought. Recent genetic studies have shown that southern steelhead represent a unique population subunit and an evolutionarily significant unit within this species (Nielsen et. al. 1994). National Marine Fisheries Service status review for steelhead showed that southern steelhead’s genetic diversity in unprecedented throughout the rest of the species range (NMFS,1995). The ability of southern steelhead to exit with such genetic diversity is probably related to special adaptations to extreme environmental conditions. The genetic stock of the Big Sur is a genetic stock of special concern, in need of protection.

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Another critical issue to address is the monitoring of steelhead rearing and utilization of available and suitable habitat to maintain a healthy, productive fish population. This includes a baseline bioassessment in areas affected by diversion, downstream in lagoon, within the area of impact or zone of influence, and upstream of

2-81

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impact. Intensive monitoring for success of the appropriated flow to protect instream resources will be required.

Evaluation of Big Sur River physical habitat conditions must be tied to a broad understanding of ecosystem processes. These are the global scale, the watershed scale, the stream segment scale (the most evident scale we are investigating), the macrohabitat scale, the mesohabitat scale, the microhabitat scale, and the temporal scale (Annear, T. et. al. 2004, *Instream Flows for Riverine Resource Stewardship*). These river components are integrated and evaluated in an instream flow study. The instream flow study is an interdisciplinary approach to quantify hydrology, biology, geomorphology, water quality, and connectivity of the Big Sur, important to protecting instream flows in maintaining or restoring the seasonal pattern of intra-annual (magnitude, duration, timing, rate of change) and inter-annual variability (frequency) to maintain or restore the natural ecological function of the Big Sur River.

DFG is the California trustee agency for fish and wildlife, and has the primary expertise in dealing with fish and wildlife issues and the primary responsibility for interpreting Fish and Game Code. Fish and Game code 1600 states in part that “The Legislature finds and declares that the protection and conservation of the fish and wildlife resources of this state are of utmost public interest. “Fish” is defined at Fish and Game Code 45 as meaning ‘wild fish, mollusks, crustaceans, invertebrates, or amphibians, including any part, spawn, or ova thereof.’” The SWRCB is required to give great weight to the Department’s judgment with respect to fish and wildlife needs (*Bank of America v. State Water Resources Control Board* (1974) 42 Cal.App.3d 198, 212, 116 Cal.Rptr. 770; see also Water Code sections 1243 and 1257.5).

DFG is mandated by the Salmon, Steelhead trout, and Anadromous Fisheries Program Act of 1988 to significantly increase the natural production of steelhead in the state. Protecting instream flow on the Big Sur will help us attain our as-yet unmet goal.

Need for requirement of protective bypass flows: The Department recommends that protective flows be established if the SWRCB issues a permit for this water right application. The impacts from existing, illegal, unpermitted diversions, in addition to the applicant’s request for an increase in diversion, are considered highly significant. Considerations in ‘Beneficial Use’ and allocation of a finite water supply should consider protective flows to be an ‘Essential Use’, as recommended by *National Audubon Society v. Superior Court of Alpine County*, and consistent with Water Code section 1257, providing additional support and weighting to the importance of maintaining instream flow in decisions regarding beneficial use. Important beneficial uses directly related to protection of instream flows are: 1) Public Trust Resource protection (aquatic and wildlife resources, adjacent riparian, and upland); 2) Scientific research on a ‘Wild and Scenic’ large southern steelhead stream; the Big Sur River may be a future site for research, assessment and monitoring in the development of biocriteria on more pristine



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Biotic Condition of Two Sites on the Big Sur River, Monterey County, Ca, December 2009 by Jim Harrington; show that the Big Sur is already being degraded. This is based on surveys conducted since 2001. Additional sampling sites are recommended, downstream of the Andrew Molera Site, and near the water diversion area. These assessments were conducted prior to the impacts from the large recent fire, 2008, in the watershed.

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Anadromous Sport Fish Management and Research Program, Project #55 – South Central Salmon and Steelhead Restoration and Enhancement Program is conducting a fish population inventory and habitat assessment project on the Big Sur to provide a basis for improved management of steelhead stocks, and to identify restoration measures and actions. This program will help document the impacts of fire on fishery habitat. Coastal Biodiversity Measured through Baseline Assessments of Important Lagoons in Central Coast Bioregion, currently proposed to study the Big Sur lagoon thru DFG’s Resource Assessment Program. This study, when funding is available, will focus on increasing our understanding of coastal lagoons, one of the most important ecosystems in California. Lagoons are one of the richest sources of biodiversity along the coast. DFG has files of stream surveys, creel surveys, reports, and investigations dating back to surveys conducted by Shapovalov and Taft on the Big Sur in 1945.

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Department of Parks and Recreation have several management and monitoring reports. Andrew Molera State Park Cooper Grove Management Plan, April 2003, has measures to protect the monarch butterfly grove. The Big Sur River Steelhead Enhancement Plan, March 2003, characterizes the status of the existing steelhead resource within the project area and provides recommendations for habitat enhancement and resource management to benefit steelhead. Progress on these plans is at various stages of implementation and completion. The East Molera Grassland Avian Monitoring Report, May 2001, reports results of monitoring baseline avian species richness, abundance, diversity, and community similarity. This baseline monitoring compared non-native vegetation plots to native vegetation plots to evaluate native vegetation habitat restoration efforts.

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The California State University, Monterey Bay has been conducting graduate research on the Big Sur River. Their most recent investigation, Post-Fire Baseline Monitoring of Big Suir River Lagoon: November/December 2008, Watershed Institute, Publication No WI-22008-7, is monitoring the effects of the fire on river processes and the lagoon.

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Alternatives

If a baseline were utilized which does not include the unpermitted non-riparian diversions, DFG believes that all of the proposed alternatives, with the possible exception of the No Project/No Permit Alternative, would result in significant and potentially

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unmitigable impacts, to the Big Sur River including associated species and habitats, and potentially to the POU. Irrespective of the standards utilized to evaluate the potential effects of the project pursuant to CEQA, DFG does not believe that any of the proposed alternatives, possibly including the No Project/No Permit Alternative, will adequately protect public trust resources.

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Additionally, the discussion of alternatives should focus on alternatives to the project which are capable of avoiding or substantially lessening any significant effects of the project, “even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly” (CCR, Title 14, section 15126.6(b)). The Department does not believe that the alternatives discussed meet that requirement; and none of the alternatives, possibly including the No Project/No Permit Alternative, would reduce impacts to public trust resources and/or could be permitted under existing statutes, regulation, policy and case law.

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The No Project/No Permit Alternative, was dismissed stating that “most of the basic project objectives, particularly the key objective of authorizing the historical water use on the Ranch’s irrigated pasture would not be realized”. In fact, most of the project objectives would be met, with the exception of authorizing the historical (and unpermitted) water use. This would meet the standard of CEQA: “even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly”.

2-92

The No Change in Existing Practices/Historical Diversions Alternative would predictably have no effects over baseline (which happens to have been set by the SWRCB at the level of this alternative). The DEIR states that this alternative would reduce flows incrementally, which, in view of the fact that the Big Sur River supports critical habitat for endangered species, the slightly lower incidence of low flow with the No Changes in Existing Practices/Historical Diversions Alternative would therefore be “substantial”. However, the DEIR concludes “the magnitude of change relative to the proposed project is difficult to predict. Because seasonal maximum volumes are higher than the proposed project, this alternative could still result in significant impacts on steelhead habitat through reductions in flow or DO.” It is not clear that this alternative would meet the intent of CEQA, in requiring that alternatives “are capable of avoiding or substantially lessening any significant effects of the project”.

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The Alternative Irrigation Efficiency Alternative is a viable alternative, which reduces impacts much more than any other alternative. However, this alternative does not have bypass flows established which would be protective of public trust resources. This alternative could have quite a bit of value, if combined with another alternative which would cap diversions at a level prescribed by by Water Code and its implementing regulations.

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The Alternative Limits on Diversions Alternative was submitted by the applicant. It relies on an even more complicated set of criteria than the proposed project to restrict the amount or rate of diversion, and still would not provide adequate protection for public trust resources. Additionally, it is not clear why the SWRCB would consider an alternative which is suggested by the applicant, instead of consideration of a meaningful alternative which would actually reduce the effects of the proposed project.

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Consideration of New Alternative

The Department recommends an alternative which would be consistent with Water Code, regulation, policy and case law; and would require the maintenance of bypass flows which would protect public trust resources. We do not believe any of the other alternatives, except possibly the No Project/No Permit Alternative, would be consistent with Water Code, regulation, policy and case law; and we do not believe that No Project/No Permit Alternative would necessarily protect public trust resources.

2-96

The water right, in particular the allowable annual diversion and the rate of diversion, as well as terms and conditions which would limit the amount and rate of diversion, should be predicated on several assumptions, primarily (1) the verification of the acreage which is currently irrigated pasture, not including those areas which are not suitable, including but not limited to: dunes, tailwater pond, outfall, access roads, irrigation canals and Swiss Canyon; (2) verification of what portion of the irrigated pasture is within the Big Sur River watershed, and therefore riparian and not a part of an appropriation; (3) verification that the water duty identified in regulations regarding the amount of water considered reasonably necessary is 1 cfs per 80 acres (California Code of Regulations (CCR), Title 23, Section 697(a)(1)); and (4) identification of what would constitute reasonable, useful and beneficial purposes of the diverted water when applied to the uncultivated pasture of the POU, up to a maximum of 2 ½ acre feet per acre (AFA) per year. While that figure (2 ½ AFA) is less than that which has historically been diverted without permits, comparable sites in coastal Monterey typically utilize 2 AFA for irrigated pasture; cultivated crops in coastal Monterey County, including strawberries, vegetables and field flowers, use 2 to 3 AFA.

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The Department recommends that the annual diversion be based on a formula which would multiply the acres of irrigated pasture subject to the appropriated water right, multiplied by the AFA appropriate to local conditions, not to exceed 2 ½ AFA, as specified in Water Code section 1004. The Department does not support bifurcation of the allowable diversion into an “average” and a “maximum” amount; nor do we support an “average” amount, based on a 20-year rolling average, be approved for diversion (see discussion above as this applies to impact analysis). The Department recommends the SWRCB identify an annual allowable diversion amount, which is not subject to averaging over multiple years, and is the maximum allowable each and every year, subject to such limitations as may be imposed via additional terms and conditions

2-98

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The applicant has suggested a maximum allowable rate of diversion (in cfs) and an average rate of diversion (in cfs), which could be limited by a complicated set of criteria in dry and critically dry years. The applicant appears to have assumed a duty of 1 cfs per 50 acres, and included their entire irrigated lands (not just the POU subject to an appropriated right), in requesting 5.34 cfs as the allowable average diversion (267 acres/50 acres X 1 cfs/acre = 5.34 cfs). Regulations were promulgated by SWRCB to clarify information to be submitted with a water right application, including “amounts for which to apply”; the amount of water considered reasonably necessary for most portions of California would be a duty of 1 cfs per 80 acres (CCR, Title 23, section 697(a)(1)).

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We believe the duty of 1 cfs per 80 acres is more appropriate than that proposed by the applicant. The regulations allow for a greater rate of diversion for a lesser time period for any 30-day period, so long as there is no interference with other users, and it is specified in the permit (CCR, Title 23, section 697(a)(2)). The applicant has requested a maximum rate of diversion of 5.84 cfs; however, the DEIR has indicated that the ESR pumps are capable of pumping at a combined rate of 7.9 cfs. As we have noted above, the instantaneous rate of diversion (as opposed to daily, monthly, annual rate) is critical to maintaining sufficient bypass flows; and, it is important to note, it is difficult to determine the instantaneous rate of diversion, let alone regulate it. The Department recommends that the SWRCB identify an average rate of diversion which is consistent with the duty recommended in 697(a)(1) of 1 cfs per 80 acres; additionally, that the SWRCB require a meter be installed on both wells which would measure and record for both wells, the time of day of pumping, and the instantaneous and cumulative diversion rates, to determine if the diversion rate(s) specified in the permit were being observed. Additionally, whatever rate is permitted (including any specified maximum rate), the Department recommends that terms and conditions be applied to require the applicant to maintain sufficient bypass flows which would be biologically meaningful to the public trust resources of the Big Sur River.

2-100

The analysis in the DEIR compares effects of the applicant’s proposed project to that which has been occurring on an unpermitted basis; the terms and conditions identified in Mitigation Measure 4.2-2 proposed to reduce diversion rates (not amounts) to address potentially significant effects. This would not address the protection of public trust resources; in fact, no information has been provided that previous, unpermitted diversions were not having a significant adverse effect on public trust resources, and the limitations which are recommended in MM 4.2-4 would not require bypass flows, or other wise insure maintenance of steelhead habitat. Additionally, the thresholds identified in MM 4.2-2 are based on an unnecessarily complicated set of criteria related to percentile of dry and critically dry flow rate percentiles; if the ever-changing thresholds were to be exceeded, the diversion rate would be adjusted, again according to an unnecessarily complicated sliding scale of allowable diversion rates.

2-101

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The Department recommends a more direct approach than is identified in the DEIR; specifically, that the allowable annual diversion (in AF), as well as the average and maximum rate of pumping (in cfs), be conditioned by criteria which would maintain bypass flows sufficient to protect fish, wildlife, and public trust resources. The specific terms the Department recommends would assume that the rate of diversion is the maximum permitted rate, and implement limitations on pumping (i.e. cessation of pumping, not just modification of the pumping rate) when the gauge indicates that habitat requirements for steelhead and other public trust resources would be impaired. The water rights permit should require cessation of diversion whenever the flows drop below the bypass requirement. The pumps would either be on or off, which can be easily monitored, rather than allowing varying rates of diversion, which could be impossible to monitor or enforce.

2-102

The thresholds for turning the pumps off would be based on maintaining flows which would protect habitat for steelhead and other public trust resources. Ideally, a stream gauge would be located in the vicinity of the project, and IFIM or similar methodology would have determined in-stream flows sufficient to maintain habitat, which would be tied to flows as measured at the gauge. The Department recommends that the SWRCB require installation and maintenance of such a gauge, to be located above the diversion, but below the other numerous diverters in the watershed. DFG is pursuing funding for purchase and installation of a gauge to facilitate ongoing studies; but would like the applicant to maintain the gauge, and should funding not be available to DFG, provide the funds for purchase and installation. While DFG is engaged in completing studies to determine in-stream flow requirements, it is recommended that interim thresholds be tied to the existing USGS gauge. Once more specific recommendations can be made, those recommendations should be tied to flows as measured at the new gauge, and those in-stream flow requirements adopted by the SWRCB for this permit.

2-103

Additionally, we suggest that this alternative be combined with the updated infrastructure identified in the Alternative Irrigation Efficiency Alternative. Increased irrigation efficiency would allow the applicant to make better use of the more limited amount and rates of diversion which are proposed under this new alternative and could allow more optimal forage production. Although there are potentially significant effects of updating the irrigation system, the impacts are primarily related to the construction phase, and could likely be lessened over time to a level of less than significant.


2-104

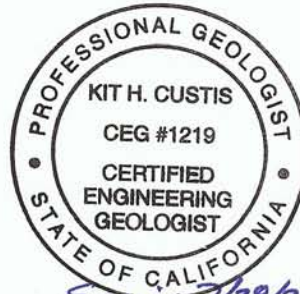
Letter 3: California Department of Fish and Game (Kit Custis)

Memorandum

Date: December 10, 2009

To: Dr. Jeffrey R. Single
Regional Manager
Department of Fish and Game
Central Region
1234 E. Shaw Ave.
Fresno, CA 93710

From: 
Kit Custis, Sr. Engineering Geologist
PG#3942, CEG#1219, CHG#254
Department of Fish and Game
Fisheries Engineering Program
Regional Operations Division
1812 9th Street
Sacramento, CA 95814



Subject: Comments on October 2009 Draft EIR for the El Sur Ranch Water Right Application No. 30166.

The following are my comments on the October 2009 Draft Environmental Impact Report (DEIR) for El Sur Ranch's water right application no. 30166 that is pending before the California State Water Resources Control Board (SWRCB). The proposed project of this DEIR is the diversion of water from a subterranean stream using two existing production wells owned by El Sur Ranch that are located in Andrew Molera State Park on the flood plain at the mouth of the Big Sur River. Pumped water is applied through a series of irrigation pipes to pastures uphill and northwest of the wells. Pumping from the older well, called the Old Well, is said to have occurred since 1949. Pumping from the more recent well, called the New Well, has occurred since 1984. The DEIR provides an assessment of the potential impacts from pumping these two wells at a rate that exceeds the historic water use.

The environmental setting and analysis presented in this DEIR are complex in part because of the hydrogeologic setting and because of the complexity of the proposed diversion limitations and proposed mitigation measures. The hydrogeologic setting for the diversion is a subterranean stream at the mouth of the Big Sur River. The dynamic character of the river channel, the presence of a lagoon, periodic closure of the river's outlet by a sand bar, and periodic occurrence of high tidal fluctuations all combine to create a dynamic hydrologic setting.

The complexity of the physical setting is overlain by the water right application's proposed six diversion limits, four measured in acre-feet (ac-ft) and two in cubic feet per second (cfs). The DEIR proposes a 23-element mitigation measure for bypass flows needed to protect public trust resources at the point of diversion. It uses two or more sets of flow criteria for each month based on historic monthly low percentile flows, except for June and November, which have only one percentile bypass flow criterion. These bypass flows are not set based on

impact to fish passage or habitat, but based on low river flows during past periods pumping. The DEIR also proposes, as a mitigation measure the future development of at least two plans to manage applied water: an Irrigation Water Management Plan, and Erosion Control and Operations Management Plan. A potential third future plan is a feasibility study and design of a seasonal instream aeration system to raise dissolved oxygen levels in the lower river during periods of low flow and high water temperature. The El Sur Ranch pastures may also be subject to Central Coast Regional Water Quality Control Board's (CCRWQCB) waste discharge waiver for irrigated lands under Order R3-2009-0050 and MRP 2004-0117, which requires development and implementation of a Farm Water Quality Management Plan with its own Monitoring and Reporting Program. The DEIR doesn't indicate whether these future management plans will be made available for public review and comment prior to approval of the water rights permit through the CEQA process, incorporated into the water rights permit, or through the approval of the another permit or order by the SWRCB.

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Finally, the DEIR appears to propose a modification of the SWRCB's Decision 1639 four-part physical test for determination of a subterranean stream flowing through a known and definite channel with the addition of the quantification how much of the water diverted through the pumping of wells comes from surface flows of the river versus how much from the ground water aquifer. This modification to the physical characteristics required for designating a subterranean stream adds additional complexity and would require additional monitoring measures to verify compliance with permit bypass flow requirements necessary to protect public trust resources.

3-3

This document is divided into three sections. The first section presents the recommendations of my general comments. In the second section I provide my general comments and recommendations in a detailed discussion of issues that are either not discussed in the DEIR or inadequately discussed. In this general comments section, I have highlighted in bold type the recommendations of each topic so that they can be more easily identified. The third section provides specific comments on sections and tables in the DEIR.

3-4

Summary of General Comments and Recommendations

1) The DEIR should acknowledge the requirements of SWRCB's Decision 1639 that defines four physical conditions needed for a subterranean stream flowing through a known and definite channel. The DEIR should then demonstrate that these conditions are met at the point of diversion of the El Sur Ranch wells. The SWRCB should as part of the CEQA and/or water rights permit process make a finding that the El Sur Ranch wells divert ground water from a subterranean stream flowing through a known and definite channel.

3-5

2) Clarification is needed about whether these riparian lands are included in the request for an appropriative water right. The DEIR should discuss separately the riparian and non-riparian land impacts and requested diversions. I've measured the area of the point of use, the irrigated pastures, using ArcMap software and found that the total irrigated area is approximately 248 acres, not the 267 acres stated in the DEIR. When the 25-acres of riparian land is subtracted from my 248 acres, the result 223 acres is the total for irrigated pastures subject to the appropriative water right. The NRCE analysis of water demand appears to include the Swiss Canyon area, but the DEIR does not consider it part of the irrigated lands. I recommend that the actual area of the irrigated pastures be measured

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and documented by a licensed land surveyor. Once the actual area is measured, the DEIR should be revised based on this updated and more accurate information.

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- 3) The engineering calculations that convert electrical consumptions to pumped volume and rate used in establishing historic and baseline water usage and well pumping capacity should be provided in the DEIR along with the input data, pump efficiency test results, sources and magnitude of potential error, and any other assumptions used to make the diversion and pump capacity estimates.

3-7

The DEIR should provide as part of the mitigation measures a discussion of how the monitoring of the various diversion volumes and pumping rates would be accomplished using the power usage rather than direct measurement with a flow meter. The mitigation monitoring should include specific data collection requirements, such as frequency and type of measurements that are needed to document compliance with the water right permit. Specifically, how often must electrical power usage be collected, monthly, daily or hourly? Should power usage be linked with the pasture(s) being irrigated? How often will water diversions be reported, particularly during periods of low river flow? Will the frequency of monitoring and/or reporting vary with the season and river flow? The DEIR should also discuss as a mitigation measure the use of calibrated flow meters on the discharge pipes that measure both the instantaneous rate of discharge and the cumulative total discharge. The mitigation should also address the issue of monitoring the time and duration of pumping for each well so that the instantaneous total diversion can be monitored.

3-8

- 4) a) 1,615 acre-feet maximum calendar year total diversion: Table 2-3 of the DEIR should be updated to show the estimate of diversion requirements based on the more recent 2007 estimates and the DEIR re-written to reflect this updated information. The DEIR doesn't present a comparison, for similar periods, between the El Sur Ranch's historic water use and the historic regional water use documented by DWR or others such as the various Monterey County water agencies. It should be noted that the requested maximum diversion is based on year of maximum historic use, 1977, which is not within the 1984 to 2004 CEQA baseline period of the DEIR. The DEIR should clarify that the pastures are considered un-cultivated cropland. According to the USDA, the permanent pasture land at the El Sur Ranch would likely be considered uncultivated lands and subject to the 2-1/2 acre-feet per acre beneficial use required by the Water Code Section 1004.
- b) 1,200 acre-feet running 20-year average maximum annual total diversion: The 1,200 acre-feet running average diversion limit doesn't have much effect on reducing the number of years that the maximum annual volume can be diverted if the next 10 year's diversions can be at the maximum of 1,615 acre-feet. The request for an average annual diversion limit that is 40 percent above the historic baseline average seems excessive and suggest unreasonable use.
- c) 735 acre-feet July 1 to October 1 seasonal maximum total diversion: The proposed July to October total seasonal limit for total diversion is set just below the maximum one-year historic diversion and exceeds the calculated estimate of the optimal diversion requirement for a year with no precipitation. In addition, the requested diversion limit of 735 acre-feet is 11% greater than the historic diversion of the year with the lowest flows on record (1977), which doesn't seem to offer much protection to the public trust resources, nor have the effects of such a diversion, in fact, been analyzed. The DEIR should provide an analysis of the relationship between historic diversion and the

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percentile flows in the river at the time of diversion, along with an opinion on whether historic seasonal diversions might have affected public trust resources. The DEIR should also provide an evaluation to justify the flow percentiles used in the mitigation measures as additional limits on the diversions. Consideration should be given to adding an additional mitigation measure that would further restrict diversion during periods of drought, such as eliminating the additional 10-percent diversion desired for annual leaching of salts during periods of drought.

3-14 (cont.)

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d) 230 acre-feet July 1 to October 1 monthly maximum diversion: The 230 acre-foot maximum monthly limit from July to October is approximately 51 percent above the baseline average diversion for July, the month used in setting the limit. This limit allows for maximum diversion during the period of lowest flows, which conflicts with the goal of protecting public trust resources. The month of June has the highest average historic diversion of June through November, the months with the lowest historic flows. The DEIR should be revised to provide a discussion of the applicant’s reasons for the requested 37 acre-foot “cushion” and the impacts on public trust resource that result from using the month with the second highest average diversion for establishing the dry season diversion limit.

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e) 5.84 cfs maximum instantaneous pumping rate: The DEIR should document the reasoning behind selecting the maximum instantaneous diversion rate of 5.84 cfs. This documentation should demonstrate why the El Sur Ranch lands fit the conditions specified in CCR Title 23 Section 697(a)(1) for 1 cfs per 50 acres, use the actual acres being irrigated in the calculation, and then compare the requested instantaneous rate to the baseline condition.

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f) 5.34 cfs maximum 30-day average pumping rate: The DEIR should document the reasoning behind selecting the maximum 30-day running average limit of 5.34 cfs. This documentation should demonstrate why the El Sur Ranch lands fit the conditions specified in CCR Title 23 Section 697(a)(1) for one cfs per 50 acres, use the actual acres being irrigated in the calculation, compare the requested 30-day average rate to the baseline condition, and then discuss the reasoning for distinguishing between and setting different diversion limits for monthly and 30-day running averages.

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5) The DEIR’s assumption that the conditions of the river in the ZOI during the 2004 to 2007 study period will continue and remain constant, and that ground water will always discharge into the river in the ZOI from Creamery Meadow isn’t justified. The DEIR should be modified to document the dynamic nature of the lower portion of the Big Sur River, evaluate the impacts of a change in channel position on the environmental impact analysis, discuss the impacts of changing channel location on the gains and losses to the river, and provide mitigation monitoring measures needed to document and measure the changes in river flow during pumping of the wells whenever the channel migrates or the character of the channel bed material changes.

3-21

6) a) The assumption that the river losses are constant at approximately 24 percent of the pumping rate, 0.74 cfs at 3.09 cfs pumping and 1.28 cfs at 5.34 cfs pumping (page 4.2-66), and that this rate of loss will occur in perpetuity is invalid.

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b) The duration of pumping impacts extends beyond the time listed in the DEIR tables because of the recovery of the cone of depression. This should be accounted for in the environmental impact analysis and the diversion limits.

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The bypass flow limitations for the water rights permit should require the cessation of pumping whenever river flow drops below a specified rate(s) as measured at an appropriate river gage. The bypass flow should be set based on specific impacts to public trust resources not historic flow percentiles. This type of bypass flow limit requires at least daily measurement and reporting of the instantaneous rate of flow at the river gage and rate of diversion at the wells in order to know when the limit is reached. Without instantaneous flow measurements there would be no way of knowing that a violation has occurred because long-term averaging doesn't measure or report peak discharge rates. While the USGS gages can provide instantaneous provisional data, the present lack of flow metering at the wells is precludes achieving this standard.

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c) The DEIR should be revised to address how the impacts of diversions from the separate sources, surface water and ground water, will be monitored to ensure that the assumptions about the conditions in the ZOI made in the environmental analysis remain valid.

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d) The complexity of the proposed system of six water right limits will be difficult enough to monitor, report and enforce, but if the permit assumes that something other than the full rate of diversion impacts the flows in the river, then a bypass flow limitation(s) is a moving target.

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e) The DEIR should discuss the requirements of SWRCB's Decision 1639 and how they are relevant to the El Sur Ranch well diversions. It appears that the DEIR's proposal to apportion the source of the water being diverted at the wells into surface water and subterranean stream ground water directly conflicts with Decision 1639. This conflict with the Decision 1639 is an addition to other technical issues that are being raised in this memorandum as a result of the proposal to separate the sources of water being pumped.

3-27

f) The DEIR should analyze the environmental impacts of the El Sur Ranch diversions with the assumption that all of the pumped water is diverted from the Big Sur River. The El Sur Ranch well water rights permit limitations and conditions, as well as the bypass flow requirements should be written assuming that all of the flow being pumped by the wells is diverted from and causes potential impacts to the surface water flow in the river. This would be consistent with other water rights permits issued for subterranean stream diversions and would make the establishing and enforcing of diversion limitations and bypass flow requirements consistent with other permits.

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7) Based on the information in my Table 3, I would recommend that at a minimum, loss in instantaneous flow of 5 cfs be assumed downstream of the USGS Big Sur gage when calculating bypass flow requirements. With a more through investigation and analysis, the validity of the 8.9 cfs loss may be determined.

3-29

The DEIR should provide analysis of the losses or gains that are likely to occur in the 7 miles between the USGS Big Sur gage and the point of diversion, and determine what value(s) should be used to correct the USGS Big Sur gage reading in setting bypass flow requirements. This analysis should document and evaluate natural and anthropogenic gains and losses in the river below the USGS gage and any potential future riparian diversions. As an alternative, the DEIR should evaluate whether another gage should be installed lower in the river that is closer to the point of diversion. CDFG staff has submitted a proposal to its management and is awaiting word on funding approval for the USGS to establish a gage on the Big Sur River in the Andrew Molera State Park area to aid in the

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current study of the river. Unfortunately, long-term funding for maintaining this gage may not be available.

8) My updated percentile calculation shown in my Table 4 and those in Table 2 of the 2006 3rd Amendment to the water rights application are in fairly close agreement, but differ significantly from those used in the DEIR, Table 4.2-1. I recommend that an evaluation be done as to why the DEIR flow percentiles differ. Following that evaluation, the correct table of historic daily flow frequency percentiles should be provided.

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9) The bypass flow limitations for the water rights permit should require the cessation of pumping whenever river flow drops below a specified rate(s) as measured at an appropriate river gage. The bypass flow should be set based on specific impacts to public trust resources at the point of diversion, not historic flow percentiles. Monitoring of bypass flow limit requires at least daily measurement and reporting of the instantaneous rate of flow at the river gage, and rate and time of diversion for each well in order to know when the bypass limit is reached. Without instantaneous flow measurements there would be no way of knowing that a violation has occurred because long-term averaging doesn't capture peak discharge rates. While the USGS gages can provide instantaneous provisional data, the current lack of flow metering at the wells precludes achieving meaningful monitoring of diversions.

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The maximum instantaneous rate of diversion of 5.84 cfs being sought by the application should be used in setting a bypass flow requirement. An interim bypass flow as measured at the USGS gage of 40 cfs between June 1 and November 30 would be appropriate given the lack of actual instream information on the flows necessary for fish passage, the distance from between the point of diversion and the USGS Big Sur gage, variability in the changes in flow below the USGS gage, and the need to consider that the entire diversion has the potential to impact river flow. An interim bypass flow of 132 cfs should be used between December 1 and May 31. Additional site-specific instream studies are needed to finalize these flow recommendations. The DEIR should be revised to incorporate interim bypass flow requirements of 40 cfs from June 1 to November 30 and a 132 cfs from December 1 to May 31.

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The interim bypass flows of 40 cfs and 132 cfs significantly alters the environmental impact analysis, conclusions and mitigation measures of the DEIR. I have drawn on my Table 4 a bold line at approximately 40 cfs and 132 cfs for the appropriate months. My Table 4 shows that the percentile flow limitation criterion proposed in the DEIR mitigation measures and Table A do not appear to be protective of public trust resources. This suggests that past historic diversions by the El Sur Ranch wells likely had an impact on fish passage and habitat. Therefore, the DEIR should provide an analysis the potential past impacts from the CEQA baseline diversions.

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10) a) Because the area that this sediment discharges to is critical habitat, a technical study is needed on the areas of erosion along the walls of Swiss Canyon to identify the level of stability and the causes of any instability and to provide mitigation measures for stabilizing the slopes and preventing further erosion. The DEIR should provide the results of this study and include any recommendations as mitigation measures.

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b) The DEIR should evaluate whether leakage from an irrigation pipe(s) is discharging into

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Swiss Canyon. In addition, the DEIR should evaluate the potential impact from irrigation pipe maintenance activities within Swiss Canyon and the need for permits along with the recommended permit conditions.

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(cont.)

- 11) The DEIR should evaluate whether the existing baseline irrigation practices of the El Sur Ranch fall under the requirements of Order R3-2009-0050 and MRP R3-2004-0117. If they do, then the DEIR should provide a copy of the management checklist/self assessment, the Farm Water Quality Management Plan, copies of the completed practices implementation checklists, and copies of the annual monitoring reports. The results of any monitoring under this Order should be incorporated into the DEIR's environmental analysis and mitigation measures developed. as necessary.

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The DEIR should evaluate whether the proposed project irrigation practices fall under the requirements of Order R3-2009-0050 and MRP R3-2004-0117. If the baseline conditions do not fall under the Order, indicate whether the Notice of Intent will be filed for the proposed project and when the required management checklist/self assessment form and the Farm Water Quality Management Plan along with implementation of the monitoring and reporting program will be developed and implemented. The lack of water quality data on the tailwater pond waters and other waters that discharge from the irrigated pastures as required by the Order suggests that the current operations either do not fall under Order R3-2009-0050 or may not be not in full compliance with the requirements from the Order. In addition, several of the future reports required by the mitigation measures, 4.2-2 – an Irrigation Water Management Plan and 4.2-4 – an Erosion Control and Operations Management Plan, appear to be similar to the Farm Water Quality Management Plan requirement of the Order. If the project operations fall under the Order, then the DEIR should discuss how the mitigation management plan identified in the DEIR will integrate with the requirements of the Order.

The DEIR should evaluate and provide mitigation measures for any potential impacts from irrigating the pastures based in part on the results of any previous water quality monitoring, particularly the project's practice of leaching out the salts that results from applying additional irrigation water. What impact does this leaching have on the quality of ground water or surface water? What monitoring and reporting will be done to evaluate potential impacts from leaching of salts?

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- 12) The DEIR should expand on the discussion of the potential impacts from applying higher salinity water regardless of whether the saltwater intrusion is caused by high tides or pumping or a combination. The impacts from irrigating with higher salinity water and the impacts of discharging the salts leached from the pasture soils may cause a significant environmental impact. A mitigation measure is needed for impact 4.2-7 that requires the wells, Old and New wells, be shut off whenever the salinity levels reach 1,000 µ/cm and followed up with sampling and testing of chloride concentration, and that the shutoff time, date and water quality measurements be documented and reported.

3-39

- 13) a) Seepage at the cliff face and resultant sapping erosion can be expected to increase with an increase in water applied to the adjacent pastures from the baseline of approximately 3 feet to the application's 6 to 6.5 feet. This is particularly significant during periods where the leaching of salts is undertaken because that requires applying more water

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than needed for vegetation growth in order to flush the salts downward. This flushing water will likely perch on the clay subsoil rather than penetrate it, and eventually flow towards the cliff face, increasing the volume and duration of seepage along the bluff.

- b) The addition of more irrigation water to the adjacent pastures from the baseline of approximately 3 feet to the application's 6 to 6.5 feet will likely add to the perched ground water on top of the clay subsoil. This perched water will eventually seep out at the cliff face and may increase the areas of saturation along with an increase in unstable areas. The DEIR should evaluate the source of the ground water seepage along the coastal bluff adjacent to the El Sur Ranch pastures and provide mitigation measures to ensure that irrigation practices do not cause or accelerate coastal bluff instability or erosion.

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General Comments and Recommendations

- 1) El Sur Ranch is seeking an appropriative water right for diverting water from a subterranean stream using two existing production wells that are located in Andrew Molera State Park on the flood plain at the mouth of the Big Sur River. The pumped water is applied to pastures that are both within and outside the watershed of the Big Sur River. Irrigation of the land that lies within the river's watershed can be done under a claim of riparian right. Irrigation of land that does not lie within the river's watershed using water from these wells requires an appropriative water right. The reason that this appropriative water right can be sought for a diversion using these two wells is because they are pumping water from a subterranean stream flowing through a known and definite channel (Water Code Section 1200). The DEIR states on page 2-13 that a determination that the ground water being diverted by the two wells is from a subterranean stream is based on the technical information provided in the April 1999 Jones and Stokes hydrologic investigation report, which confirmed an earlier April 1992 SWRCB staff inspection report. However, the DEIR doesn't acknowledge the fact that the SWRCB has established a test for subterranean stream flow with its Garrapata Decision (Decision 1639) issued in September 1999 after the Jones and Stokes report.

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Apparently, the first determination that the ground water being pumped by the El Sur Ranch wells is from a subterranean stream was made in the April 12, 1992 SWRCB staff inspection report prepared by Mr. Lewis Moeller, Water Resource Control Engineer. Mr. Moeller found that the two wells are pumping from underflow of the Big Sur River and not from percolating ground water. Mr. Moeller's findings that the water being pumped is underflow of the Big Sur River and the fact that the wells need to be located on the river deposits of the Big Sur River appear to be the only reasons to conclude that the pumped water is taken from a subterranean stream. Mr. Moeller reached a conclusion that 90 acres of the El Sur Ranch's pastures can be irrigated under a valid claim of riparian right, but that the remaining acreage was not riparian to the Big Sur River. Thus, an appropriative water right is needed to divert the underflow from the river for the purpose of irrigating non-riparian pastures.

At the time of Mr. Moeller's inspection report, the finding that the El Sur Ranch wells pumped underflow may have been sufficient evidence to reach a conclusion that the water being pumped was taken from a subterranean stream. In September 1999 the SWRCB's issued Decision 1639 which gives the requirements for defining a subterranean stream.



This decision supercedes both Mr. Moeller's inspection report and the Jones and Stokes April 1999. Decision 1639 established a four-part physical test for ground water to be classified as a subterranean stream flowing through a known and definite channel. The four physical conditions that must exist are:

- A subsurface channel must be present;
- The channel must have relatively impermeable bed and banks;
- The course of the channel must be known or capable of being determined by reasonable inference, and
- Groundwater must be flowing in the channel.

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(cont.)

While there appears to be sufficient hydrogeologic information in the DEIR and its referenced reports to demonstrate that the SWRCB's four physical conditions of a subterranean stream can be met at the point of diversion of El Sur Ranch wells, the DEIR doesn't compile or present the information in a organized manner that allows for this finding. For example, DEIR Figures 4.2-1, 4.2-2a, 4.2-2b, and 4.2-3 provide sufficient information to define the location of the subterranean stream. The DEIR discusses the nature of the alluvial aquifer from page 4.2-17 to page 4.2-22 providing information that ground water is stored and is flowing in the subterranean stream, and that its hydraulic conductivity ranges from 3,567 to 3,679 feet per day. The discussions in The Source Group, Inc.'s (SGI) 2005 report on the Franciscan Formation, Section 3.2.1, the terrace deposits, Section 3.2.2, and the alluvial aquifer, Section 3.2, provide sufficient data to define the nature and hydrogeologic character of the subterranean stream aquifer and the bed and bank materials. Section 3.3.4 of the 2005 SGI report indicates that the terrace deposits that compose part of the bed and bank have a maximum hydraulic conductivity of 100 feet per day. Although the hydraulic conductivity of the underlying Franciscan Formation isn't stated, the discussion of the bedrock unit in Section 3.2.1 states that it grades from dark grey clay to a weathered micro-greywacke beneath the El Sur Ranch wells. The hydraulic conductivity of the underlying grey clay and weathered bedrock would likely be no greater than the younger less weathered terrace deposits. With this information, the hydraulic conductivity ratio of the subterranean stream to the bed and bank materials can be calculated at approximately 35 times (3,567 ft/day divided by 100 ft/day = 35.67). Thus, the subterranean stream's hydraulic conductivity is greater than the bed and bank by more than 1 order of magnitude (order a magnitude = 10 times greater), a general standard that the SWRCB has used in the past for determining bed and bank.

The DEIR should acknowledge the requirements of SWRCB's Decision 1639 that defines four physical conditions needed for a subterranean stream flowing through a known and definite channel. The DEIR should then demonstrate that these conditions are met at the point of diversion of the El Sur Ranch wells. The SWRCB should as part of the CEQA and/or water rights permit process make a finding that the El Sur Ranch wells divert ground water from a subterranean stream flowing through a known and definite channel.

2) The proposed project is the issuance of water rights permit to appropriate water from the Big Sur River to irrigate pasture-lands of the El Sur Ranch. The irrigated pastures include lands that are considered riparian to the river. The DEIR and the 3rd Amendment to the water rights application information about the riparian lands that seems to be in conflict. Clarification is needed about whether these riparian lands are included in the request for an appropriative water right. The DEIR should discuss separately the riparian and non-riparian land impacts and requested diversions.

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The DEIR states on page 2-5 that the total project area is 292 acres of which 25 acres are dunes, tailwater pond, outfall, access roads, or irrigation canals. The remaining area, 267 acres, is irrigated pasture, which is the place of use (POU) for the water right application no. 30166. The DEIR states that an existing riparian right serves the 25 acres of these 267 acres of irrigated pasture. Therefore, the appropriative water right is being sought for the remaining 242 acres. This POU acreage appears to differ from the 267-acre POU area given Table 1 on page 3 of the memorandum accompanying the October 17, 2006 3rd Amendment to the water rights application no. 30116 (3rd Amendment). The 3rd Amendment states that the POU is a total of 267 acres and then lists separately the 25 acres of riparian lands. The 3rd Application states that the applicant is claiming a right to use a portion of the diverted water under a riparian right, but it's unclear if the applicant is requesting an appropriative right for water used on riparian lands.

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I measured the irrigated pasture areas using ArcMap software with the USGS digital orthoquadrangle image (DOQQ o36121c7sw.tiff) as a base map and placed a geo-referenced overlay of a scan of DEIR Figure 2-3 to define the project boundaries. My measurements of Figure 2-3 found that the total irrigated pasture area is approximately 248 acres not the 267 acres stated in the 3rd Amendment and DEIR. I assumed that the 25 acres of riparian lands is an accurate measure of this area. The 25 acres of riparian lands are included in my 248 acres. Thus, the area that an appropriative water right is needed is 223 acres not the 242 acres given in the DEIR. While this 19-acre difference in total POU area may be small, it does impact the amount of water being applied per acre. The maximum annual diversion of 1,615 ac-ft being requested in the water right application when applied uniformly over the POU changes from approximately 6 feet per year to 6.5 feet per year (1,615 ac-ft over 267 acres versus 1,615 ac-ft over 248 acres). If the 267-acre POU area is used throughout the DEIR is changed to 248 acres, it will affect the analysis in a number of chapters as well as the water rights application. I haven't attempted to assess the impact on 2005 and 2007 Natural Resource Consulting Engineers, Inc.'s (NRCE) analyses of water use, but it's likely to have an impact.

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The technical documents supporting the DEIR provide some confusion as to whether the Swiss Canyon area is part of the lands. The 3rd Amendment's Table 1 on page 3 appears to indicate that the Swiss Canyon area is included in the POU area even though Figure 2-2 of the DEIR shows that it is not part of the POU. The DEIR also states that Swiss Canyon is not within the POU and is not part of the irrigated area under existing or proposed conditions (page 2-6). The 267-acre POU area is derived in the 3rd Amendment by removing the 25 acres of riparian from the 292-acre total project area. The Swiss Canyon area is not mentioned in the DEIR as part of the 25-acres of non-irrigated lands. The 2005 NRCE report on page 6-11 and the 2007 report on page 7-15 state that Swiss Canyon is "likely irrigated by seepage water from the irrigated pasture fields above," that the grasses



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(cont.)

in the canyon derive a beneficial use from this seepage, and that the cattle graze on the grass in the canyon. Therefore, they included the canyon in their irrigated area. NRCE didn't indicate how much water from the irrigated pastures drains into Swiss Canyon, but the inclusion of the canyon area in their calculations and the water right application apparently assumes that the requested 6 feet per year or a total of approximately 150 acre-feet area will run off or seep into the approximate 25 acres of canyon.



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Clarification is needed about whether these riparian lands are included in the request for an appropriative water right. The DEIR should discuss separately the riparian and non-riparian land impacts and requested diversions. I've measured the area of the point of use, the irrigated pastures, using ArcMap software and found that the total irrigated area is approximately 248 acres, not the 267 acres stated in the DEIR. When the 25-acres of riparian land is subtracted from my 248 acres, the result 223 acres is the total for irrigated pastures subject to the appropriative water right. The NRCE analysis of water demand appears to include the Swiss Canyon area, but the DEIR does not consider it part of the irrigated. I recommend that the actual area of the irrigated pastures be measured and documented by a licensed land surveyor. Once the actual area is measures, the DEIR should be revised based on this updated and more accurate information.



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3) The DEIR indicates that the amount of baseline and current water diverted is calculated using electrical power usage and pump efficiency tests results (page 2-14). The 2005 NRCE report states that pump efficiency tests were conducted in 1967, 1992 and 2004 (page 6-17). NRCE provides the results of the 2004 pump efficiency tests giving the kilowatt-hour to acre-feet conversion rates in Table 6-12. Historic water diversions based on the electrical usage conversion are presented in the DEIR in Table 2-1, which covers a period from 1975 to 2004. The DEIR doesn't provide any information on water use prior to 1975, or after 2004. Neither the DEIR, nor the NRCE report provides information on the actual electricity usage or the actual pump efficiency tests. From DEIR Table 2-1, it is clear that an accurate estimate of the water diverted is a complex engineering calculation that requires knowledge of what pasture(s) is/are being irrigated, what the duration of pumping is for each well associated with each pasture and the change in pump efficiency with time. The 2005 NRCE report states that daily records of pump operations were available from 1989 to 2000 (page 6-17). Apparently, daily records of pump operations are not available before 1989 or after the year 2000.

The calculation of water diversion is fundamental to the establishment of baseline water diversion and the subsequent DEIR analysis of impacts. The maximum pumping rate of each well is apparently calculated by the pump efficiency tests rather than direct measure with a flow meter. The lack of actual data on electricity consumption and the well efficiency tests prevents review of the accuracy of the historic water use and the pumping capacity of the wells.

The engineering calculations that convert electrical consumptions to pumped volume and rate used in establishing historic and baseline water usage and well pumping capacity should be provided in the DEIR along with the input data, pump efficiency test results, sources and magnitude of potential error, and any other assumptions used to make the diversion and pump capacity estimates.

The DEIR should provide as part of the mitigation measures a discussion of how the monitoring of the various diversion volumes and pumping rates would be accomplished using the power usage rather than direct measurement with a flow meter. The mitigation monitoring should include specific data collection requirements, such as frequency and type of measurements that are needed to document compliance with the water right permit. Specifically, how often must electrical power usage be collected, monthly, daily or hourly? Should power usage be linked with the pasture(s) being irrigated? How often will water diversions be reported, particularly during periods of low river flow? Will the frequency of monitoring and/or reporting vary with the season and river flow? The DEIR should also discuss as a mitigation measure the use of calibrated flow meters on the discharge pipes that measure both the instantaneous rate of discharge and the cumulative total discharge. The mitigation should also address the issue of monitoring the time and duration of pumping for each well so that the instantaneous total diversion can be monitored.

3-48

- 4) The 3rd Amendment to water rights application no. 30166 proposes six diversion limits. The proposed period of diversion and use is year-round. Four of the limits are based on the volume of diversion, while two set limits on the rate of diversion. These six diversion limits sometimes overlap making monitoring, reporting, determination of compliance, and enforcement very complex. The volume and rates of diversion sought in the water rights application are based on estimates of historic use and an estimate of optimum irrigation requirements. The estimate of required optimal irrigation was derived using an irrigation efficiency of 65% and an additional 10% for leaching salts. The estimated irrigation requirements appear to be an overestimation of actual historic use by approximately 32% for the 30-year median of 962 acre-feet (312 ac-ft / 962 ac-ft = 0.31), and approximately 42% for the median of the baseline period (377 ac-ft / 898 ac-ft) (see my Table 1). The requested water allocation for an annual maximum diversion of 1,615 acre-feet and a 20-year average are approximately 68% and 25%, respectively, above the 30-year median of actual water use.

3-49

The application seeks to have an annual diversion that is an additional 10 percent above the optimal irrigation requirement for leaching of salts that might build up as a result of irrigating with higher salt content water. The need for leaching could be lessened through irrigation management, pumping less from the Old Well, and close monitoring of irrigation water salinity. The maximum annual diversion limit is based on optimal irrigation during a year that would be similar to the drought of 1977, a period of lowest flows on record for the Big Sur River. The DEIR's justification of historic diversions as baseline does not consider whether these past diversions might have had an impact on public trust resources, such as fisheries. The six water diversion limitations are given in DEIR Table 2-4 and will be discussed in the order listed below:

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- 1,615 acre-feet maximum calendar year total diversion;
- 1,200 acre-feet running 20-year average maximum annual total diversion;
- 735 acre-feet July 1 to October 1 seasonal maximum total diversion;
- 230 acre-feet July 1 to October 1 monthly maximum diversion;
- 5.84 cubic feet per second maximum instantaneous pumping rate; and
- 5.34 cubic feet per second maximum 30-day average pumping rate.

3-51

a) 1,615 acre-feet maximum calendar year total diversion

The maximum 1,615 acre-feet per calendar year diversion will provide for the average application of approximately 6.5 acre-feet per acre (or just feet) of water across the 248 acres of pasture, or 6 feet if the DEIR's 267 acres (that includes the 25-acres of riparian lands) is used. This water is in addition to the 26.41 inches of annual precipitation stated in the 3rd Amendment, or the 27.26 inches of annual precipitation given in Table 7-14 by NRCE in their 2007 report, or the 30.63 inches of annual precipitation given in Table 1 of Appendix B of NRCE's 2007 report. The water right application request for a maximum annual 1,615 acre-feet of diversion is based on an estimated historic high diversion of 1,611 acre-feet in 1977 and 1,737 acre-feet in 1984 (page 4.1-5 and Table 2-1). Water year 1977 had the lowest average annual flow on record, 10 cfs, for the Big Sur gage; water year 1984 had a near median annual average flow of 80.6 cfs (USGS web site for gage #11143000). During 1984 the diversion was highest because the New Well was brought on-line, and apparently the pumping wasn't based on and far exceeded what was needed. The DEIR notes that the amount pumped in 1984 was not normal, but still uses it in the justification of maximum annual diversion. The DEIR also notes on page 2-24 that calculations show that the amount of water pumped in 1977 exceeded the 1,430 acre-feet that were calculated as necessary (Table 2-3). It should also be noted that the year being used to set the maximum historic use, 1977, is not within the 1985 to 2004 CEQA baseline period of the DEIR. Table 2-1 shows that the highest annual diversion during the baseline period was 1,136 acre-feet in 2004.

3-52

The DEIR indicates in the footnote of Table 2-3 that the source of the irrigation diversion requirements listed in the table is from the 2006 3rd Amendment to the water rights application. However, there is a conflict between the amended water rights application's Table 5 and the tables in the supporting technical reports. The 2006 3rd Amendment states on page 4 that the annual amount of water needed for optimal crop production would have been 1,440 acre-feet for 1977, while Table 5 on page 8 of the Attachment A of the 3rd Amendment, which was the source for DEIR Table 2-3, shows 1,430 acre-feet. The source for Table 5 in the 2006 3rd Amendment to the application is unknown because it disagrees with the monthly irrigation diversion requirements table given in Appendix B of the 2005 NRCE water use report, the document cited in the 3rd Amendment. It even disagrees with the monthly irrigation requirement given in the table in Appendix C of the updated 2007 NRCE report. The 2005 NRCE report shows irrigation diversion requirements for 1977 were 1,321 acre-feet, but the analysis was based on an irrigation area of 290 acres, with 55 percent efficiency and 11 percent leaching. The 2007 NRCE report shows irrigation diversion requirements for 1977 were 1,303 acre-feet, but the analysis is based on 267 acres, with 65 percent efficiency and 10 percent leaching. Given that the updated 2007 NRCE report followed the 2006 3rd Amendment to the water right application, the conflict is understandable. However, the 2007 NRCE addendum report was accessible yet an outdated table on irrigation diversion requirements was still used in the DEIR. **Table 2-3 of the DEIR should be updated to show the estimate of diversion requirements based on the more recent 2007 estimates and the DEIR re-written to reflect this updated information.** The water rights application may also need to be updated.

3-53

The updated 2007 NRCE analysis attempts to justify the argument in the application for the 1,615 acre-feet annual maximum based on the need for optimal pasture growth and a need for leaching of built up salts. The fact is that the application is for a maximum annual diversion that is based on a non-baseline year with the worst flows on record, plus approximately 24 percent $((1615 \text{ ac-ft} - 1303 \text{ ac-ft}) / 1303 \text{ ac-ft} = 0.239)$, which includes the extra 10-percent for leaching. I'm not certain what the limit of beneficial use of applied water is, but appropriating annually 24 percent more water than is needed to satisfy optimal pasture growth during the worst drought on record, seems to be excessive.

3-54

The proposed application of 6-plus feet of water to a pasture greatly exceeds the irrigation requirement that others have either measured in the Monterey County area for pastures or cited as being considered not wasteful. The California Department of Water Resources (DWR) web site has spreadsheets that tabulate agricultural land and water use throughout California for 1998 through 2001 (<http://www.water.ca.gov/landwateruse/anlwuest.cfm>). El Sur Ranch is located in the Detailed Analysis unit 057-Santa Lucia Range, Planning Area 301-Northern Central Coast, and the Central Coast hydrologic region. DWR lists a range of applied water for pasture in these study areas for the years 1998 through 2001 of 2.17 to 3.5 acre-feet per acre (or feet). Mr. Moeller in his April 12, 1992 SWRCB staff inspection report stated that a typical application rate for pasture land is 3 acre-feet per acre (3 feet).

In fact, the 2007 NRCE report states that the average historic January to December irrigation application on the El Sur Ranch is 3.43 feet, which is close to the DWR regional March to October estimate that ranges from 3.3 to 3.5 feet. A review of DEIR Table 2-1 shows that the applicant's historic irrigation occurred mostly during March to October. **The DEIR doesn't present a comparison, for similar periods, between the El Sur Ranch's historic water use and the historic regional water use documented by DWR or others such as the various Monterey County water agencies. It should be noted that the year being used to set the maximum historic use, 1977, is not within the 1984 to 2004 CEQA baseline period of the DEIR.**

Finally, the Water Code in Section 1004 states that "useful or beneficial purposes' shall not be construed to mean the use in any one year of more than 2-1/2 acre-feet of water per acre in the irrigation of uncultivated areas of land not devoted to cultivated crops."

The Water Code doesn't indicate whether an irrigated pasture is considered a cultivated or uncultivated crop. The USDA does, however, define the difference between a cultivated and uncultivated crop for its National Resource Inventory Program. Footnote 5 in a 2006 USDA publication, Environmental Effects of Agricultural Land-Use Changes by Lubowski and others, (<http://www.ers.usda.gov/publications/err25/>) provides the following distinction:

3-55

⁵Cultivated cropland includes land identified as being in row or close crops, summer fallow, aquaculture, in crop rotation, or other cropland not planted. Cultivated cropland includes cropland in short-term set-aside programs; double-cropped horticulture; and land in either hay or pasture which had at least one of the three previous years in row or close-grown

crops. The NRI definition of uncultivated crops includes land in hay with no rotation and single-cropped horticulture.”

3-55
(cont.)

The DEIR should clarify that the pastures are considered un-cultivated croplands. According to the USDA definition, the permanent pasture land at the El Sur Ranch would likely be considered uncultivated lands and subject to the 2-1/2 acre-feet-per-acre beneficial use required by Water Code Section 1004.

b) 1,200 acre-feet running 20-year average maximum annual total diversion

The second proposed diversion limit is a 20-year running average maximum annual total of 1,200 acre-feet. Application of this criterion requires calculating next year’s maximum diversion by averaging it with the previous 19 years of annual diversion data. The date that this forward calculation needs to be done isn’t specified in either the DEIR or the 3rd Amendment, but presumably it would be done at the first of each year because a calendar year is the stated period of use, January 1 to December 31. Table 2-1 of the DEIR shows that the 20-year rolling average for the baseline period of 1985 to 2004 was 857 acre-feet. Thus, the requested 1,200 acre-foot 20-year rolling average is approximately 40 percent above the baseline average ((1,200 ac-ft -857 ac-ft) / 857 ac-ft = 0.40). The DEIR doesn’t provide water use information for years after 2004. Therefore, whenever the water rights permit is approved, there will be a for water use data after 2004 in order to calculate the 20-year average. I made a spreadsheet with 19 years of baseline water use data (1986-2004) to calculate how many years the 1,615 acre-foot maximum annual diversion can occur before the 1,200 acre-foot average is reached. Without the last 5 years of water use data (2005-2009), this calculation has to use, beginning with the year 2005, the maximum annual diversion of 1,615 acre-feet. According to the calculation, the 1,200 acre-feet limit would be exceeded in 2014. **The 1,200 acre-foot running average diversion limit doesn’t have much effect on reducing the number of years that the maximum annual volume can be diverted if the next 10 year’s diversions can be at the maximum of 1,615 acre-feet. The request for an average annual diversion limit that is 40 percent above the historic baseline average seems excessive and suggest unreasonable use.**

3-56

c) 735 acre-feet July 1 to October 1 seasonal maximum total diversion

The DEIR states on page 2-25 that two out of the 30 years of historic record exceeded the 735 acre-foot seasonal limit. Based on DEIR Table 2-1, those two years were 1979 and 1984. As discussed above and hinted at in the DEIR, pumping in 1984 was related to the development of the New Well and exceeded what was necessary for beneficial use. The estimated actual pumping in 1979 exceeded the requested 735 acre-foot seasonal limit by 9 acre-feet. The water year 1979 was an average water year with an average annual flow of 97.9 cfs (USGS web site). It should also be noted that 1979 is outside the DEIR baseline period. The historic seasonal diversion for 1977, the water year with the lowest flows on record, was only 661 acre-feet. Additionally, DEIR Table 2-3 shows the calculated estimate of diversion required for this four-month irrigation season in a year with no precipitation is 690 acre-feet.

3-57

I’ve attached my Table 1 which compares the historical and the calculated optimal

diversions shown in DEIR Tables 2-1 and 2-3, respectively. Based on DEIR Table 2-3 and my Table 1, the estimated optimal irrigation diversion requirements during the baseline period for the July 1 to October 31 irrigation season reached a maximum of 735 acre-feet once, in calendar year 1993, and the difference between actual diversion and calculated irrigation requirement for that year is 81 acre-feet (735 ac-ft – 654 ac-ft = 81 ac-ft). The difference between the median of the actual diversion and the median of the optimal irrigation season for the baseline period is 98 acre-feet (653 ac-ft – 508 ac-ft = 98 ac-ft). The difference between the actual and optimal irrigation for the 30-year record is 53 acre-feet (651 ac-ft – 599 ac-ft = 53 ac-ft). These are differences of approximately 19% ($98/508 = 0.19$) and 9% ($53/599 = 0.088$) above the median, respectively.

3-57 (cont.)

As with the annual maximum diversion limit, the water right application is requesting an appropriation for the summer irrigation season that is at the maximum of historic use and estimated optimal diversion requirement. The requested 735 acre-foot seasonal diversion is 45 acre-feet greater ($735-690 = 45$) than the calculated irrigation requirement for a year with no precipitation and 74 acre-feet greater than the historic diversion during 1977 ($735-661 = 74$), the year of lowest flows on record. The 3rd Amendment states that this seasonal diversion limit is intended to regulate pumping during the months of lowest flows. The DEIR doesn't provide any information on the relationship between the historic diversions and the flows in the river at the time of these diversions with reference to the current knowledge about flows necessary for fish passage. Thus, there is no assessment in the DEIR of whether the historic seasonal diversions might have affected fish passage. Given that the requested diversion is 11% greater than the historic diversion of the year with the lowest flows on record ($74/661 = 0.11$), it doesn't seem to offer much protection to the public trust resources. The DEIR should also show that the flow percentiles used in the mitigation measures as additional limit on the seasonal diversion are protective of fish passage and other public trust resources.

3-58

The proposed July to October total seasonal limit for total diversion is set just below the maximum one-year historic diversion and exceeds the calculated estimate of the optimal diversion requirement for a year with no precipitation. In addition, the requested diversion limit of 735 acre-feet is 11% greater than the historic diversion of the year with the lowest flows on record (1977), which doesn't seem to offer much protection to the public trust resources, nor have the effects of of such a diversion, in fact, been analyzed. The DEIR should provide an analysis of the relationship between historic diversion and the percentile flows in the river at the time of diversion, along with an opinion on whether historic seasonal diversions might have affected public trust resources. The DEIR should also provide an evaluation to justify the flow percentiles used in the mitigation measures as additional limits on the diversions. Consideration should be given to adding an additional mitigation measure that would further restrict diversion during periods of drought, such as eliminating the additional 10-percent diversion desired for annual leaching of salts during periods of drought.

3-59

d) 230 acre-feet July 1 to October 1 monthly maximum diversion

The fourth limitation addresses the monthly volume of diversion during the irrigation season running from July 1 to October 31. The 2006 3rd Amendment states that this diversion limit is approximately the calculated maximum irrigation requirement for optimal forage in July. The DEIR states on page 2-25 that “[t]his volume is the calculated maximum irrigation diversion requirement for optimal forage production in July, and is based on an average pumping rate not-to-exceed 5.34 cfs for the period July through October.” However, a pumping rate of 5.34 cfs results in a total monthly diversion of approximately 318 acre-feet. The DEIR in Table 2-3 lists the estimated July requirements and has a maximum of 222 acre-feet for the baseline years, but gives no average for any month. The equivalent table in Appendix C of the NCRE 2007 report shows a July maximum of 220 acre-feet. The 2006 3rd Amendment indicates that the 230 acre-foot monthly maximum diversion includes a “cushion” of 37 acre-feet above the average diversion requirement to allow for unanticipated variations in need. Back calculating by subtracting the 37 acre-foot cushion from the 230 acre-feet gives an average July diversion requirement of 193 acre-feet. Table 2-1 of the DEIR shows that the average historic baseline diversion in July was 152 acre-feet. Thus the requested 230-acre-foot maximum monthly limit from July to October is approximately 51 percent higher than the baseline average use ((230 ac-ft -152 ac-ft) / 152 ac-ft = 0.513). This 51 percent above the baseline average during the period of lowest flows exceeds the diversion requested for the 20-year rolling average, which is 40 percent above the baseline average. The July monthly average diversion is the highest of the July to October months for both the 30-year historic use and 30-year calculated optimal irrigation requirement. It should be noted that DEIR Table 2-1 shows that June has the highest average historic rate of baseline diversion, while the DEIR focuses most of the impact assessment on the months of September and October.

3-60

The 230 acre-foot maximum monthly limit from July to October is approximately 51 percent above the baseline average diversion for July, the month used in setting the limit. This limit allows for maximum diversion during the period of lowest flows, which conflicts with the goal of protecting public trust resources. The month of June has the highest average historic diversion of June through November, the months with the lowest historic flows. The DEIR should be revised to provide a discussion of the applicant’s reasons for the requested 37 acre-foot “cushion” and the impacts on public trust resource that result from using the month with the second highest average diversion for establishing the dry season diversion limit.

e) 5.84 cfs maximum instantaneous pumping rate

The water right application requests a maximum instantaneous diversion rate of 5.84 cfs based on an application rate of 1 cfs for each 50 acres assuming a total irrigated acreage of 292 acres (see Table 1 on page 3 of the memorandum accompanying the 3rd Amendment). The DEIR is based on irrigating 267 acres, and as noted above, I measured the actual number to be approximately 248 irrigated acres. The DEIR doesn’t give any discussion or reasoning as to why the maximum diversion is set at 5.84 cfs beyond stating that it is below the historic high pumping rates that periodically

3-61

exceeded 6 cfs (page 4.2-59). The DEIR in Table 4.1-1 lists the 5.84 cfs rate as a “[m]aximum monthly rate” not an instantaneous rate. This conflicts with the 2006 3rd Amendment that requests “a flow rate not to exceed 5.84 cfs at any time.”

The standard of one cubic foot per second per 50 acres apparently comes from California Code of Regulations (CCR) Title 23, Section 697(a)(1), which discusses reasonable use of water appropriated by direct diversion. According to the CCR Title 23, Section 697(a)(1), the 1 cfs per 50 acres rate of use, or duty, applies when there is an abundance of water and a heavy transportation loss, or for irrigating porous, sandy or gravelly soils in the Central Valley of California or elsewhere in the State where similar conditions prevail. For other than porous, sandy or gravelly soils in the Central Valley or area with similar conditions the, CCR Title 23, Section 697(a)(1) considers a duty of 1 cfs per 80 acres to be reasonable use. In areas where water supply is less abundant and conditions are favorable to a more economical use, a duty of 1 cfs for 150 acres is considered reasonable use. The conditions that the CCR Title 23, Section 697(a)(1) applies to the diversion rate of 1 cfs for 50 acres are not fully met at El Sur Ranch and therefore the reasonableness of the proposed 5.84 cfs maximum diversion may not be consistent with the CCR Title 23, Section 697(a)(1).

3-62

First, the climatic conditions at the El Sur Ranch along the Central Coast of California adjacent to Big Sur are not similar to the central valley of California. Second, the majority of the soils being irrigated (86 percent) are a Santa Ynez fine sandy loam and likely don’t fit the porous, sandy or gravelly criteria of the CCR Title 23, Section 697(a)(1). Water available for appropriation is not abundant throughout the year, especially during summer months. Transportation losses are minimal because water is delivered to the pastures by pipe. Finally, the area of irrigation is not 292 acres as stated in the application, but closer to 248 acres, as discussed above. Therefore the reasoning used in the water rights application and the DEIR to justify the one cfs per 50 acres as a reasonable use doesn’t seem to apply.

A reasonable diversion rate of 3.1 cfs is calculated from CCR Title 23 Section 697(a)(1) with a duty of 1 cfs per 80 acres, along with an irrigated area of 248 acres (248 acres * (1 cfs / 80 acres) = 3.1 cfs). This value assumes that the El Sur Ranch lands being irrigated have a climate similar to the Central Valley of California. Table 4.2-6 of the DEIR lists the baseline mean flow diversions by month and shows that the historic maximum diversion in June was 2.89 cfs, which is comparable to the 3.1 cfs calculated above.

The DEIR should document the reasoning behind selecting the maximum instantaneous diversion rate of 5.84 cfs. This documentation would demonstrate why the El Sur Ranch lands fit the conditions specified in CCR Title 23 Section 697(a)(1) for 1 cfs per 50 acres, use the actual acres being irrigated in the calculation, and then compare the requested instantaneous rate to the baseline condition.

f) 5.34 cfs maximum 30-day average pumping rate

The sixth water right diversion limit is the 5.34 cfs 30-day average diversion rate for any

3-63

time of the year. As with the maximum instantaneous diversion rate, the DEIR does not provide the reasoning behind the selection of this 30-day running average diversion limit, but some reasoning is provided in 2006 3rd Amendment. This limit was added in the 2005 amendment, based on the ratio of 50 acres per cubic foot per second, similar to the maximum instantaneous rate, only this time 267 acres was used as the number of irrigated acres. In addition there is a statement in the DEIR on page 2-26 that the 230 acre-feet July to October monthly limit is based on the average pumping rate not-to-exceed 5.34 cfs. However, the maximum monthly diversion from continuous pumping at a rate of 5.34 cfs is approximately 318 acre-feet. Elsewhere, the 3rd Amendment on page 8 of the accompanying memorandum states that, based on the 230 acre-foot monthly maximum diversion limit, the monthly pumping rates should not normally exceed 3.87 cfs in “any calendar month,” but that the 5.84 cfs pumping rate is retained because it is close to the combined capacity of the two wells and is needed on occasion. However, the 230 acre-foot monthly limit is only for the months of July to October. In addition, the combined pumping capacity of the two wells is 7.93 cfs, 4.45 cfs for the Old Well and 3.48 cfs for the New Well (page 4.2-48).

3-63
(cont.)

As discussed above, the rationale for this reasonable use standard apparently comes from CCR Title 23 Section 697(a)(1) and, as noted above, the reasonable use diversion of 1 cfs per 50 acre doesn’t seem to apply to the El Sur Ranch pastures. The maximum pumping rate of 3.1 cfs based on a duty of 1 cfs per 80 acres still applies. If this diversion limit were applied during the July 1 to October 31 irrigation season, then a 30-day running average maximum total diversion of approximately 184 acre-feet would result. It should be noted that 184 acre-feet is the value used in the DEIR in Table 4.2-6 for both the project’s 20-year average and the maximum diversion for the months of July to October, rather than the maximum limit of 230 acre-feet in any month requested in the 3rd Amendment.

3-64

The DEIR presents other information related to this 30-day average maximum diversion rate that appears to conflict. Table 4.1-1 lists a 30-day average rate (5.34 cfs) as a baseline of 234 acre-feet for August and September 1997. However, Table 2-1 lists the historic diversions during August and September 1997 as 97 and 121 acre-feet, respectively, and 94 and 98 acre-feet for July and October 1997, respectively. Table 4.1-1 then lists the proposed project’s 20-year running 30-day average as 318 acre-feet. But the 3rd Amendment doesn’t link the 30-day average maximum limit to the 20-year running average limit.

3-65

The water rights application makes a significant distinction between calendar months and the period of 30 days for diversion limits, 230 acre-feet per month and a 5.34 cfs 30-day average maximum. Table 4.2-6 compares the baseline to the proposed project diversion and gives another average rate of 3.09 cfs for the months of July to October, apparently based on the monthly maximum diversion of 184 acre-feet, which is less than the 230 acre-feet limit specified in the water rights application. The reasoning for the 184 acre-feet and 3.09 cfs project maximums given in Table 4.2-6 is unknown, other than it is the 4 month average of the 735 acre-foot seasonal limit, but a 184 acre-foot per month limit in July through October is not required in the application. Another example of the conflict between 30-day and monthly averaging would occur when pumping is continuous during the July 1 to October 31 season at an average rate of

3-66

5.84 cfs (the maximum instantaneous any time rate) for 19 consecutive days in a calendar month with no pumping for the remainder of the month (10 or 11 days depending on the month). This would divert approximately 220 acre-feet and would not exceed either the 230 acre-foot monthly limit or the 30-day average maximum of 5.34 cfs. Nevertheless, this 19-day period of pumping would affect the flow of the Big Sur River by the continuous diversion of 5.84 cfs, which would greatly exceed the impact by the 3.87 cfs diversion assumed by the maximum monthly total diversion of 230 acre-feet, and would have a slightly greater impact than would the maximum 30-day average diversion rate of 5.34 cfs. The overlapping complexity of the various diversion rates, such as the any time maximum 30-day average of 5.34 cfs, the seasonal monthly total of 230 acre-feet, and the any time instantaneous average of 5.84 cfs, is another example of complexity that these overlapping diversion limits create, which raises the question of how the diversions will be monitored and reported, and the limits enforced.

3-66 (cont.)

The DEIR should document the reasoning behind selecting the 30-day running average limit of 5.34 cfs. This documentation would demonstrate why the El Sur Ranch lands fit the conditions specified in CCR Title 23 Section 697(a)(1) for one cfs per 50 acres, use the actual acres being irrigated in the calculation, compare the requested 30-day average rate to the baseline condition, and then discuss the reasoning for distinguishing between and setting different diversion limits for monthly and 30-day running averages.

3-67

- 5) Estimates of the impact on river flows from pumping the El Sur Ranch wells is highly dependent on the location and condition of the Big Sur River as it flows through the pumping zone of influence (ZOI) of the wells. The impacts from a pumping well(s) on a nearby stream are controlled by the distance between the well(s) and the river, the rate and duration of pumping, and the hydraulic conductivity and storage coefficient of the aquifer and any low permeability layer that lines the channel. A great deal of effort by the applicant has been directed to the study of how much and at what location surface water is gained or lost during periods of pumping and non-pumping within the ZOI of the El Sur Ranch wells. While these studies were being conducted, from 1997 to 2007, the lower section of the Big Sur River made a sharp bend towards the southwest (see DEIR Figure 2-2), flowing almost transverse to the axis of Creamery Meadow, and then bent northwest into the lagoon area before bending again southwest to discharge into the ocean.

3-68

The southwestern transverse flow of the river within the ZOI is a critical factor in gains or losses to the river during pumping because it cuts across the regional direction of ground water flow. The applicant previously described the discharge of ground water in the ZOI as upwelling either due to a constriction in the bedrock at the mouth of the river that reduced the volume of ground water discharge or the result of salt-water intrusion during high tides. My June 28, 2006 memo that's included in Appendix B of the DEIR discusses in detail why the constriction hypothesis is not likely the cause of ground water upwelling and why the effect of the salt-water intrusion has not been adequately quantified.

In summary, while the aquifer width and cross-sectional area are reduced at the mouth of the river, but the ability of the aquifer to transmit ground water is not because the hydraulic conductivity increases with depth, which increases the aquifer transmissivity. Thus, the product of the transmissivity times the aquifer width is equal to or greater at notch as

3-69

further upgradient under Creamery Meadow. If the hydraulic gradients at the notch and Creamery Meadow are considered the same, then the quantity of flow is the same using Darcy's Law ($Q = k \cdot i \cdot A$). The upwelling that might be caused by salt-water intrusion hasn't been quantified and, given the daily and seasonal variation in sea level from tides and storms, and impacts of pumping of the wells on salt-water intrusion, it hasn't been shown that any upwelling due to salt-water intrusion is consistent long enough to have made a sustained impact. The likely cause of the ground water discharging to the river in the ZOI is not due to upwelling from a constriction or salt-water intrusion, but rather to a difference in head between the river and the adjacent water table, which is strongly affected by the orientation of the river relative to the direction of ground water flow.

3-69
(cont.)

The orientation of the river transverse to the direction of ground water flow allows for the discharge of ground water into the river on the upgradient riverbank, a gain in flow, whenever the surface water elevation of the river is lower than the water table elevation under the adjacent aquifer beneath Creamery Meadow. The amount of water gained by the river is controlled by the hydraulic conductivity of the aquifer and riverbed, the area of river bed exposed, and the hydraulic gradient, in other words, Darcy's Law. Because the river flows transverse to the direction of ground water flow the gradient between the river and ground water table is at a maximum. When the river is oriented less than perpendicular to the ground water gradient, then the hydraulic gradient between the river and water table is less than maximum and rate of flow between them is reduced. In fact, the conditions where the river flows nearly parallel to the flow of ground water occurs just upstream of the ZOI. Measurements of river flow taken between velocity transect no. 1, VT1, and the ZOI show that this reach of river changes back and forth from a gaining to a losing stream several times. I've attached my Table 2, which shows the changes during July through October of 2004 between upgradient VT1 and study year 2004 velocity transect no. 2, VT2, which is located near the edge of the ZOI (see SGI, 2005, Figure 1-3). This table shows that this section of the river that is outside the ZOI changes from a losing to gaining reach and back again during these 4 summer months. The causes of these changes were not determined. However, the DEIR on page 4.2-62 notes that during the 2007 study for a distance of up to 600 feet upstream from the ZOI the groundwater gradient become more negative, greater river loss, when both wells were pumping. This suggests that the changes from gaining to losing in Table 2 might in part be due to pumping.

3-70

The change in the rate and direction of ground water discharge to the river based on the orientation of the river is an important factor in the consideration of the impacts on the Big Sur River from pumping the El Sur Ranch wells. The DEIR places a lot of emphasis on the gains in river flow that occur in the transverse section of the ZOI. The DEIR balances these gains against the losses that occur in the river due to pumping. The problem however is that these gains are in part dependent on the orientation and location of the river and require that the river stay in its current location and in the current condition for the gains measured during the period of study to remain valid. Unfortunately, the river's location during the 1997 to 2008 period of study is significantly different from its historic location at least in the lower section adjacent to the El Sur Ranch wells. This suggests that the river is very dynamic in the lower section and likely to meander to other locations as a result of high flow events. In fact, the 5,000 cfs peak flow during the recent October 13, 2009 storm event appears to have created a second flowing channel according to

3-71

CDFG staff that conducted recent field surveys following this storm. This change in the impact on the gains or losses to the river flows, from shifting of the channel location and/or a bifurcation of flow in the ZOI, is not evaluated in the DEIR. The fact that the channel recently changed means that the DEIR is based on channel conditions that apparently no longer exist.

The dynamic nature of the lower section of the Big Sur River is apparent when the historic aerial photos of the lower river are reviewed. Several historic aerial photos either were submitted with the applicant's reports or are readily available over the Internet. The Rogers E. Johnson and Associates's (REJA) 2007 report on El Sur Ranch coastal cliff erosion has eight aerial photos taken from 1942 to 2003 that show portions of the lower section of the Big Sur River. The 2005 NRCE report on reasonable beneficial use has a 1929 image of the river adjacent to the southern portion of the project area. A digital orthophoto quadrangle developed by the USGS from May 1994 imagery (NAPP 6920 12) is available over the Internet as a digital tiff file (o36121c7sw.tiff). This imagery can be found at: <http://atlas.ca.gov/download.html>, and a portion that encompasses the project area is attached as my Figure 1. Oblique coastal aerial photos of the mouth of the Big Sur River are available on-line from the Coastal Records Project. The Andrew Molera State Park web site links to these Coastal Records Project images. Attached Figure 2 shows the mouth of the Big Sur River in its historic straighter course on April 30, 1979. Flows at the USGS gage on this day were approximately the mean annual average at 99 cfs. This image also gives an indication in Creamery Meadow of the course the river would take sometime after May 1994.

The historic location of the channel was much closer to the El Sur Ranch wells than its location during the 1997 to 2008 period of study. In fact, the 1992 SWRCB water rights staff report indicated that the river was approximately 160 feet from the New Well. The channel shifted southwestward, apparently in response to high flows sometime after May 1994 when the USGS orthophoto imagery was taken and prior to the 1997 field studies of Jones and Stokes (Jones and Stokes, 1999). A close inspection of attached Figure 2 finds that the future course the river can be seen as a shallow, arcuate depression to the right of the active channel in what was then a grass covered section of Creamery Meadow. This shallow depressed area aligns well with the edge of overbank flow pattern visible on Figure 6 in the REJA 2007 report, a May 1956 aerial photo of the project area.

The river was apparently still migrating following the 1997 Jones and Stokes field work as evidenced by the destruction of their JSA-5 monitoring well they installed across the river within Creamery Meadow. A plot of the previous location of this monitoring well on more recent imagery would give an indication of the amount of channel migration. As noted above, the recent October 13, 2009 storm flows have apparently changed the channel again and appear to have created a second flowing channel. The historic migration of the river during high flow events indicates that the channel can shift course at any time. This dynamic geomorphic characteristic should be considered when assessing the impacts of diversions from wells in the area.

Given the historic migration of the Big Sur River channel within the lower reach as evidenced in the recent channel changes, it is likely that the section of the river adjacent to the El Sur Ranch wells will always be susceptible to a change in shape and location.

Reliance on the channel remaining in one location is not warranted. Thus, the analysis of the relationship between the river, ground water table and the pumping wells can be expected to periodically change and that change may be significant. When the river flows nearly parallel to the axis of the alluvial valley, gains and losses from the river to ground water will likely follow the pattern seen in the reach upstream of the ZOI, that is, vary from a gaining to losing reach naturally throughout the year, and in response to changes in pumping rate and duration. Combined with the periods of drought that reduce the amount of ground water flowing beneath Creamery Meadow, the amounts of ground water gained or lost to the river will the likely vary significantly over time.

3-71 (cont.)

The DEIR’s assumption that the conditions of the river in the ZOI during the 2004 to 2007 study period will continue and remain constant, and that ground water will always discharge into the river in the ZOI from Creamery Meadow isn’t justified. The DEIR should be modified to document the dynamic nature of the lower portion of the Big Sur River, evaluate the impacts of a change in channel position on the environmental impact analysis, discuss the impacts of changing channel location on the gains and losses to the river, and provide mitigation monitoring measures needed to document and measure the changes in river flow during pumping of the wells whenever the channel migrates or the character of the channel bed material changes.

6) The DEIR assesses the environmental impacts from the El Sur Ranch wells with the assumption that the water pumped comes from two separate sources, water stored in the ground water aquifer and water lost from the river during periods of pumping. The DEIR also assumes that the amount of water loss from the river during periods of pumping is a relatively constant percentage of the total water pumped and that the maximum amount is constant at 24 percent of pumping (page 4.2-65). The assumption that the source of water pumped by a well can be both the groundwater aquifer and a nearby river is valid and well documented in technical literature. However, there are several significant issues, both technical and legal, that complicate the DEIR’s approach of having two distinct sources for the water being diverted through pumping wells. Those issues include the following:

3-72

a) The DEIR’s determination of how much water is lost from the river due to pumping of the El Sur Ranch wells ignores the likelihood that the channel location and conditions will change and thereby alter the hydrogeologic setting which determines the amount of water lost from the river. **Thus, the assumption that the river losses are constant at a approximately 24 percent of the pumping rate, 0.74 cfs at 3.09 cfs pumping and 1.28 cfs at 5.34 cfs pumping (page 4.2-66), and that this rate of loss will occur in perpetuity is invalid.** It should be noted that the loss rate is not given for the maximum instantaneous pumping rates of 5.84 cfs, which would be 1.4 cfs, if this linear relationship is accurate. The issue of channel migration was discussed in more detail above in item no. 5.

3-73

b) The DEIR’s analysis of pumping impacts ignored the fact that the river continues to lose flow after the pump is turned off. When a well pumps ground water it creates a cone of depression around it and this drop in water table or piezometric surface has to be backfilled once the pumping stops. The DEIR acknowledges that it takes approximately 4 days for ground water levels to recover after pumping stops, but fails

3-74

to understand what this means to flows in the river (page 4.2-59). The rise in the level of ground water during this recovery period is similar, but inverse to the drop during pumping. In fact, well recovery analysis commonly assumes that the rise in water level during recovery can be calculated by assuming the pump drawdown curve continues, but at the moment the pumping stops the drawdown pumping curve beginning at time zero is inverted and the recovering water level is the sum of the two curves.

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(cont.)

The period of recovery can be almost as long as the period of pumping. The continued loss of water from the river following cessation of pumping was not accounted for in the DEIR analysis of impacts or the mitigation measures. This failure to account for river losses during well recovery becomes important because the DEIR proposes to split the source of water pumped and because some of the water right application diversion limits are based on specific periods of time, such as monthly and 30-day averages. Although water is not diverted to the pastures when the pumps stop, water is still being diverted from the river and the impacts of that diversion continue until the water table recovers. This is analogous to diverting surface water through a gate that doesn't completely closed. **The duration of pumping impacts extends beyond the time listed in the DEIR tables because of the recovery of the cone of depression. This should be accounted for in the environmental impact analysis and the diversion limits.**

- c) The DEIR assumption that water is being diverted from two sources, surface water and subterranean channel ground water, requires that the monitoring of diversion include measurements of both surface water and ground water hydraulic and hydrogeologic conditions across the ZOI rather than at one local point of interest. The DEIR assumes that the changes in surface water flow due to pumping can be averaged across the ZOI. However, this averaging does not account for local impacts such as restriction of fish passage at a riffle. Averaging flows across the ZOI isn't valid when the impacts are local. For example, the failure to maintain fish passage at passage transects 10 and 11 near the upstream limit of the ZOI can't be mitigated by having more flow at the downstream passage transect 4. The DEIR mitigation measures lack ongoing monitoring of conditions in the river channel within the ZOI to measure whether the assumptions about the rate of diversion from each source, the effectiveness of flow averaging within the ZOI, and the stability of the channel location continue to maintaining adequate fish passage and habitat during periods of diversion.

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The DEIR should be revised to address how the impacts of diversions from the separate sources, surface water and ground water, will be monitored to ensure that the assumptions about the conditions in the ZOI made in the environmental analysis remain valid.

- d) The proposal to separate the sources of pumped water into surface water and ground water will require that the monitoring program for the water right permit take into account not only the river flows at a surface water gage, but also the condition and location of the channel, the ground water levels in and adjacent to the ZOI and the changes in the level of the surface water in the ZOI due to variations in upstream flow and temporal changes caused by tidal fluctuation and/or the closing off of the lagoon.

3-76

As I've discussed above, the assumption that the amount of water lost during pumping is known and can be calculated based on a long-term consistent linear relationship between pumping and river loss is invalid. If the water right permit assumes that only a portion of the rate of diversion is derived from the river, that this proportion is constant throughout time, and then uses this relationship in establishing bypass flow requirements, then the bypass flows requirements will likely become invalid whenever the channel changes location or characteristics. As noted above, this may have already occurred as a result of the October 13, 2009 storm event, rendering the calculations presented in the DEIR outdated.

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(cont.)

The water rights permit needs to have conditions that limit diversion that are easily monitored and accurately measurable, otherwise the permit conditions are unenforceable. The DEIR states that approximately 24% of the diverted flow comes from the river, but, as I've pointed out, river losses continue for some time after diversion stops and in time the percentage of river loss will vary as that channel shifts.

The complexity of the proposed system of six water right limits will be difficult enough to monitor, report and enforce, but if the permit assumes that something other than the full rate of diversion impacts the flows in the river, then a bypass flow limitation(s) is a moving target.

3-77

- e) The separation of diverted water into different sources raises an interesting legal issue regarding the nature of a subterranean stream. The proposal in the DEIR to account for the different sources of water being diverted by the El Sur Ranch wells appears to add a new condition to the legal definition of subterranean stream that directly conflicts with the SWRCB's Decision 1639.

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SWRCB's Decision 1639 states on pages 6 and 7 that a subterranean stream need not be interconnected with a surface stream and any evidence concerning the interconnection of the ground water in the aquifer (alluvium) with surface flow is immaterial to the legal classification of the ground water. The decision goes on to discuss the meaning of underflow noting that it is a subset of a subterranean stream. The decision further notes that it is not necessary for ground water to be underflow to establish the existence of a subterranean stream. This issue of underflow is relevant because that is how Mr. Moeller described the conditions at the El Sur Ranch wells in his April 12, 1992 inspection report and it appears to be the basis for his stating that the underflow (ground water) of the Big Sur River is not from percolating groundwater and its use on other than riparian lands requires an appropriative right. In other words, Mr. Moeller determined that the ground water being pumped required an appropriative water right permit because it was coming from a subterranean stream flowing through a known and definite channel (Water Code Section 1200).

As discussed above, the DEIR was developed based on the assumption that the ground water being pumped by the El Sur Ranch wells comes from a subterranean stream flowing through a known and definite channel which, based on Decision 1639, doesn't require a linkage to surface water. Nevertheless, the DEIR attempts to quantify in somewhat confusing detail the linkage between the surface water flow in the Big Sur River, the nature of the ground water, and the different sources of the water being

diverted through pumping of the El Sur Ranch wells. If the linkage between surface water and ground water is immaterial in determining that the ground water is in a subterranean stream, then why is it relevant in the granting an appropriative right to divert water being pumped from that subterranean stream?

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The DEIR should discuss the requirements of SWRCB’s Decision 1639 and how they are relevant to the El Sur Ranch well diversions. It appears that the DEIR’s proposal to apportion the source of the water being diverted at the wells into surface water and subterranean stream ground water directly conflicts with Decision 1639. This conflict with Decision 1639 is an addition to other technical issues that are being raised in this memorandum as a result of the proposal to separate the sources of water being pumped.

- f) The issues discussed in this section show that the DEIR’s proposal to separate the water pumped by the El Sur Ranch wells into two sources, surface water and ground water in a subterranean stream, has a significant impact on the ability to monitor the diversion, and enforce CEQA mitigation measures, the water rights permit diversion limits and conditions, and any minimum bypass flow requirements that are necessary to protect public trust resources. In addition, the separation of water sources may significantly change the SWRCB’s Decision 1639 requirements for establishing the existence of a subterranean stream flowing through a known and definite channel by requiring that additional evidence regarding where the water being diverted comes from and in what proportion. If one of the sources is surface water, then additional information may be necessary on the other types of surface water, such as springs, or irrigation return flow, and perhaps other elements of the hydrological cycle, such as direct precipitation runoff, the path of source water flow, or the age, etc.

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The DEIR should analyze the environmental impacts of the El Sur Ranch diversions with the assumption that all of the pumped water is diverted from the Big Sur River. The El Sur Ranch well water rights permit limitations and conditions, as well as the bypass flow requirements should be written assuming that all of the flow being pumped by the wells is diverted from and causes potential impacts to the surface water flow in the river. This would be consistent with other water rights permits issued for subterranean stream diversions and would make the establishing and enforcing of diversion limitations and bypass flow requirements consistent with other permits.

- 7) The DEIR analysis utilizes the historic flow records for the Big Sur gage, USGS #11134000, located approximately 7 miles upstream from the point of diversion, the El Sur Ranch wells (page 4.2-4). The DEIR’s was written with the assumption that this gage will be used in the water rights permit to measure flows at the point of diversion, determine compliance with water rights permit and bypass flow limits, and to monitor impacts from the pumping of the wells. Use of this gage requires that the gains and losses between the gage and the point of diversion be identified and accounted for when measuring the environmental impacts, and when establishing, implementing and monitoring minimum bypass flows needed to protect public trust resources.

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The DEIR attempts to document the diversions between the USGS gage and the point of

diversion, but doesn't provide any information on the gains or losses between the gage and the point of diversion that can be used in establishing minimum bypass flow requirements. The DEIR Table 5-1 is a listing of existing and potential water rights within the Big Sur watershed, but provides information on only the annual diversions, nothing on the seasonal diversions or instantaneous rates of diversions. In addition, Table 5-1 doesn't indicate whether these diversions are above or below the USGS gage and doesn't provide a map of their locations. The DEIR doesn't discuss or quantify the impacts from existing riparian diversion below the USGS gage or evaluate whether there is a potential for additional riparian diversions with future development. Elsewhere in the DEIR, under the discussion of surface water hydrology, some information on the changes in flow below the USGS gage is provided, but the information is incomplete and conflicting. For example, the text on page 4.2-25 states that the lower Big Sur River downstream of the USGS gage is a losing reach, but the information presented in Table 4.2-4 shows that the river is always gaining, even during summer months.

3-80 (cont.)

On page 4.2-31 of the DEIR states that flow losses measured from the USGS gage to a point approximately 4,000 feet upstream from the point of diversion, near velocity transect VT1, ranged from 1.93 to 8.9 cfs as measured from 1997 to 2005. The discussion however doesn't provide any insight on what rate of flow loss should be used in setting bypass flow requirements for the water rights permit. I have attached my Table 3 that provides four tables that list changes in flow between the USGS gage and a point approximately 4,000 feet upstream from the point of diversion, S1 in 1997 and 1998, and VT1 in 2004, 2006 and 2007. Information for these tables was taken from the Jones and Stokes (1999) and SGI reports (2005, 2007 and 2008). These four tables show the variation in the losses and gains in flow over this 7 miles of river at different times. While the August 1997 loss of 8.9 cfs is much higher than the others, losses in the range of 4 to 5 cfs are common during dryer periods. It should be noted that none of the studies evaluated what caused the measured losses, and thus can't provide any data on how to calculate the natural and anthropogenic losses below the USGS gage. This lack of information is likely due to the fact that the DEIR mitigation measures propose bypass flow requirements based on flow percentiles from historic gage measurements, not river flows necessary for fish passage.

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The DEIR text also discusses the changes in flow between the USGS gage and Zones 2 to 4 in the ZOI during the 2007 study. The discussion cites Figure 3-28 of the 2008 SGI report as showing a losing stream between velocity transect VT1, located about 4,000 feet upstream of the ZOI, and VT3 midway in the ZOI. Unfortunately, the 2007 and 2008 SGI studies placed the upstream ZOI velocity transect, VT3, near the center of the zone, rather than at the upstream perimeter as the 2004 SGI study did with station VT2 (see Figure 1-3 in the 2005 SGI report). Flow losses between VT1 and VT3 measured in September 2007 shown in Figure 3-28 ranged from approximately 1.5 to 4.7 cfs. Because VT3 is within the ZOI and not at its upstream edge, the natural river losses can't be separated from those induced by pumping. I provided addition information of the gains and losses between VT1 and the ZOI above in general comment no. 5 with my Table 2 of flows measured from July to October 2004. The range of the losses shown in my Table 2 is similar to those of Figure 3-28, although there are periods where the river actually gains flow.

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Therefore, the DEIR doesn't address the issue of gains or losses in the Big Sur River over the 7 miles between the USGS gage and the El Sur Ranch point of diversion with sufficient information to allow for determination of an appropriate value for adjusting USGS gage readings in the calculating of bypass flow requirements. **Based on the information in my Table 3, I would recommend that at a minimum, loss in instantaneous flow of 5 cfs be assumed downstream of the USGS Big Sur gage when calculating bypass flow requirements. With a more through investigation and analysis, the validity of the 8.9 cfs loss may be determined.**

3-82 (cont.)

The DEIR should provide analysis of the losses or gains that are likely to occur in the 7 miles between the USGS Big Sur gage and the point of diversion, and determine what value(s) should be used to correct the USGS Big Sur gage reading in setting bypass flow requirements. This analysis should document and evaluate natural and anthropogenic gains and losses in the river below the USGS gage and any potential future riparian diversions. As an alternative, the DEIR should evaluate whether another gage should be installed lower in the river that is closer to the point of diversion. CDFG staff has submitted a proposal to its management and is awaiting word on funding approval for the USGS to establish a gage on the Big Sur River in the Andrew Molera State Park area to aid in the current study of the river. Unfortunately, long-term funding for maintaining this gage may not be available.

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8) The DEIR is written with the assumption that public trust resources can be protected using diversion limits set at flows for derived from specific threshold percentiles based historic daily river flows at the Big Sur USGS gage. Historic daily flows from April 1, 1950 to August 18, 2008 are listed by percentile in DEIR Table 4.2-1. Table 2 of the 2006 3rd Amendment also provides historic flow percentiles between 1950 and 2006, but these two tables don't give similar values. I've also prepared a historic flow percentile table using daily average flow data for the USGS Big Sur gage #11143000 that I recently downloaded from the USGS web site and processed in an Excel spreadsheet using the PERCENTILE() function. My attached Table 3 lists historic flow by percentile and by type of flow condition, wet, above average, normal, dry and critically dry. My Table 4 uses historic gage flow data from April 1, 1950 through August 30, 2009, the latest information available at the time of this memorandum. My percentile calculations are close to those in Table 2 of the 2006 3rd Amendment to the water rights application, which lacks the most recent three years of record because it was prepared in October 2006. **My updated percentile calculation shown in my Table 4 and those in Table 2 of the 2006 3rd amendment to the water rights application are in fairly close agreement, but differ significantly from those used in the DEIR, Table 4.2-1. I recommend that an evaluation be done as to why the DEIR flow percentiles differ. Following that evaluation, the correct table of historic daily flow frequency percentiles should be provided.**

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9) The DEIR is written based on the premise that baseline pumping as listed in Table A on page 4.2-69 should be allowed year-round, subject to limitations established in a future monitoring program that will become part of a future Irrigation Water Management Plan (IWMP) as described in mitigation measure 4.2-2. In addition, mitigation measures 4.3-1 and 4.3-2 have flow limitation criteria, but the inclusion of these criteria in the IWMP isn't required. Pumping diversions above the baseline condition are allowed throughout the

3-87

year, based on the month and various non-exceedence flow criteria derived from the USGS Big Sur gage. I have attached my Table 5, which lists the monthly non-exceedence flow criteria taken from mitigation measures 4.2-2, 4.3-1, 4.3-2 and 4.3-4 as stated in DEIR Table 3-1 giving flow percentile cutoffs for when baseline and greater-than-baseline diversions can occur. The other mitigation measures listed below each of the three main mitigations are also subject to the same flow limitations. These criteria trigger only during either extreme critical dry and/or critical dry conditions. The term extreme critical dry is a term defined for this DEIR on page 4.2-68 as flows less than the 10th percentile. My Table 5 shows that there are typically two percentile triggers for each month, except June and November, each of which has only one. I've also added in parentheses the actual flow associated with each percentile, which is taken from my Table 4. Mitigation measure 4.3-4 for dissolved oxygen is listed at the bottom of my Table 5 because it is uniform throughout the year with fixed flow and temperature thresholds. These mitigation measures seem to overlap and present an unusual set of 23 bypass flow requirements.

For example, most of the 4.2-2 mitigation measures require that the flows at the USGS Big Sur gage drop below the 5th or 10th percentile before a cut back to baseline pumping is triggered. Once triggered, baseline pumping has to be maintained until flows rise above the 10th or 20th percentile, respectively. Regardless of flows, pumping can continue at the baseline rate unless no-diversions flow thresholds are specified in the yet-to-be-developed monitoring and operations plan for streamflow in ZOI Zones 2 through 4, which will be incorporated into the future IWMP. In addition, part (b) of the 4.3-1 and of the 4.3-2 mitigation measures require, in the future, development of possibly another monitoring and operations plan along with specific flow thresholds that will apparently be established in the Final EIR. Apparently, there is insufficient information at this time to develop the monitoring and operations plan or the specific flow thresholds needed to protect public trust resource. The lack of this information in the DEIR prevents government agencies and the public from having an opportunity to review and comment on these critical flow thresholds. Also, the DEIR doesn't set any specific standards for resource protection in these future plans other than general statements that flows in Zone 2 through 4 are not to be reduced such that the project has an effect on steelhead movement, that critical passage and dissolved oxygen conditions are not violated, real-time monitoring, recordkeeping, with an adaptive management feedback system, etc.

A review of my Table 5 suggests that mitigation measures 4.3-1 and 4.3-2 invalidate the lower trigger criteria of mitigation measure 4.2-2. For example, mitigation 4.2-2 allows pumping above baseline in January when flows are between the 10th (25.9 cfs) and 5th (24.4 cfs) percentiles, but upon reaching the 5th percentile, pumping is reduced to baseline. However, 4.3-1 requires that pumping be reduced to baseline below the 10th percentile flow condition. Why not restate 4.2-2 to be consistent with mitigations 4.3-1 and 4.3-2 and require that, whenever flows are below either the 20th or 10th percentile, pumping only at baseline levels is allowed, subject to future flow thresholds?

The DEIR states that CEQA guidance is followed in establishing baseline pumping rates, baseline environmental impacts, and mitigation measures for protection of public trust resources. The baseline pumping and environmental impacts used in this DEIR are given without an assessment or review of past impacts caused by this level of pumping. Even

though the DEIR generally dismisses the prior impacts from pumping with justification of the project’s baseline, there are statements on pages 4.3-37 and 4.3-42 that acknowledge that significant impacts may have occurred during past diversions.

“It should also be noted that the proposed incremental increases in pumping rates are relatively slight compared to baseline pumping rates. Baseline pumping has historically had a substantially larger effect on surface flow elevation than would be caused by the anticipated incremental increase in pumping that would occur as part of the proposed project. While baseline pumping conditions, by definition, do not require mitigation under CEQA, the effect of baseline pumping on fish passage in critically dry conditions, serves to magnify any adverse cumulative effect of project pumping on aquatic resources.” (page 4.3-37)

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“Further, while only a slight, yet potentially significant, increase in the incidence of critical flow conditions could result from the proposed incremental increase above baseline pumping conditions, it is important to note that baseline pumping rates have historically had a substantially larger effect on the incidence of critical flow conditions than would be caused by the anticipated incremental increase in pumping that would occur as part of the proposed project. As noted above, baseline pumping conditions, by definition, do not require mitigation under CEQA, but the effect of baseline pumping on stream hydrology, water quality, and, particularly, fish passage in critically dry conditions, serves to magnify any adverse cumulative effect of project pumping on aquatic resources.” (page 4.3-42)

The DEIR is effectively “grandfathering” or “vesting” the environmental impacts from baseline diversions without providing any analysis of what environmental impacts might have occurred during past diversions. Although the DEIR does briefly mention, on page 2-2, *National Audubon Society v. Superior Court* (1983) (33 Cal.3d 419 [189 Cal.Rptr. 346]), it ignores the conclusions of that decision. One particularly relevant part of this ruling addresses the issue of whether past impacts have to be evaluated and considered in a decision to issue an appropriative water right:

“In exercising its sovereign power to allocate water resources in the public interest, the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs.”

Though the *National Audubon* case addressed the issue of existing appropriative water rights and flow requirements below an existing dam, one would hope that the ruling would also apply to establishing diversion limits on a free flowing river during the process of issuing an appropriative water rights permit.

Rather than rely on a complex set of bypass flows based on historic flow percentiles that haven’t been shown to be protective of public trust resources, the water rights permits should use a more standard approach for bypass requirements that use actual instream flows established through instream studies at the point of diversion. The technical studies done for the El Sur Ranch application haven’t provided sufficient information to develop protective instream bypass flow limits. CDFG staff are now conducting field studies to obtain this information, but the results of these efforts aren’t available at this time.

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Therefore, interim bypass flow limits are needed to facilitate the evaluation of potential environmental impacts. The water rights permit should require cessation of diversion whenever the flows drop below the bypass requirement. The DEIR's approach of allowing continued diversion at the baseline rate regardless of flow conditions isn't justified because no information has been provided to show that the past baseline diversions were not detrimental to the public trust resources.

Use of an actual rate of bypass flow would eliminate the multiple, overlapping percentile flow limits presented in Table A and my Table 5. Several statements in the DEIR, data in the technical reports, and preliminary results of recent CDFG staff instream flow investigations on the lower Big Sur River would allow a limited assessment of possible impacts from past diversions and allow a preliminary or interim estimate of minimum bypass rates of flow needed to protect fish habitat and passage. The DEIR on page 4.3-40 states that flows in 2007 at passage transects 4, 10 and 11 didn't meet juvenile steelhead passage criteria. There is also additional information from the 2006 study that shows that passage criteria were not met several times at passage transects 10 and 11 (see Tables 3-11 and 3-12 of Hanson, 2007a). Information in the 2006 study is important information because the flows were higher during that year and passage was still not achieved. The flows listed in the two 2006 Hanson study tables were measured approximately 4,000 feet upstream from the ZOI, at station VT-1 (see Table 3-1 of Hanson, 2007a). The highest daily average flow where passage was not achieved in a transect in the ZOI occurred on September 6, 2006 at approximately 22 cfs. For the other days in the study, changes in flow between the USGS gage and VT1 varied from a gain of approximately 1 cfs to a loss of 3.6 cfs (see Hanson's Table 3-1 in my Table 3). Changes in flow between VT1 and the passage transects were not measured. While these passage transect measurements don't provide information on what rate of flow is actually needed for passage, they do provide a lower limit for development of an interim bypass flow rate during the low flow months, June through November. See my Table 3 for calculations of flow losses/gains between the USGS gage and VT-1 on the study days in September and October 2006. Note that there were no measurements of the actual flow at the passage transects so the loss or gain in flow between the USGS gage and the passage transects can't be calculated.

An interim bypass flow for low flow months, June through November, can be estimated from the flow measured on September 6, 2006 at Hanson's passage transect no. 11, which didn't meet fish passage criteria, and from estimates of the losses in flow downstream from the USGS gage using previous measurements (my Table 3). Adding to the no-passage flow of 22 cfs for passage transect 11, a loss below the USGS gage of 5 to 9 cfs results in a flow of 27 to 31 cfs, which still doesn't allow for fish passage. When the full instantaneous diversion rate of 5.84 cfs is added, a rounded flow of 33 cfs to 37 cfs results, which still doesn't allow for fish passage. It should be noted that the maximum combined pumping rate of the two El Sur Ranch wells is 7.93 cfs (page 4.2-48), which exceeds the requested maximum instantaneous diversion rate of 5.84 cfs. Flow rounding is warranted because the USGS often report stream flow in whole numbers.

Preliminary analysis from studies conducted in October and November of 2009 on the lower Big Sur River by CDFG staff appear to confirm that flows in the ZOI need to be greater than 30 cfs for consistent fish passage. Determination of a final value will have to

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wait until additional studies are conducted and analyzed.

Although the information developed by the applicant doesn't allow for determination of the flows necessary for fish passage in the ZOI, there is sufficient data to estimate an interim bypass flow for low flow months. An interim bypass flow of 40 cfs for the months of June through November is warranted given that flows greater than 30 cfs appear to be required for fish passage in the ZOI, and adding the typical losses below the USGS gage of 5 cfs to 9 cfs, and the maximum requested instantaneous diversion rate of 5.84 cfs, with the knowledge that the maximum pumping rate is 7.93 cfs.

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The DEIR and supporting technical studies don't provide any information on flows needed for maintaining public trust resources during high flow months, December to May. An interim high flow bypass requirement can be estimated using the procedures in the December 2007 Draft SWRCB's *Policy for Maintaining Instream Flows in Northern California Coastal Streams*, updated March 14, 2008 (2007 SWRCB Instream Flow Policy). Even though this policy is specific to coastal streams north of Marin County, and application of its methodology to a dryer central coast stream may not be adequately protective, it does provide an accepted method for establishing a bypass flow. A bypass flow estimated from the 2007 SWRCB Instream Flow Policy can also be compared to procedures given in the joint CDFG/NMFS's June 17, 2002 *Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams* (2002 CDFG/NMFS Instream Flow Guidelines).

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The 2007 SWRCB Instream Flow Policy recommends, for watersheds less than 290 square miles in area, that equation 1 on page 4 be used to establish a minimum bypass flow. The area of the watershed above the point of diversion is 58.9 square miles (DEIR page 4.2-3), and the mean annual unimpaired flow at the USGS gage is 99.2 cfs (from USGS web site). When these parameters are used in equation 1, a minimum bypass flow of 132 cfs is derived. This flow is lower than the February median flow of 186 cfs that is recommended as a minimum bypass flow by the 2002 CDFG/NMFS Instream Flow Guidelines (see my Table 4). Note that the 132 cfs December to May bypass flow doesn't include any gains/losses below the USGS gage or the diversions. My Table 4 has a bold line drawn across each month, which defines these two interim minimum bypass flows needed to protect fisheries resources. This bold line is drawn between percentile values during months of December through May at 132 cfs, and for June through November at 40 cfs. Whenever instantaneous flows are above the bold line no diversion can occur.

The bypass flow limitations for the water rights permit should require the cessation of pumping whenever river flow drops below a specified rate(s) as measured at an appropriate river gage. The bypass flow should be set based on specific impacts to public trust resources at the point of diversion, not historic flow percentiles. Monitoring of bypass flow limits requires at least daily measurement and reporting of the instantaneous rate of flow at the river gage, and rate and time of diversion for each well in order to know when the bypass limit is reached. Without instantaneous flow measurements there would be no way of knowing that a violation has occurred because long-term averaging doesn't capture peak discharge rates. While the USGS gages can provide instantaneous provisional data, the current lack of flow metering at the wells precludes achieving meaningful

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monitoring of diversions.

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The maximum instantaneous rate of diversion of 5.84 cfs being sought by the application should be used as a minimum in setting a bypass flow requirement provided measures are in place to prevent the maximum pumping rate of 7.93 cfs. An interim bypass flow as measured at the USGS gage of 40 cfs between June 1 and November 30 would be appropriate given the lack of actual instream information on the flows necessary for fish passage, the distance from between the point of diversion and the USGS Big Sur gage, variability in the changes in flow below the USGS gage, and the need to consider that the entire diversion has the potential to impact river flow. An interim bypass flow of 132 cfs should be used between December 1 and May 31. Additional site-specific instream studies are needed to finalize these flow recommendations. The DEIR should be revised to incorporate interim bypass flow requirements of 40 cfs from June 1 to November 30 and a 132 cfs from December 1 to May 31.

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The interim bypass flows of 40 cfs and 132 cfs significantly alters the environmental impact analysis, conclusions and mitigation measures of the DEIR. I have drawn on my Table 4 a bold line at approximately 40 cfs and 132 cfs for the appropriate months. My Table 4 shows that the percentile flow limitation criterion proposed in the DEIR mitigation measures and Table A do not appear to be protective of public trust resources. This suggests that past historic diversions by the El Sur Ranch wells likely had an impact on fish passage and habitat. Therefore, the DEIR should provide an analyze the potential past impacts from the CEQA baseline diversions.

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10) The Swiss Canyon runs between the two El Sur Ranch irrigated pastures that are the POU for the appropriated water right and the riparian diversion. There is potential for irrigation water to run into the canyon from overland flow or subsurface seepage. The DERI states that the Swiss Canyon area is not within the POU and is not part of the irrigated area (page 2-6). However, as I discussed above, under general comment no. 2, the canyon area appears to be included in the 267-acre POU, which seems to contradict the DEIR's statement. The DEIR states that studies of the historic erosion of Swiss Canyon, the POU and the coastal bluffs found no evidence of increased erosion during the past 50 years (page 4.2-33). The DEIR attributes this lack of increased erosion in part due to filling of pre-existing gullies, control of surface runoff and vegetative cover. The DEIR also stated that riparian vegetation in Swiss Canyon increased from 1942 to 2003 and that although some erosion and slumping was evident along the banks, the amount and extent was less than identified in the early 1940s prior to pasture irrigation (page 4.2-33). The following is a discussion of two issues related to erosion and runoff into Swiss Canyon that need additional discussion in the DEIR.

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a) The 2007 REJA report provides a set of historic aerial photos of the pastures and Swiss Canyon from 1942 to 2003. The 1942 image, REJA Figure 3, shows a number of arcuate slumps and eroded areas of slope failure along the walls of Swiss Canyon. The REJA report states that these failures were filled in between 1956 and 1967. The REJA report doesn't discuss how these fills were placed, but I think it can be assumed

3-99

that it was not placed as engineered compacted fill and that the slope face of some of these filled areas is at or near the angle of repose. This fill material is likely less dense and has less strength than the native soils or terrace deposits. However, this assumption should be evaluated with laboratory testing of in-situ samples. If this fill was placed without engineering design and control, then the stability of these fill slopes is unknown. The REJA report notes that there is still some erosion, but less than before the fill was placed. The REJA report doesn't address how much erosion is occurring, whether mitigation measures, such as additional drainage control or fill stabilization, should be taken to prevent future erosion and what measures are needed to monitor and document erosion. **Because the area that this sediment discharges to is critical habitat, a technical study is needed on the areas of erosion along the walls of Swiss Canyon to identify the level of stability and the causes of any instability and provide mitigation measures for stabilizing the slopes and preventing further erosion. The DEIR should provide the results of this study and include any recommendations as mitigation measures.**

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(cont.)

- b) The DEIR states in several places that there is "upwelling" or a spring of ground water in Swiss Canyon near the boundary of pastures 2 and 7 (page 4.2-17) about 0.1 miles upstream from biological monitoring station 1 (page 4.3-45). The 2008 Hanson report concludes that there is no evidence to suggest that El Sur Ranch irrigation practices were an important factor affecting habitat or surface waters within Swiss Canyon in 2007. It should be noted that Hanson commented in the 2007 report (2007b) that there was standing water within the creek bed in the vicinity of irrigation pipe repair and testing downstream of Station 2 between fields 2 and 3 (page 6). DEIR Figure 2-3 shows the boundaries of the irrigation pastures and the piping. The figure shows that there is an irrigation pipe running across Swiss Canyon aligned with the boundaries between pastures 2 and 7, and pastures 3 and 6.

3-100

I've attached as my Figure 3, an image that was taken from a USGS digital orthophoto quadrangle (DOQQ o36121c7sw.tiff) that shows Swiss Canyon on May 12, 1994. Of particular interest is the unvegetated area in the lower third of the canyon between pastures 2 and 7 and pastures 3 and 6. This image shows a linear feature cutting through this patch of bare ground in line with the pipe is shown on DEIR Figure 2-3. The 2001 and 2003 aerial photos, Figures 9 and 10, provided in the REJA 2007 report still show a variation in vegetation density in the area of this disturbance. The change in vegetation density is apparent in a comparison of the May 1978 image in the REJA report, Figure 8, to my the attached Figure 3, and comparison of oblique aerial photos taken in April 1979m my Figure 4, and September 2008, my Figure 5.

Given the presence of an irrigation pipe running beneath Swiss Canyon between pastures 2 and 7 and pastures 3 and 6, and perhaps elsewhere, and the observation that a repair of the pipe was taking place in 2006, the DEIR should evaluate whether the "upwelling" of ground water in the area between pastures 2 and 7 might be caused by a leak in an irrigation pipe. The DEIR should also address the environmental issues associated with the maintenance of any pipes that transect Swiss Canyon, particularly when there is a need to excavate and otherwise disturb the bottom of the canyon to facilitate repairs. The DEIR should provide a mitigation measure that requires periodic testing of the integrity of the irrigation pipes that cross Swiss Canyon,

such as conducting a pressure test of the section of pipe that traverses the canyon. The DEIR should address whether additional permits are necessary when performing pipe maintenance activities, permits such as a Fish and Game Streambed Alteration Agreement and other Federal Permits.

3-100
(cont.)

The DEIR should evaluate whether leakage from an irrigation pipe(s) is discharging into Swiss Canyon. In addition, the DEIR should evaluate the potential impact from irrigation pipe maintenance activities within Swiss Canyon and the need for permits along with the recommended permit conditions.

- 11) The DEIR discusses on page 4.2-42 that the irrigated pastures are subject to the requirements of the Central Coast Regional Water Quality Control Board's (CCRWQCB) *Conditional Waiver of Waste Discharge Requirements for Discharges From Irrigated Lands*, Order R3-2004-0117. The CCRWQCB has recently replaced that order with Order R3-2009-0050 (Order), which requires that the Monitoring and Reporting Plan (MRP) No. R3-2004-0117 continue under this new order. The DEIR states elsewhere that there are no specific best management practices or discharge limitations under this order (page 4.2-74). My reading of Order R3-2009-0050 differs with the statements in the DEIR that there are not discharge limitations or required management practices.

3-101

Order R3-2009-0050 has a number of General Conditions that require compliance with water quality standards. The Order also has a list of documents that need to be submitted along with the Notice of Intent during the Enrollment Process. Among these is a completed management practice checklist/self assessment form, and a statement of completion of a Farm Water Quality Management Plan. Depending on which of the two tiers the irrigated lands belong, the Farm Water Quality Management Plan needs to be completed immediately for Tier 1 lands, or within 3 years of enrollment date for Tier 2 lands. Filing of the NOI was required by January 1, 2005. Full region-wide monitoring in accordance with MRP R3-2004-0117 (MRP) was to be implemented by January 1, 2006. The MRP requires that the discharger participate in a cooperative monitoring program or monitor individually. Because there are no other irrigated-land dischargers in the area of El Sur Ranch's pastures, I'm assuming that they would undertake individual monitoring for this conditional waiver. The MRP requires monitoring of any discharges to surface or ground water, including discharges to streams, tailwater ponds, and stormwater runoff. The MRP provides three tables of specific water quality parameters that need to be monitored along with the frequency of sampling. Monitoring data are to be submitted electronically to the Regional Board at least quarterly with hard copy reports annually.

The DEIR should evaluate whether the existing baseline irrigation practices of the El Sur Ranch fall under the requirements of Order R3-2009-0050 and MRP R3-2004-0117. If they do, then the DEIR should provide a copy of the management checklist/self assessment, the Farm Water Quality Management Plan, copies of the completed practices implementation checklists, and copies of the annual monitoring reports. The results of any monitoring under this Order should be incorporated into the DEIR's environmental analysis and mitigation measures developed. as necessary.

The DEIR should evaluate whether the proposed project irrigation practices fall under the requirements of Order R3-2009-0050 and MRP R3-2004-0117. If the baseline conditions do not fall under the Order, indicate whether the Notice of Intent will be filed for the proposed project and when the required management checklist/self assessment form and the Farm Water Quality Management Plan along with implementation of the monitoring and reporting program will be developed and implemented. The lack of water quality data on the tailwater pond waters and other waters that discharge from the irrigated pastures as required by the Order suggests that the current operations either do not fall under Order R3-2009-0050 or may not be in full compliance with the requirements from the Order. In addition, several of the future reports required by the mitigation measures, 4.2-2 – an Irrigation Water Management Plan and 4.2-4 – an Erosion Control and Operations Management Plan, appear to be similar to the Farm Water Quality Management Plan requirements of the Order. If the project operations fall under the Order, then the DEIR should discuss how the mitigation management plans identified in the DEIR will integrate with the requirements of the Order.

3-101 (cont.)

The DEIR should evaluate and provide mitigation measures for any potential impacts from irrigating the pastures based in part on the results of any previous water quality monitoring, particularly the project’s practice of leaching out the salts that results from applying additional irrigation water. What impact does this leaching have on the quality of ground water or surface water? What monitoring and reporting will be done to evaluate potential impacts from leaching of salts?

3-102

- 12) The DEIR discussion of seawater intrusion on page 4.2-24 suggests that the high spring tides cause the saline wedge to migrate into the subterranean alluvial channel towards the Old Well. The DEIR states on page 5-10 of the cumulative effects section that “[c]onsidering that current wave action can result in high salinity at the Old Well, a 2-foot increase in mean sea level, coupled with high tides and wave actions, could substantially increase the potential for salt water intrusion.” Thus, there is a potential for the wells to pump saline water whether the condition is “natural” or the result of pumping. The DEIR notes that irrigation operations of the Old Well “require” shutoff whenever the salinity levels reach 1,000 µ/cm (page 4.2-75). However, the DEIR states on pages 2-11 and 2-12 that according to the 3rd Amendment this salinity shut off is voluntary and that following the shut off the chloride concentration is measures. The DEIR then notes that “[i]n the event that the chloride concentration exceeds 250 ppm, the California Department of Parks and Recreation (DPR) may require the Ranch to terminate pumping until the chloride concentration in the well is reduced.”

3-103

The salinity shutoff is not a requirement of the water rights permit application or included as a CEQA mitigation measure because the DEIR concludes that the impact is less than significant (see mitigation measure 4.2-7). This seems to conflict with the need to shut off of the Old Well due to salinity during the 2005 to 2007 studies and the need for 10 percent additional diversion to leach out salts caused by irrigation with high salinity waters. As discussed in my general comment no. 11, the impacts from leaching of salts from the pasture soils is still an outstanding environmental issue that likely requires monitoring under CCRWQCB Order R3-2009-0050. For reasons discussed above in my general comment no. 9, the fact that water with higher salinity has been applied to the

pastures for the past 50 years and is considered the baseline condition, doesn't justify in the potential environmental impact. The CCRWQCB Order R3-2009-0050 requires compliance with the SWRCB's Anti-Degradation Policy of Resolution No. 68-16 and states that the conditional waiver doesn't create a vested right to discharge. Thus, the DEIR assumption that the environmental impacts from the baseline irrigation practices are "grandfathered in" or "vested" doesn't appear to be valid.

The DEIR should expand on the discussion of the potential impacts from applying higher salinity water regardless of whether the saltwater intrusion is caused by high tides, pumping or a combination. The impacts from irrigating with higher salinity water and the impacts of discharging the salts leached from the pasture soils may cause a significant environmental impact. A mitigation measure is needed for impact 4.2-7 that requires the wells, Old and New wells, be shut off whenever the salinity levels reach 1,000 µ/cm and followed up with sampling and testing of chloride concentration, and that the shutoff time, date and water quality measurements be documented and reported.

- 13) The DEIR discusses the potential erosion of the sea cliffs due to irrigation of the pastures and concludes that there isn't any evidence of accelerated erosion from irrigation and there shouldn't be any additional erosion from an increase in application rate. The DEIR states on page 4.2-33 that:

"The REJA study (2007) found no evidence of increased erosional activity during the past 50 years (through 2003, the last date of stereo aerial photographs) or erosion resistant bedrock either along the bluff tops, on the banks of Swiss Canyon, or within the POU. In fact, gully formation and slumping decreased from 1949 through 2003, primarily because of filling in of pre-existing gullies, the control of surface runoff, and vegetative cover. Additionally, from 1942 to 2003, riparian vegetation in Swiss Canyon increased, and although some erosion and slumping was evident along the banks, the amount and extent was less than that identified in the early 1940s prior to irrigated pasture use."

"Overall, there was no evidence of increased erosional activity during the past 50 years, either along the bluffs or on the banks of Swiss Canyon. In fact, gullying and slumping has decreased within this time frame, primarily because of filling of pre-existing gullies and control of surface runoff."

The DEIR conclusions are apparently based on the finding of the 2007 REJA report and possibly the 2007 Hanson and Associates report (2007c) included in the May 2007 Volume II of technical reports submitted by the applicant. The REJA report concluded that:

"Surf erosion is the primary agent affecting bluff retreat; if surf erosion ceased, the coastal bluffs would soon reach a stable angle of repose regardless of whether or not the land adjacent to the bluffs is irrigated."

Hanson and Associates (Hanson) reported the results of the twice weekly inspections they made during September and October of 2006 of five locations on the coastal bluff

adjacent to El Sur Ranch pastures 7 and 8. Hanson include in the report a series of photos taken at the five stations throughout the study period. The inspection report concluded that:

“Twice weekly onsite inspections and analysis of photographic documentations of fixed monitoring points showed no changes to the bluff within the context of surface irrigations excess overflow or rainfall infiltration excess runoff.”

The REJA 2007 study focused on large changes in the sea cliffs that might have occurred over the last 50 years, while the Hanson study was almost an instantaneous look at the stability of the sea cliff over a brief two-month period. I’ve discussed above in my general comment no. 10a the inadequacy of the slope stability studies in Swiss Canyon and made recommendations for further investigation and analysis. In the analysis of the long-term stability of the sea cliffs, the REJA and Hanson studies may not have adequately evaluated the impacts of irrigation or identified the existing indicators of unstable slope conditions.

The aerial photo study by REJA documented that the coastal bluffs along the El Sur Ranch pastures have retreated an average of 1.8 to 2 feet per year and attributed this retreat to normal sea wave induced erosion (DEIR page 4.2-33). REJA noted seepage from the face of the bluff inside and outside of the irrigated pasture area and slumping along segments of bluff adjacent to irrigated and non-irrigated pasture. Unfortunately, the REJA report doesn’t provide any site-specific mapping of the locations of the noted seepage and slumping, so I can’t compare their observations to mine. The REJA report also didn’t provide any discussion of the potential sources of the observed ground water seepage or the failure mechanisms and factors that caused the slumping, other than being sea wave induced. The lack of information on the source(s) of the seepage and the specific failure mechanisms of the slumps leaves a significant data gap in evaluating the stability of the slopes adjacent to the pastures.

In addition to the aerial photos provided in the REJA 2007 report, I have reviewed a series of oblique aerial photos obtained through the Andrew Molera State Park web site that were taken periodically since the 1970s by the Coastal Records Project. I have attached as Figures 4 through 15 portions of these Coastal Records Project images that show the sea cliff adjacent to pasture 7 in April 1979, January 1989, September 2002, October 2005 and September 2008. My interpretation of these images is as follows:

- a) Figures 4 through 10 show the section of the bluffs adjacent to pasture 7 and Swiss Canyon. This area lies approximately between the bluff survey points #1 and #2 in Hanson’s 2006 (2007c) monitoring study. Unfortunately, the older images are not as clear as the more recent ones, but I think that the two larger arcuate gully head scarps can be seen in the 1979 and 1989 image as well as a bluff that appears to have a shallower slope than in the later images. In the 2005 and 2008 images, Figure 7 through 10, the bluff shows a distinctive set of scalloped or “theater-headed” scarps at the head of a number of gullies. The number and density of these scalloped shaped gullies appears to have increased significantly between 1989 and 2005. The bluff erosion continued between 2005 and 2008, but because of the shorter period of time the change is less apparent.

3-104
(cont.)

The causes of these scallop shapes is discussed in some detail in USGS Professional Paper 1693 by Hampton and others (2004). They discuss the role of ground-water seepage on ocean cliff stability and note that when downward percolation of ground water is retarded by an impermeable horizon causing seepage along the cliff face it creates erosion. This ground-water seepage erosion is also called “sapping” which they note can resemble wave erosion, but the cause and remediations are different (page 20). The scalloped or “theater-headed” shapes at the head of the gullies are created by the concentration of ground-water flow. Hampton and others describe the erosion process as:

“[a] feedback mechanism then begins, whereby sapping leads to valley formation, which in turn leads to further concentration of ground-water flow, which leads to accelerated erosion of the valley.”

Hampton and others also cite publications by Higgins and Osterkamp (1990) and Laity and Malin (1985) for more detailed treatment of the mechanisms of sapping in forming cliffs and theater-headed valley formation.

The occurrence and apparent increase in the number and density of these scallop shaped gullies suggests that groundwater sapping is occurring along this section of the coastal bluff. The soil underlying the adjacent pasture is Santa Ynez sandy loam, which has a low permeability zone caused by a 25-inch thick clay subsoil at a depth from 16 to 36 inches (page 4-1 of NRCE, 2005). When the water applied to the adjacent pasture exceeds the evapotranspiration demand of the pasture vegetation, it either runs off as surface flow or likely infiltrates and eventually becomes perched on the clay subsoil. Because the slope of the land is towards the ocean, perched ground water likely flows towards the cliff face. There the ground water seeps out the cliff face and entraps and transports grains of soil, eventually undermining the slope through the process known as sapping (Higgins and others, 1990). This process develops scalloped heads on the resulting gullies. These gullies erode from the top down, not the bottom up. They aren’t created by sea waves eroding the toe of the cliff and migrating upwards.

Seepage at the cliff face and resultant sapping erosion can be expected to increase with an increase in water applied to the adjacent pastures from the baseline of approximately 3 feet to the application’s 6 to 6.5 feet. This is particularly significant during periods where the leaching of salts is undertaken because that requires applying more water than needed for vegetation growth in order to flush the salts downward. This flushing water will likely perch on the clay subsoil rather than penetrate it, and eventually flow towards the cliff face, increasing the volume and duration of seepage along the bluff.

- b) A second area of sea cliff instability occurs to the northeast between Hanson’s 2006 bluff survey points #3 and #4. My attached Figures 11 through 15 show the area in 1989, 2002, 2005 and 2008. In the 2002 and 2005 images, several darkened areas of groundwater seepage can be clearly seen on the face of the bluff in Figures 12 and 13. In addition, the 2005 and 2008 images in Figures 13 and 14 show numerous

3-104
(cont.)

clumps of non-native pampas grass in the area of seepage. Pampas grass thrives where there is ample moisture (<http://wric.ucdavis.edu/information/pampasgrass/pampasgrass5.html>). Figure 15 is a closeup of this cliff in 2005 and shows the density of the pampas grass with the darken slope areas. The series of images taken at bluff survey point #4 by Hanson in September and October 2006 show the some of the pampas grass in that area. It should be noted that the density of the pampas grass appears to increase from 2002 to 2008, suggesting continued seepage with possibly an increase. Figure 16 is a photo from Hampton and others (2004) that shows a similar image of a seepage darkened bluff failure in northern Monterey Bay with the growth of pampas grass.

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(cont.)

The mechanism of slope failure in this area differs from the scalloped gully area to the southeast. Here the failures look like slumps that slip out from seepage areas. The increase in moisture has a significant impact of slope stability. Increasing soil moisture causes additional weight adding to the forces driving instability. When moisture is sufficient to saturate soil and develop hydrostatic pressure, slope stability rapidly decreases. The seepage along the coastal bluff adjacent to the El Sur Ranch pastures is likely there for the same reasons as further the southeast. Infiltrated irrigation water perches on top of a clay subsoil whenever it is over applied and then flows towards the cliff face.

The addition of more irrigation water to the adjacent pastures from the baseline of approximately 3 feet to the application’s 6 to 6.5 feet will likely add to the perched ground water on top of the clay subsoil. This perched water will eventually seep out at the cliff face and may increase the areas of saturation along with an increase in unstable areas. The DEIR should evaluate the source of the ground water seepage along the coastal bluff adjacent to the El Sur Ranch pastures and provide mitigation measures to ensure that irrigation practices do not cause or accelerate coastal bluff instability or erosion.

Comments on Specific Sections of the DEIR

This section of comments is specific to the text in the DEIR document. These comments are given in sequence by DEIR page number. Specific comments will also refer to the general comments when additional discussion is needed.

3-105

- 14) Page 1-5: The final paragraph of the section on EIR certification at the top of the page states that the approval of the Final EIR will include a mitigation monitoring and reporting program (MMRP) and that this will “likely” be included in the conditions of the water rights permit. The DEIR shouldn’t consider the inclusion of mitigation measures in the water rights permit that will protect public trust resources as a “likely” event. Rather, it should be a considered a “requirement” that they be part of the water rights permit. Several of the mitigation measures proposed in the DEIR to protect public trust resources, 4.2-2, 4.3-1 and 4.3-2, include the requirement to develop at some unspecified time in the future several management plans. For example, the IWMP, ECOMP, and detailed flow monitoring and operations plans of mitigation measures 4.3-1 and 4.3-2. The mitigation measures in these plans are critical to reducing the impacts from the project’s diversions

to less than significant. The description of the DEIR mitigation measures 4.3-1 and 4.3-2 require consultation with NMFS and CDFG in the development of the detailed flow monitoring and operations plans. On page 2-28 the DEIR states that:

↑ 3-105
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“There are no other permits or approvals that are anticipated. The SWRCB has consulted with other trustee agencies as required by CEQA. These agencies, through consultations during the DEIR and water rights process, will provide input related to appropriate areas of responsibility and any proposed mitigations and/or conditions on the water rights permit.”

3-106

While it is probably incorrect that no other permits or approvals are needed (see my general comments nos. 10 and 11), this statement appears to indicate that mitigation measures and/or conditions proposed by CDFG as a responsible agency **will** be part of any proposed mitigations and/or conditions on the water rights permit. If this is not the intent of the SWRCB, then the DEIR needs to expand on the method(s) they will employ to ensure that the diversions approved in the El Sur Ranch’s water rights permit are protective of public trust resources.

- 15) Page 2-1: The project description states that El Sur Ranch has diverted water from groundwater wells for irrigation purposes since 1949. Pages 1-1 and 4.2-32 state that the Old Well has been operational since 1949, so it’s assumed that this is the first well used to divert water in 1949. On page 2-17 the DEIR states that the first year of riparian land irrigation was not later than 1951. However, the April 12, 1992 memorandum by Mr. Moeller that reports on his investigation of the El Sur Ranch wells following a complaint to the Division of Water Rights states that the El Sur Well (Old Well in DEIR) was used to irrigate lands on the El Sur Ranch since 1955. Why is there a discrepancy on the beginning of the use of the Old Well between the SWRCB’s complaint report and the DEIR? What specific information is available to document actual diversions in 1949? Are there records of electrical usage?

3-107

- 16) Page 2-1: The proposed project is the issuance of a water rights permit. The DEIR doesn’t discuss until page 2-13 in the Project Description that the SWRCB staff found back in 1992 that the irrigation of non-riparian lands required an appropriative water right. The DEIR’s discussion on pages 2-13 and 2-14 that describes the Mr. Moeller’s recommendations in the El Sur Ranch complaint report doesn’t give an accurate picture of the alternatives given in 1992. Mr. Moeller’s recommendation was that El Sur Ranch should be directed to cease diversions from underflow of the Big Sur River in accordance with Water Code 1052. Water Code 1052 states that the diversion or use of water subject to Water Code Division 2 other than when authorized in Division 2 is a trespass and prescribes civil fines that the SWRCB can impose for the trespass. Mr. Moeller’s 1992 report recommends that if El Sur Ranch wishes to irrigate non-riparian lands from wells taking underflow of the Big Sur River, an appropriative water right permit should be obtained from the SWRCB. The DEIR’s language on page 2-14 seems to imply that Mr. Moeller gave a recommendation that applying for a water rights permit was an alternative to the immediate cessation of the unauthorized diversion. I don’t think that was the intent of Mr. Moeller’s recommendation when he said that an appropriative water right should be obtained. He didn’t say that applying for an appropriate water right permit is sufficient to continue the unauthorized diversion. The DEIR should clearly represent the legal status

3-108

under Water Code 1052 of the diversion of water by the El Sur Ranch wells since April 12, 1992 to irrigate non-riparian lands. To do otherwise, gives the reader of this **DEIR prepared for the SWRCB** an impression that the continued diversion of all but 270 acre-feet per year, or 75 acre-feet per year if the riparian acreage is reduced to 25 acres, is not considered a trespass by the SWRCB, in effect Water Code 1052 doesn't apply.

3-108 (cont.)

17) Page 2-5: The project description notes that Swiss Canyon, which bisects the project site, specifically El Sur Ranch's irrigated pastures, is "fed indirectly by seepage from the Ranch,... and that the canyon is accessible to cattle for grazing." In my general comment no. 10, I discuss the issue of groundwater upwelling within Swiss Canyon and suggest that its source may be the buried irrigation pipe running beneath the canyon between the two irrigated pasture areas.

3-109

18) Page 2-5: The discussion of the 267-acre area as the place of use indicates that 25 of these acres are considered riparian to the Big Sur River. On page 2-17 the DEIR states that only 23 of the 25 riparian acres are currently irrigated. So the statement that the water rights application is requesting diversion to irrigate the remaining 242 acres is not accurate, the value would be 244 acres. The DEIR apparently evaluates the environmental impacts of the diversions for both the riparian and appropriative water rights. The 3rd Amendment doesn't make it clear whether the riparian area is part of the appropriative water right, but it appears that the requested diversion limits include water necessary to irrigate the riparian lands (see application Table 1). The fact is that the appropriative water right is only needed for irrigation of 242 (244) acres of non-riparian lands. The question arises as to whether a riparian water right can be issue an appropriative water permit? If so, does this appropriation then allow the place of use of water allocated to riparian lands be used to irrigate outside the watershed of the riparian lands? The DEIR and the water rights application discusses diverting water to irrigate both riparian and non-riparian lands from a single point of diversion, in this case two wells whose flows aren't separated, without specifying what portion is dedicated to each type of right appears to create a situation of "commingling of accounts," along with all of the associated problems. In addition, my general comment no. 2 discusses my opinion that the total irrigated pasture area is approximately 248 acres, not the 267 acres. Thus, by my measurement, the non-riparian area would be 223 acres not 242 acres.

3-110

19) Page 2-6: The discussion of the capacity of the two wells gives their instantaneous pumping rates in gallons per minute (gpm) without a conversion to cubic feet per second (cfs). The 3rd Amendment to the water rights application uses units of cubic feet per second for the requested instantaneous maximum and 30-day average rate of diversion limits. This section of the DEIR should also give the pumping rates in cfs to be consistent with the water rights application. For the Old Well the pumping rate is said to range from 1,145 gpm (2.55 cfs) and 2,000 gpm (4.46 cfs) and for the New Well the pumping rates are 963 gpm (2.15 cfs) and 1,567 gpm (3.49 cfs). Elsewhere in the DEIR the estimated maximum pumping rate for the Old Well is said to be 4.45 cfs and for the New Well a maximum rate of 3.48. However, in the cumulative effects section on page 5-12 the maximum production capacity of the Old Well is said to be 1,145 gpm or 2.55 cfs, and 1,562 gpm or 3.49 cfs for the New Well. As I've discussed above in my general comment no. 4(f), the issue of the maximum combined pumping rate becomes a part of the justification for the 30-day average pumping rate of 5.34 cfs, which is said to be near the

3-111

maximum combined pumping rate of the two wells. If the combined pumping rate is actually 7.95 cfs (4.46 cfs + 3.49 cfs = 7.95 cfs) as the DEIR infers then there is an additional problem with ensuring that the pumping doesn't greatly exceed the diversion limits imposed in a water right permit.

3-111
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20) Page 2-11: The project description states that the El Sur Ranch varies the number of cattle on the pastures from an average of approximately 400 to a maximum of 700 head. The DEIR doesn't discuss how much water will be appropriated for each head of cattle. If the maximum 1,615 acre-feet per year is appropriated, then the water dedicated to each head of cattle ranges from approximately 4 acre-feet to 2.3 acre-feet. To put this in perspective, the average residential household uses approximately 127,000 gallons or 0.4 acre-feet per year (American Water Works Association Drinktap.org web site). Thus the water being requested for appropriation for each head of cattle would support from 5.75 to 10 average households. If the 1,200 acre-feet 20-year running average appropriation is used instead, then the water being irrigated would support from 4.25 to 7.5 average households. Perhaps the DEIR should provide some discussion of these types of statistics in the evaluation of beneficial use and the need for appropriating water for optimal production of pasture grasses.

3-112

21) Page 2-12: The discussion of the requirement to cease pumping when the electrical conductivity of the pumped water reaches 1.0 micromhos per centimeter needs additional clarification. Elsewhere in the DEIR the equivalent term uS/cm is used (page 4.2-24) where it is said that the pumping halts at 1,000 uS/cm. The DEIR should note that these two units of measure are equivalent. The discussion also indicates that the California Department of Parks and Recreation (CDPR) has some discretionary authority on this matter. El Sur Ranch is apparently required to test the chloride concentration whenever the electrical conductivity reaches 1,000 uS/cm. If the chloride exceeds 250 parts per million, DPR may require that the well stop pumping. The DEIR states on the previous page that cessation of pumping is voluntary on the part of El Sur Ranch. If testing for chloride content must be performed whenever a specific trigger is reached and DPR has the authority to require the cessation of pumping, what part is voluntary on the part of El Sur Ranch? The DEIR should expand on the specifics of this voluntary requirement, along with the contractual or legal requirement(s) for testing the salinity of the pumped water and the authority of DPR to require the cessation of pumping. This discussion should be very specific, such that the SWRCB can properly refer to or adopt as a condition in the water rights permit this requirement for salinity testing, reporting and the cessation of pumping trigger.

3-113

3-114

22) Page 2-18: A Water Availability Analysis (WAA) that was done in support of the water rights application and included in Appendix D of the DEIR. The WAA states that the analysis was done using the procedures given in Appendix A of the June 17, 2002 *Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams*, prepared by the California Department of Fish and Game and the National Marine Fisheries Service (Guidelines). These Guidelines were written for analysis of the high flows of the winter season, from December 15 to March 31. However, the WAA appears to have calculated the Cumulative Flow Impairment Index (CFII) using parameters that significantly differ from the Guidelines. For example, the WAA period of study was April 1 to October 31 El Sur

3-115

Ranch’s permit “diversion season,” a dry season, even though the permit is for year-round diversions. Therefore, the WAA violates the basic premise for the Guidelines, the use for high winter flows only, and ignores the year-round period of diversion, so the analysis is of questionable validity.

The WAA also makes several assumptions that don’t seem to add up correctly. First, the calculation of upstream demand is based on taking the existing water rights, totaling 177.6 acre-feet per year, and dividing the demand evenly across 365 days and then calculating the use for the 213-day “diversion season.” By my calculation, 213 days is approximately 58.4% of the year. Thus, the total upstream demand should be approximately 103.7 acre-feet not the 49.9 acre-feet listed ($177.6 \text{ ac-ft/yr} \times 0.584 = 103.7 \text{ ac-ft/yr}$). Then the WAA proportions the applicant’s water use evenly throughout the 213-day “diversion season” even though the water right being sought allows otherwise. The application allows for diversion of 735 acre-feet from July to October, with a monthly maximum of 230 acre-feet. The application also allows outside the July-October irrigation season a maximum average 30-day diversion of 5.34 cfs, or 318 acre-feet. If the 30-day rate of 5.34 cfs or 318 acre-feet is applied for the months of April, May and June, a diversion of approximately 951 acre feet would be permitted. The combination of the maximum diversions of the April to June and July to October periods exceeds the annual 1,615 total acre-feet being sought. Thus, the correct value for the WAA calculation would be the maximum annual diversion of 1,615 acre-feet. If this value were used and then added to the 103.7 acre-feet of upstream diversions for the April to October “diversion season,” then the total demand would be 1,718.7 acre-feet or a CFII of 9% of the average seasonal flow volume of 19,012 acre-feet ($1,718.7 \text{ ac-ft} / 19,012 \text{ ac-ft} = 0.09$), which exceeds the 5% Guideline cutoff for impact to fisheries. Note that this cumulative flow calculation doesn’t appear to include the potential riparian diversions upstream from the point of use. When all potential riparian diversions are added in, the upstream riparian demand increases the CFII percentage. Therefore, the WAA conclusion that the CFII doesn’t exceed the recommended 5% cutoff is incorrect because of the misapplication of the Guidelines and the incorrect calculation of existing and application demands.

3-115
(cont.)

23) Page 2-19: The discussion of the proposed place of use states that the land to be irrigated includes 25 acres of riparian. As noted above in my comment no. 18, the DEIR states elsewhere (page 2-17) that only 23 of these acres are currently being irrigated.

3-116

24) Page 2-20: The introduction to the section on diversion and rate limits assumptions states that the chapter doesn’t reflect the SWRCB’s determination or judgement as to whether the proposed diversion and use of water are reasonable and beneficial. Granted, the SWRCB as a deliberating body has the right to reach an independent decision regarding the appropriateness of the requested water rights application. But this is still a curious statement given that this DEIR is a SWRCB document developed to evaluate the environmental impacts of a discretionary permit that they alone have the authority to approve. Ultimately the SWRCB will have to certify the Final EIR and in doing so make “one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding” (CEQA Guidelines section 15090). It would seem that the time for the SWRCB to put forth their best effort at presenting the rationale for their eventual findings would be in this DEIR.

3-117

25) Pages 2-21 through 2-26: This section of the project description presents water use and diversion limitations of the project. I have provided in my general comment no. 4(a) through 4(f) discussions of each of the diversion limits along with the inconsistencies. In particular, Table 2-3 that lists the estimated irrigation diversion requirements doesn't seem to agree with the technical support documents. See my general comment no. 4(a) for additional discussion.

3-118

26) Pages 2-26 through 2-28: This section discusses the operational practices of the El Sur Ranch in irrigating the pastures. Several of the mitigation measures require that different operation management plans be developed, and there is a possibility of additional requirements that CCRWQCB's Order R3-2009-0050 requires for irrigated lands. These management plans are a critical component of the mitigation measure to ensure the protection of public trust resources. The operating practices listed in this section appear to be the beginnings of these required operation management plans, but a list of general goals and practices isn't specific enough to be an enforceable operations plan. The DEIR should provide specific mitigation measures, operation practices and procedures so that these practices that are critically important for reducing the project's impacts to a level of less than significant can be reviewed and commented on by government agencies and the public, and clearly demonstrate to the SWRCB that the impacts can be mitigated.

3-119

27) Page 2-28: See my comment no. 14 for discussion on the statement that the DEIR was developed with the assumption that no other permits are required and the issue of whether responsible agency mitigation measures or conditions will be part of the water rights permit.

3-120

28) Page 3-1: See my comment no. 15 for discussion of inconsistencies about when the Old Well began pumping. See my general comment no. 1 for the discussion of determination of whether the El Sur Ranch well has been found to be pumping from a subterranean stream as defined by SWRCB Decision 1639.

3-121

29) Table 3-1: The summaries in this table of the mitigation measure are very complex. I've attached my Table 5, my attempt to list by month the flow limitations of mitigation measures 4.2-2, 4.3-1 and 4.3-2. However, my Table 5 doesn't begin to explain the decision tree, linkages, and alternatives to the mitigation measure being proposed. For example, mitigation 4.2-4 requires in the future that a ECOMP be prepared and on approval by the SWRCB incorporated into the IWMP as required by mitigation 4.2-2. But the IWMP has to be approved by the SWRCB only when it is modified; the original plan apparently requires no review or approval. Likewise, monitoring to ensure compliance with the IWMP is required only if it is modified, but apparently the original plan has no monitoring requirements. These complex conditions and links among the mitigation measures creates problems in understanding the mitigation requirements, administering the mitigation measures, monitoring and reporting, ensuring compliance, and enforcement. The DEIR needs a graphic that shows the decision tree and the linkage among the mitigation measures as well as a table that presents a matrix of the flow limitations, the times and duration that they apply, and the timing of monitoring and reporting to ensure compliance with the mitigations. If these mitigations are acceptable to the SWRCB, or something like them, then these graphics and tables should become part of the water right permit

3-122

The DEIR mitigations 4.2-2, 4.2-6, 4.2-10, 4.2-11, 4.3-1, 4.3-2, 4.3-9, 4.3-10, 4.3-12, and 5-4 only restriction continuous baseline diversion based on protocols and operation management procedures to be developed in the future in the IWMP. The IWMP is supposed to have protocols and operator training to ensure that the project diversions do not cause or contribute to extremely critical dry flows (< 10th percentile) or critical dry flows (< 20th percentile) greater than baseline. Thus mitigation measures apparently allow for unrestricted year-round diversions at baseline rates. The IWMP apparently doesn't have to be developed during the CEQA process although mitigations 4.3-1(b) and 4.3-2(b) imply that flow thresholds established in the Final EIR will be part of a "flow monitoring and operations plan" that will be at some undetermined future time approved by the SWRCB and incorporated into the IWMP. Interestingly, mitigation measure 4.3-4 that deals with dissolved oxygen levels in the river does not require the instream aeration system to be part of the IWMP or an evaluation of its feasibility and efficacy during the CEQA process. I will provide additional discussion as needed on each mitigation measure in my comments on DEIR Section 4.

3-122
(cont.)

30) Page 4.2-1: See my general comment no. 2 for a discussion on why the irrigated acreage is approximately 248 acres not 267 acres. The DEIR states that the applicable issues are only the impacts during critical dry periods. See my general comments nos. 5, 6, 7, 8, and 9 for discussions on why this assumption is incorrect and potentially significant impacts may occur in normal, above normal and even wet years (see my Table 4).

3-123

31) Page 4.2-4: See my general comment no. 8 for a discussion on the flows listed in Table 4.2-1 and the inconsistency with a similar table in the 3rd Amendment to the water rights application and my calculation of flow percentiles.

3-124

32) 4.2-8: Table 3-3 of The SGI's 2005 report presents estimates of the quantity of flow out of the terrace deposits along with the hydraulic conductivity of 100 feet/day, which they indicate is a high estimate. The use of hydrogeologic information from the 1999 Jones and Stokes report raises an issue of professional practice and what license is required to practice hydrogeology. This issue was raised in an October 4, 2001 review by staff of the California Geological Survey (formerly Division of Mines and Geology). This review was included as Attachment 2 in the June 30, 2006 memorandum to Ms. Victoria Whitney, Chief of the Division of Water Rights on the Notice of Preparation from Mr. Robert W. Floerke, Regional Manager of CDFG's Yountville Office. This memorandum is attached in Appendix B of the DEIR. The DEIR should use hydrogeologic or geologic information presented in the 1999 Jones and Stokes report only when an SGI or other licensed geologist and/or civil engineers have accepted responsibility for the work. In the case of the terrace hydraulic conductivity, SGI has used the value in their calculations and therefore becomes responsible for the data. The SGI 2005 report should also be cited as the source for the terrace deposit hydraulic conductivity and elsewhere in the DEIR where Jones and Stokes hydrogeologic data and conclusions are use, provided that SGI accepts responsibility for the work.

3-125

33) Pages 4.2-7 through 4.2-15: This section discusses the geology of the project area. The DEIR includes several geologic cross-sections prepared by SGI (2005), but doesn't provide much discussion on the hydrogeologic significance of these sections. Instead,

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(cont.)

the DEIR substitutes the finding of a geophysical study for the hydrogeologic setting and presents a rather detailed discussion of the geophysical layers identified by their differing resistivity. The DEIR however, doesn't discuss how these resistivity layers relate to the physical aquifer conditions. The DEIR needs a better explanation of why this geophysical data is important and how it will be used in assessing the project's impacts.

34) Page 4.2-16: The discussion of the soils in the POU doesn't provide much information on the distribution of the soils or the subsurface characteristics. The 2005 and 2007 NRCE reports provide information on the soils, their permeability and water holding capacity, as well as a map showing their distribution. Of particular interest is the description of the clayey subsoil of the Santa Ynez fine sandy loam that has a permeability rate of less than 0.06 inches per hour. The permeability rate of this clayey subsoil is approximately an order of magnitude lower than the surface layer with a permeability ranging from 0.6 to 2.0 inches per hour. This clayey subsoil will inhibit downward drainage of applied water, which raises the issue of where the water applied to leach the salts out of the soils will go and what additional impacts result from the discharge of this high salt content water. See my general comment no. 13 for further discussion on the importance of this clayey subsoil and seepage of ground water on the coastal bluffs. The DEIR should provide more information on the soils in the POU, provide the soils map of NRCE reports and discuss where the water that leaches the salts from the pastures will discharge and the impacts of that discharge on water quality and beneficial uses.

3-127

35) Pages 4.2-17: See my general comment no. 1 on the need to determine that the point of diversion is a subterranean stream as defined by SWRCB Decision 1639. The 169 cfs listed as normal winter flows should be stated as average of normal daily flow. The "normal" for peak flows during winter months is much higher. Also see my general comment no. 8 on the problem with the flows listed in Table 4.2-1. The discussion of alluvial aquifer characteristics should include information on the hydraulic conductivity of the different alluvial layers. This will be important in the later discussion on page 4.2-21 of the impact of the Franciscan bedrock constriction on naturally forcing ground water to seep into the river or "upwelling" in the ZOI.

3-128

36) Pages 4.2-18: As discussed in my comment no. 32, the use of Jones and Stokes hydrogeologic opinions and data is questionable because they did not have the required professional licenses to make these opinions or reports. The DEIR should only use hydrogeologic data and opinions where SGI has accepted responsibility. The statement that the depth of the notch in the bedrock at the mouth of the river is unknown conflicts with DEIR Figure 4.2-3, which has contours showing the base of the gravels, and supposedly the top of the bedrock, all the way to the ocean. These contours suggest that the depth of the notch is approximately 90 to 95 feet below sea level.

3-129

37) Page 4.2-21: The discussion of the bedrock constriction naturally forcing ground water to seep into the lower-most reach of the river as the path of least resistance is incorrect. Refer to my June 28, 2006 memorandum in Appendix B that comments on the Notice of Preparation and Initial Study for this DEIR for a discussion on the theory that the bedrock constriction causes natural upwelling of ground water into the river. Specifically, I estimated that the transmissivity of the aquifer at the bedrock constriction isn't reduced because of the high hydraulic conductivity of the material in the "notch." Because the flow

3-130

of ground water is determined by the transmissivity, aquifer width and the gradient not just the cross-sectional area and gradient, the theory of constant upwelling ground isn't valid. See my general comment no. 5 for a discussion of the likely cause of the groundwater seepage in the ZOI and its dependence on the orientation of the channel and the elevation of ground water.

3-130
(cont.)

38) Page 4.2-23: See my general comment no. 5 on the issue of the stability of the channel location and the impact on the loss of river flow during pumping. Also see my general comment no. 3 for a discussion of the engineering analysis of electrical use and pump efficiency tests needed to document the historic pumping diversions shown in Tables 2-1 and 4.2-2.

3-131

39) Page 4.2-24: The discussion on the halting of pumping when the electrical conductivity reaches 1,000 uS/cm needs to indicate that this is a voluntary cutoff. See my general comment no. 12 for discussion of the salinity cutoff, the potential impacts from applying salty water and why there should be a mitigation measure in the DEIR and a condition in the water rights permit that require cessation of pumping when this conductivity is reached.

3-132

40) Page 4.2-25 and 26: The section states that the Big Sur River is a losing reach below the USGS gage and references Table 4.2-4, which gives monthly average annual flows at the gage and Andrew Molera State Park. Table 4.2-4 shows that the river always gains flow between the gage and Andrew Molera State Park, which contradicts the statement that it's a losing reach. In addition, the average flows listed in Table 4.2-4 don't match either the median flows or fall between the 40 and 60 percentiles listed in Table 4.2-1, except for July, August and September. This suggests that the data are skewed and the mean (average) and median (50th percentile) are very different. The DEIR should point this out and discuss why the average is the most appropriate value instead of the median, given that the mitigation measures are based on percentile flows. The discussion of the velocity transects used in the 2004, 2006 and 2007 SGI studies fails to point out that in the 2004 study VT2 was at the upper end of the ZOI and in a different location in the 2006 and 2007 studies. The changing of the velocity stations locations between studies creates confusion.

3-133

41) Page 4.2-31: The discussion of the estimate of flow losses below the USGS gage can be expanded to include more data. See my general comment no. 7 and my Table 3 for more information on the flow losses between the USGS gage and the point of diversion.

3-134

42) Page 4.2-32 and 33: See my general comment no. 13 for discussion of evidence of irrigation impacts on stability of coastal bluffs.

3-135

43) Page 4.2-34: The first paragraph gives total diversion rates for water users in the Big Sur River watershed. What is the source of this data? This section also considers that the total 5.84 cfs diversion being requested by El Sur Ranch is part of the total river flow diversion. See my general comment no. 9 for discussion of why the 5.84 cfs total diversion should be used in calculating bypass flow requirements. Table 6-1 is said to provide a list the appropriative water rights, but this table lists the water use for the project alternative. It is likely that the table to be reference is Table 5-1 in Chapter 5.

3-136

- 44) Page 4.2-36: The discussion of the lack of water quality data for the tailwater pond or for any other runoff from the pastures suggests that El Sur Ranch has not confirmed that natural degradation is occurring in the pond. See my general comment no. 11 for a discussion of the requirement for following the CCRWQCB's Order R3-2009-0050 and MRP R3-2004-0117.

3-137
- 45) Page 4.2-37: The discussion of groundwater quality leaves out the potential impacts from the leaching of the salts that build up in the pastures. Where does this leached water discharge and what is the impact on the receiving waters? See my general comment nos. 11, 12 and 13 for a discussion of the potential impacts from the leaching of salts and the monitoring requirements.

3-138
- 46) Page 4.2-39: The discussion of beneficial uses of waters seems to miss the significance of SWRCB Resolution 68-16, the Anti-Degradation Policy. This policy provides protection for water bodies even when there is no specific numerical standard listed in the Basin Plan. On the next page, the DEIR discusses the role of the Anti-Degradation Policy for protection of all waters of the State without citing the resolution number. The DEIR give the impression that this policy doesn't apply to surface waters. The DEIR should be written to reflect the requirements of the Anti-Degradation Policy.

3-139
- 47) Page 4.2-42: See my general comment no. 11 for discussion of the conditional waiver of waste discharge requirements for discharges from irrigate land.

3-140
- 48) Page 4.2-45: Table 4.2-6 lists the baseline and proposed project diversion rates, both the 20-year running average and the project maximum. Several of the diversion rates listed in this table don't match the diversion limits being requested in the water right application. For example, the monthly diversion rates listed for July through October show 184 acre-feet per month, but the requested limit is a maximum of 230 acre-feet per month. The monthly diversion rate of 184 acre-feet isn't a requirement of the water right limits and uniform diversion during these months isn't required. In fact, as I've discussed in my general comment 4(f), pumping at the maximum rate of 5.84 cfs for 19 days per month wouldn't violate any of the other diversion limitations. The anytime maximum instantaneous diversion rate of 5.84 cfs isn't listed on this table, yet pumping can go that high at any time. The sum of the acre-feet for the project's 20-year average totals is 1,557 acre-feet not the 1,200 acre-feet of the 20-year average. The sum of the average baseline historic diversions for November through April (Table 2-1) is 52 acre-feet, but Table 4.2-6 shows 7 acre-feet. The baseline seasonal maximum monthly average is given as 269 acre-feet, but this is a one-time monthly maximum from September 1990 (Table 2-1). The greatest monthly baseline July to October season average is for July at 168 acre-feet. Note that the highest monthly average is June at 172 acre-feet. The DEIR should be written to reflect the actual diversion rates being requested in the 3rd Amendment to the water rights application. The complexity of the six diversion limits makes describing the maximum permitted diversion and associated impacts difficult, but that is what is being requested and the DEIR should address the potential maximum impact

3-141
- 49) Page 4.2-46 through 48: The discussion of the SGI studies provides a section on the many limitations of these technical studies. These technical studies have more limitations

3-142

than presented on in this section that are discussed elsewhere in the DEIR. The impact of these limitations on the environmental analysis of this DEIR is significant. In particular, how accurate is the proportioning of the diverted water into surface water and ground water sources, and can this ratio be assumed to continue unvaried in perpetuity? See my general comments nos. 5, 6, 7 and 9 for additional discussion on the splitting of the sources of water diverted by the two El Sur Ranch wells. The following are some of the additional technical limitations in the DEIR that are found outside of the Study Limitations section:

4.2-48 & 49: *“No natural groundwater flow information in the terrace area underlying the POU was measured for initial conditions but it was measured after pumping tests as 0.019 ft/ft...”*

4.2-49: *“However, these tests do not include data from groundwater wells located outside of the ZOI and/or within the Creamery Meadow. Consequently, for this impacts analysis, although the ZOI will be often used to refer to the New Well ZOI radius, but the actual ZOI may extend farther.”*

4.2-49: *“The shallow piezometer essentially measures surface water elevations and the deeper one measures the local groundwater hydraulic potential. However, as with surface water quality, flow, and water depth measurements, these measurements were also affected by the ambient changes in lagoon conditions, tides, and rain events. During the 2006 and 2007 studies, there was no attempt to reconcile potential groundwater elevations and local tidal conditions and no monitoring was conducted within the south side alluvial aquifer (underlying the Creamery Meadow).”*

4.2-50: *“However, because of external factors that can influence results and limited data available for analysis, characterization of incremental effects remains qualitative.”*

“Additionally, changes in gradients at each location can be used to identify impacts at each location caused by pumping, but differences between locations cannot necessarily be used to identify impacts from pumping because both locations may be affected by pumping (e.g., see VT3 and VT2 on Figure 4.2-5).”

4.2-54: *“Instantaneous measurements are insufficient to capture the potential effects of pumping on changes in flow characteristics because potential confounding factors such as lagoon closure, tidal action, precipitation, or changes in upstream inflows could affect the data and the measurements may not occur at a high enough frequency such that the stabilized condition or the immediate effects may be missed.”*

4.2-54: *“Consequently, data where the lagoon changes state from open to closed or closed to open cannot be reliably used to evaluate potential flow effects. Additionally, because both VT2 and VT3 were within the zone of influence, pumping would effect flow and water surface elevation at both locations; therefore, proposed project differences between the two locations would not reflect the total gain/loss from the Big Sur River within Zones 4 through Zone 2.”*

4.2-55: *“As with all other measurements, tidal action, lagoon status, and precipitation all*

affect the measurements. However, despite limitations in the data, these changes in hydraulic gradient and groundwater inflow/outflow were used to qualitatively evaluate the effects of incremental increases in diversion rates during the July to October irrigation season on flow within the Lower Big Sur River adjacent to the area of diversions.”

4.2-58: “No measurements within the Creamery Meadow underlying aquifer were taken to accurately identify the ZOI extending within the Creamery Meadow during the ZOI tests (SGI 2007).”

4.2-61: “However, because the unaffected gradient was not measured closer to the same time period as the pumping-affected gradients, the effect of pumping on the overall groundwater gradient in the area of diversions cannot be determined from the 2004 study...No information is available regarding the groundwater gradient in the aquifer underlying the Creamery Meadow.”

4.2-63: “Only one monitoring station was located within the Big Sur River along the curve where it begins to flow southwestwardly. This station was located within the area expected to be affected by the New Well, but not the Old Well. However, no hydraulic gradient (difference between shallow water versus groundwater potentiometric surface) was measured at this station, regardless of extraction scenario (Figure 3-6 SGI 2008). The lack of any measureable differences at this station indicates that this station may have been compromised and proposed project effects on surface water to groundwater gradients in this area cannot be determined.”

4.2-64: “When only the Old Well or New Well was operating, there was likely still an effect on river flow; however, because of confounding external factors (e.g., lagoon closing and opening, low flow above the project area, rainfall events, tidal actions), these relationships cannot be reasonably identified.”

4.2-70: “However, no measurements have been made to identify specific conditions on the POU and verify the accuracy of these calculations; calculations are based on average values for the types of soils within the POU and not any actual measurements of infiltration, uptake, and evapotranspiration. Consequently, the use of additional irrigation water that calculations indicate could be effectively used may not, in reality, be effectively used.”

4.2-77: “Because of data variability, no conclusions regarding pumping effects on DO can be made.”

4.2-78: “Because values are instantaneous and several events may artifact the data (e.g., lagoon opening and closing, precipitation, tidal processes, and alterations in flow and water quality because of Labor Day weekend additional water demands/diversions and increased septic seepage from greater recreational activities in the [Pfeiffer]-Big Sur State Park) effects of diversions cannot be identified.”

4.3-2: “Timing of field visits by PBS&J biologists was established by project and landowner schedules. All visits were reconnaissance-level surveys and not intended to

be comprehensive surveys for specific resources.”

4.3-31: *“A passage transect study was conducted in 2007, which indicated that the shallow water depths at the upstream transects “were independent of irrigation well operations” (Hanson 2008: pg 26). No analysis, however, was provided to support this conclusion. There were several other factors which limit the usefulness of this study when assessing the potential for the project to impact the ability of fish to move through the study area. These factors include:*

- Tidal influences drive the changes in depth observed at passage transects 2 and 3 at the downstream end of the study area.*
- It is unknown how far upstream the area of tidal influence extends.*
- The 2007 study did not include a discussion of the stage-discharge relationship for different passage transects making it difficult to predict passage conditions for different levels of streamflow.*
- All passage transects have different geometries, which influence their depths at different flows and make comparisons between riffles impossible.*
- The lagoon was closed between September 3 and 12 influencing results as water collected in the lower river.*
- There were substantial rainfall events on September 21 and October 10 which could have influenced streamflows and therefore passage conditions.”*

4.3-41: *“The Hanson (2008) passage tables indicate that only the New Well was operating during this period. However, the SGI (2008) report indicates that between August 31 and September 2, both wells were operating and pumped 5.02 cfs (SGI 2008); this condition is assumed to be accurate...Passage data and the precise relationship between pumping attributable to the project and reductions in water surface elevations are both somewhat limited.”*

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50) Page 4.2-50: See my general comment no. 12 for a discussion of the need to expand the assessment of impacts from pumping saline water.

3-143

51) Page 4.2-51: The ZOI lines on Figure 4.2-6 should be drawn on Figures 4.2-4 and 4.2-5 so that the relationship between the monitoring station and the ZOI is clear. In several places within section 4.3, Biological Resources, there is some confusion as to whether passage transects 10 and 11 are within the ZOI. Placement of the radius of the ZOI on the figures with the monitoring stations would show that they clearly are within the ZOI.

3-144

52) Page 4.2-53: Table 4.2-7 compiles the monthly average flows for the study period at the USGS gage. Are the values listed the mean or median? The DEIR is written around flow percentiles, so I would think that the values given are the 50th percentile or the median because the mean of a skewed data set doesn't have to fall into a consistent percentile. See my general comment no. 8 for a discussion of the discrepancy in the percentile tables in the DEIR, the water right application and my Table 4.

3-145

53) Page 4.2-55 and 56: The discussion of bankfull flow should refer the reader to Table 6-3, which has a tabulation of flood flows and return periods. The flows listed in Table 6-3 appear to be low for return periods listed. Bankfull flow as well as other flood events are

3-146

calculated based on the annual peak flow events not the daily flows (Dunne and Leopold, 1978). Therefore the values listed for the flood flow return periods in Table 6-3 will likely be significantly higher. My estimate of the 1.5 and 2.0 year return period flood flows using a simple Weibull plotting position method finds the flow range to be approximately 1,600 cfs to 2,200 cfs.

3-146
(cont.)

54) Page 4.2-57: See my general comment no. 13 on the evidence for coastal bluff erosion and instability from groundwater seepage and the relationship to irrigation of pastures.

3-147

55) Page 4.2-58: The text states that the ZOI extends 1,100 feet from the New Well and refers the reader to Figure 4.2-6. However, the annotation on this figure says that the radius of influence of the New Well is 1,000 feet. Also, the radius of influence lines should be put on the other figures that show the monitoring stations and zones. The DEIR should note that the radius of influence of the Old Well is estimated at 1,120 feet (Figure 3-7 of 2007 SGI report), but the 720 feet shown on Figure 4.2-6 is from the New Well. The DEIR should also note that the combined effect of both wells pumping at the same time may extend the radius of influence (see my comment no. 57).

3-148

56) Page 4.2-59: This section discusses the potential impact on ground water levels and aquifer supply and concludes that the project pumping will not permanently lower the level of ground water. Elsewhere in the DEIR, on page 4.2-21, the storage capacity of the aquifer, presumably the one beneath the entire Creamery Meadow, is stated as 765 acre-feet [cubic-feet]. The proposed maximum annual diversion is 1,615 acre-feet and the 20-year running average is 1,200 acre-feet. Thus, the annual diversion can be greater than the volume of the water in storage, by approximately 50 to 100 percent. The aquifer is being recharged mostly from upgradient underflow and surface flows. An extended period of low precipitation (dry and critical dry years) would reduce the volume of recharge. The DEIR is written such that during periods of low precipitation the volume of pumping would be at a maximum in order to provide optimal forage. These two conditions, low precipitation with maximum pumping, could result in a lowering of the water table well below normal conditions. As I've discussed in my general comment no. 5, the rate of groundwater discharge to the river is in part dependent on the difference in elevation between the water table and the river. A sustained drop in the water table from a lack of recharge would result in a reduction in the rate that ground water discharges to the river and may even reverse the direction of flow, e.g. the river flows to the ground water. While the statement that ground water would not be permanently lowered, it may be lowered for a period of time sufficient to cause a potentially significant impact to river flows and thereby public trust resources.

3-149

57) Page 4.2-62: The discussion of the hydraulic gradient between surface water and ground water in the river states that during the 2007 SGI study, a critical dry irrigation season, when both wells were pumping, the gradient became more negative for a distance of 600 feet upstream of the ZOI. In other words, the river lost flow to the groundwater aquifer for a distance that was greater than the radius of influences calculated by the pumping well tests when both wells were pumping. The DEIR goes on to say that the groundwater gradient could change as much as 16% when diversions are above 5.0 cfs. What information is there that this loss only occurs when pumping is above 5.0 cfs? The change in volume of river flow lost when both wells are pumping is not calculated, but

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should be provided for comparison with losses/gains in the ZOI. First, this is an interesting statement that the pumping impacts extend up to 600 feet upstream of the ZOI when both wells pump. Perhaps the ZOI is larger when both wells pump, perhaps because their pumping impacts are additive. Second, there is some question whether passage transects 10 and 11 are within the ZOI (see page 4.3-37), but this statement that pumping influences extend 600 feet beyond the designated ZOI would clearly find that these transects are affected when both wells pump and well within the ZOI.

58) Page 4.2-63: The discussion of the impacts to the river in the ZOI when both wells are pumping describes differences between the river zones. The difference in the gains or losses throughout the ZOI is important because the pumping impacts are local and can't be averaged. For example, Zone 2 is apparently a losing reach even without pumping, and with pumping river losses increase. This contrasts with Zones 3 and 4 that are said to be gaining reaches and pumping reduces the water gained. This DEIR states that the losses to the river during pumping are approximately 26%, but the fact that the river varies from a gaining to losing reach within the ZOI means that the impacts may vary within the ZOI. This fact isn't emphasized in the DEIR, but is critically important because the issue of acceptable fisheries habitat and passage is local and can't be average over a long section of river. Note that elsewhere in the DEIR the river losses during pumping are stated as 16% and 30% (see my comment no. 74).

3-151

59) Page 4.2-64: The DEIR should note that during the 2004 SGI study VT2 was not in the same location as it was during the 2006 and 2007 SGI studies. In 2004, Station VT2 was located near the upper stream end of the ZOI near passage transect 10, see Figure 1-3 in SGI's 2005 report. Velocity transect VT3 also changes location in the 2004 study. This change in station locations needs to be made clear.

3-152

60) Pages 4.2-64 and 65: The last paragraph discusses the loss of river flow during pumping of a single well. The loss of flow in the river during baseline July to October diversion is stated to be approximately 16% of the total diversion of 2.21 cfs. The discussion compares baseline losses to the increase in losses from increased rate of diversion. The term "average irrigation season condition," is used for this, but the actual diversion rate isn't given. DEIR Table 4.2-6 gives a listing of the baseline and proposed diversions and shows baseline flows in September as high as 2.60 cfs. The DEIR's averaging of irrigation season flow causes the assessment of the potential impact to be understated. The math in this paragraph is hard to follow. In fact, the sentence at the top of page 4.2-65 states that the increase in overall loss of river flow would be 0.06 cfs more than baseline for the average July through October season, but 0.05 cfs less than baseline at the maximum monthly July through October diversion rate. What does an "increase in overall loss" "less than baseline" mean? How can the loss from pumping be greater during average conditions than during maximum condition? Also, I've discussed elsewhere that the maximum pumping rate during the months of July to October can be 5.84 cfs, the instantaneous maximum diversion rate at anytime, provided the duration of pumping is 19 or less consecutive days every 30 days and every per month.

3-153

61) Page 4.2-65: See my comment 53 for discussion of how bankfull flow should be calculated. DEIR Table 4.2-8 should be revised to reflect the proper calculated flood flows.

3-154

62) Page 4.2-66: The discussion of loss of river flow has several errors. The sustained maximum diversion rate is 5.84 cfs not 5.34 cfs. As I've discussed before, that a pumping rate of 5.84 cfs can occur for 19 consecutive days resulting in a diversion of a total volume of approximately 220 acre-feet without violating the 30-day average or monthly average limits or 5.34 cfs and 230 acre-feet, respectively. The statement that no minimum has been established for flows that are necessary to maintain aquatic habitat, which presumably includes fish passage, is incorrect. The lack of establishing a minimum flows is due to the failure of the technical studies done to support the water rights application. While these report fail to provide the necessary minimum flows, they do contain sufficient information to establish an interim minimum bypass flow for periods of low flow. See my general comment no. 9 where I document that the minimum bypass flow of 40 cfs during June through November is needed for fish passage and 132 cfs during December to May. Therefore, this analysis that assumed a minimum flow needed is only 1 cfs is inadequate. DEIR Table 4.2-9 should be revised using 40 cfs and 132 cfs as a minimum flows necessary for protection of public trust resources. This table should also be expanded to include each month since the flow percentiles change with month. See my Table 4 with a bold line drawn along the 40 cfs and 132 cfs boundary between flow percentiles.

3-155

63) Page 4.2-67: This section states that sustained 30-days of pumping at 5.34 cfs can occur at any time from November to June, but Table 4.2-6 shows a maximum pumping rate of 0.68 cfs in November to April. I've discussed before the need to assume that the maximum diversion rate of 5.84 cfs can occur at any time.

3-156

The "average" baseline flow for November is stated as 29.8 cfs and over 100 cfs for all other winter months. However, the DEIR Table 4.2-1 lists the November median at 19 cfs and the other winter months range from 36 to 120 cfs, with only January and February exceeding 100 cfs. Again, the issue is the use of mean (average) or median. Because DEIR is written around percentile flows and the mean changes with the skew of the data, I suggest that the median, 50th percentile, is the better statistic.

3-157

The discussion on Swiss Canyon states that the point of upwelling between pastures 2 and 7 may be natural groundwater seepage or percolation of irrigation water. See my comment no. 10(b) for a discussion of why the source of this water might be a leak in the irrigation pipe that runs beneath Swiss Canyon in this area.

3-158

64) Pages 4.2-68 and 69: Mitigation measure 4.2.2 requires the applicant "immediately" develop and implement an Irrigation Water Management Plan (IWMP). Will this document be developed as part of the CEQA process? Will it be approved by any or all regulatory agencies that have jurisdiction over the project's impacts? What permit(s) other than a water right permit will be required for implementation of the IWMP? Finally, why is it that the only time the SWRCB has to approve the IWMP is when there are modifications, but not the original plan? What is the regulatory procedure for SWRCB approval? Will the approval be done under CEQA or an equivalent regulatory process? Does the IWMP approval conflict with the CCRWQCB's authority under Order R3-2009-0050, or CDFG's authority?

3-159

Table A lists baseline diversion rates and the proposed limits on diversion using baseline flows at the specified percentiles. The baseline diversion in Table A don't seem to match the baseline diversions given in Table 4.2-6. For example, in Table 4.2-6 the November to April baseline mean diversion is listed as 0.02 cfs, whereas the baseline diversions in these months in Table A range from 0.0 to 0.42 cfs with a mean of of 0.113 cfs.

3-160

The bypass flow requirements listed for this mitigation measure are based on seasonal percentile flows as measured at the USGS gage. See my general comments nos. 5, 6, 7, 8, and 9 for discussions on why the proper bypass flow requirements should be based on actual flows in the river that allow for fish passage and habitat protection and why the minimum bypass flows should be 40 cfs from June through November and 132 cfs from December to May. See my Table 5 for my interpretation of the monthly limitations stated in mitigation measure 4.2.2. See my Table 4 for the monthly percentiles that achieve my recommended 40 cfs and 132 cfs bypass flow requirement.

3-161

65) Pages 4.2-71 and 72: The excess irrigation in the northern pasture is said to discharge, presumably off site, through a flow control structure. DEIR Figure 2-2 and 2-3 show a single outlet draining over the coastal bluff from northern pasture 7. See my general comment no. 13 for a discussion of areas along the coastal bluff of the northern pasture 7 where groundwater seepage is creating erosion and instability. Also, no study or evaluation has been done on the potential for runoff from the pastures in to the natural drainage north of the irrigated pastures.

3-162

The discussion of Swiss Canyon notes the "upwelling" of ground water near pastures 2 and 7, and that riparian vegetation in the canyon reduces the potential for bed and bank erosion. See my general comment no. 10 for a discussion of the erosion in the canyon, vegetation disturbance, and possibility that the source of the "upwelling" ground water is a leak in the irrigation pipe that runs beneath Swiss Canyon.

The discussion of mitigation measures for Impact 4.2-3 requires that an Erosion Control and Operations Management Plan (ECOMP) be submitted to the SWRCB for approval. The mitigation measures require monthly inspection and repairs during the "irrigation season," a term that has been used elsewhere in the DEIR to mean July through October. The ECOMP will become part of the IWMP, which apparently doesn't have to be approved by the SWRCB until it is modified. The mitigation adds a requirement to the IWMP of mitigation measure 4.2-2 that it have management practices to avoid bare soil conditions and limit grazing above pre-project levels on land with less than 50 percent cover. The mitigation requires that erosion and sediment transport BMPs be implemented. However, on page 4.2-74 the DEIR states that under the CCRWQCB's irrigated land discharge waiver, there currently are no required BMPs or discharge limitations.

3-163

Is the ECOMP a modification the IWMP? When does the ECOMP have to be submitted to the SWRCB for approval? Is the approval by the SWRCB a CEQA process or some other equivalent permit process? Will erosion control management occur throughout the year given that the requested diversion is year round? Is the project proposing to increase the grazing intensity above the pre-project level, and if so, what is the pre-project level and what is the expected increase? How does the ECOMP compare to the Farm

Management Plan required by CCRWQCB’s Order R3-2009-0050? What BMPs will be implemented given the DEIR’s apparent decision that the CCRWQCB doesn’t require specific practices be implemented? See my general comments nos. 11 and 13 for discussion of erosion control and water quality permit issues.

3-163 (cont.)

66) Page 4.2-73: The discussion of Impact 4.2-6 states that the proposed project would be subject to CCRWQCB Order No. R3-2004-0117. This order has been replaced on July 10, 2009 by Order No. R3-2009-0050, but the monitoring and reporting plan from Order No. R3-2004-0117 remains in place and was adopted by Order No. R3-2009-0050. See my general comment no. 11 for a discussion of this CCRWQCB order and its applicability to the El Sur Ranch pastures.

3-164

67) Pages 4.2-74 and 75: The discussion of Impact 4.2-7 says that the pumps are periodically shut down in response to high salinity levels. The discussion says that the Old Well is “required” to shut off when salinity levels reach 1,000 uS/cm. Elsewhere in the DEIR the salinity shut off for the Old Well is said to be voluntary. The statement is again made that the maximum allowed rate of sustained pumping is 5.34 cfs. I’ve noted before that the requested maximum year-round water right limit is 5.84 cfs, and that this level of pumping could be sustained for 19 consecutive days every 30 days and/or month without violating any of the other diversion limits. See my general comments nos. 4 and 12 for discussion of the diversion limits and the issues related to applying higher salt content irrigation water.

3-165

68) Page 4.2-76: The statements that the maximum average diversion during July through October is 3.67 cfs and the maximum average throughout the rest of the year is 5.34 cfs are incorrect because of the presumption that pumping has to take place for longer than 30-days and for reasons given above in several of my other comments. In addition, compare these values with those in DEIR Table 4.2-6 to see additional discrepancies in the presentation of the maximum allowed pumping rates. See my general comments nos. 5 and 6 for discussion of potential impacts from changes in the channel location, and needed monitoring requirements to document channel conditions. Also, see my June 28, 2006 memorandum on the 2006 Notice of Preparation and Initial Study for a discussion on temperature data from the 2004 study.

3-166

69) Page 4.2-78: The mitigation measure for Impact 4.2-8 has as an alternative mitigation measure an instream aeration system to increase the level of dissolved oxygen. This alternative mitigation doesn’t have even a preliminary design, or any evaluation of feasibility or effectiveness, yet the DEIR concludes that it would result in a less than significant impact over baseline. However, the statement on the previous page says, “...no conclusions regarding pumping effects on DO can be made.” If the studies to date can’t provide any conclusion on pumping impacts, so how can a conclusion be reached that instream aeration system would mitigate these effects to less than significant? In addition, this alternative mitigation doesn’t address what permits would be required to implement it, and the fact that several of the permits would have to come from other than the SWRCB, namely CDFG and possibly CDPR. There is also the fact that the applicant doesn’t own the land and would have to have approval from CDPR to install and operate such a system. If this alternative is to be considered feasible, more information is needed on the design, efficacy, and implementation and permit requirements. In addition, letters

3-167

are needed from the agencies that might have approval and/or permit authority concurring that the project is feasible. Will the project’s approval be carried out under a CEQA or another equivalent process? Finally, who will be the lead agency, SWRCB, or whom? At this point in time, it doesn’t appear that the planning effort for the instream aeration system alternative has been adequate to consider it a feasible mitigation measure.

3-167 (cont.)

70) Pages 4.2-79 and 80: The discussion on cumulative impacts states that the unpermitted historic maximum diversion is approximately 1,412 acre-feet and that the total cumulative maximum diversion being sought by water rights application no. 30116 is 1,891 acre-feet. DEIR Table 5-1 lists the maximum historic total annual diversion during baseline as 1,136 acre-feet. The 3rd Amendment to the water rights application discusses a theoretical requirement for optimal production of 1,440 acre-feet, and a historic maximum annual diversion of 1,611 and 1,737 acre-feet as shown in DEIR Table 2-1. While the DEIR baseline from 1985 to 2004 has a maximum annual diversion of 1,136 acre-feet in 2004. The 3rd Amendment to the water rights application is requesting an annual maximum of 1,615 acre-feet. Why does the DEIR use different numbers to evaluate impacts of the maximum diversion requested in the permit?

3-168

The discussion of Impact 4.2-9 states that the current total water diversions in the Big Sur River are 6.85 cfs, which apparently include 5.84 cfs diverted by El Sur Ranch (see page 4.2-34). As I questioned in my comment no. 43, where does this number come from? On page 4.2-34 the reader is referred to Table 6-1 for a detailed list of the appropriative water rights, but this table is a list of CEQA alternatives. Table 5-1 lists the existing and potential water rights within the Big Sur watershed, but only by acre-feet per year not cfs. The analysis also neglects to account for other riparian users in the watershed. El Sur Ranch’s riparian diversion is included in the 5.84 cfs. The cumulative impacts discussion needs to account for the riparian uses in the watershed. See my general comment no. 7 for a discussion of flow losses below the USGS gage and the need to include riparian users in the assessment of water availability.

3-169

The statement that diversions of the proposed project would not substantially draw the aquifer down has been discussed in my comment no. 56. For the proposed annual diversion of approximately 50 to 100 percent more than the ground water stored in the aquifer stores to not have an impact requires that the recharge rate be continuously at or greater than the diversion rate. The DEIR hasn’t established this as a fact. If the flow of ground water from upgradient of Creamery Meadow isn’t adequate to replenish the diversion, then losses from the river flows will have to make up the difference, if that is at all possible. The DEIR should calculate the amount of underflow coming through the narrow aquifer in the bedrock section of the river upgradient from Creamery Meadow and document the groundwater mass balance among all of the gains, losses, and diversions including losses to the ocean.

3-170

71) Page 4.2-81: See my comment no. 53 for discussion of the issue of calculating bankfull and flood flows.

3-171

The statement that irrigation runoff from the project site doesn’t enter the Big Sur River seems to ignore the riparian irrigation. The water rights application apparently includes 25 acres of riparian lands. See my general comment no. 2 for a discussion of the lands

3-172

included in the application. In fact, the 3rd Amendment to the water rights application has a statement that the applicant reserves the right to contend that additional lands are riparian to the Big Sur River. It seems that, by definition, lands that are riparian to a river drain towards that river, which contradicts the DEIR's statement. The mitigation measure for the riparian portion of Impact 4.2-11 should include irrigation practices and erosion control measures and monitoring.

72) Pages 4.3-36 and 37: The discussion of the potential reduction in river water depth from project pumping states that the stream flows lists in Table 4.3-7 are the mean daily exceedence flows at the USGS gage from December through May. The listing of flows as "exceedence" percentiles differs from the previous tables in the DEIR, which list percentiles as "non-exceedence." To avoid confusion, I recommend that the DEIR use either exceedence or non-exceedence percentiles, but not both. Note that the 3rd Amendment to the water rights application uses exceedence flows in Table 2. Also, compare DEIR Table 4.2-1 and 4.3-7 for differences in flow values with the same percentile when exceedence to non-exceedence conversion is made.

The discussion of the passage studies indicates that there is a question whether passage-transects 10 and 11 are within the ZOI. Elsewhere in the DEIR these passage-transects are said to be within the ZOI (page 4.3-40). As I discussed in comment 55, the radius of influence lines on DEIR Figure 4.2-6 should be put on Figure 4.2-5 to clearly show that passage transects 10 and 11 are within the ZOI. In addition, on page 4.2-62, it's stated that during the 2007 SGI study, during a critical dry irrigation season when both wells pumped, the groundwater gradient became more negative as far as 600 feet upstream from the ZOI. In other words, the river lost more flow to the groundwater aquifer (see my comment no. 57). This suggests that the pumping influence may extend further upstream than the theoretical radius of ZOI.

The mitigation measure for Impact 4.3-1 uses flow percentiles to establish flow limits and requires development, in the future, of a detailed flow monitoring and operations plan approved by the SWRCB that will eventually be incorporated into the IWMP. As I discussed above, a table similar to my Table 5 is needed that clearly lists these flow limits. This future monitoring and operations plan will use flow thresholds established in the Final EIR that will be developed in consultation with NMFS and CDFG. It's not clear whether these consultations will occur before or after the development of flow threshold for the Final EIR. If these consultations are to occur before, why haven't they happened prior to the submission for this DEIR? What is the timeline for approval of this flow monitoring and operations plan? Apparently sometime after the Final EIR because the FEIR thresholds are needed to develop the plan? Will the SWRCB's approval process be done under CEQA or some other board equivalent process? What other permits will be needed to implement this flow monitoring plan and how will the SWRCB incorporate the requirements of other permits? In addition, see my general comment no. 9 for a discussion on a minimum bypass flows from June to November of 40 cfs and December to May of 132 cfs.

The issues of Table A have been previously discussed in my general comment no. 9 and comment 64. Specifically, that the listed percentile flows don't agree with Table 2 of the 3rd Amendment to the water rights application or my Table 4. My comment no. 64

discusses the disagreement between Table A baseline diversion rates and those in Table 4.2-6. In addition, the baseline diversion rates seem to be opposite the availability of water supply. Winter diversions are lowest, while summer's are the highest. Although this is the historic pattern of un-permitted diversion, it conflicts with the amount of water available for diversion.

3-173 (cont.)

73) Pages 4.3-39 through 42: The discussion of juvenile steelhead passage impairment is provided in Table 4.3-8, which lists the mean monthly flows at the USGS gage for June to October during the 2004, 2006 and 2007 study years. This table is linked to Table 4.3-9, which shows the flows by percentile. As with the other sections that use flow percentiles, there is an exceedence versus non-exceedence issue, and the disagreement between DEIR percentile flows and those of the the 3rd Amendment to the water rights application and my Table 4. There also appears to be another issue with the disagreement between flows listed (Table 4.3-9 and Table 4.2-1) when the exceedence to non-exceedence issue is corrected. For example, the 50th percentile in Table 4.3-9 for October is given as 22 cfs, while the median (50th percentile) in Table 4.2-1 is given as 15 cfs. There are other discrepancies between the table.

3-174

The last paragraph on page 4.3-40 says that the analysis focuses on passage transect 4 because it is located in the area subject to the greatest amount of drawdown. Other passage transects are equally important. In particular, passage transects 10 and 11 frequently failed to have sufficient flows for passage during several of the studies. The section closes with a statement that the passage data and relationship between project pumping and reductions in surface water elevations are "somewhat" limited. Are they limited sufficiently that the statements about changes in flow and depth given sometimes to two decimal places are only rough estimates? This statement seems to invalidate much of the DEIR analysis of impacts to river flow by pumping.

The mitigation measures for Impact 4.3-2 are similar to those for Impact 4.3-1 in the use of flow percentiles to establish flow limits along with the requirement to develop, in the future, a detailed flow monitoring and operations plan to be approved by the SWRCB that will eventually be incorporated into the IWMP. As I discussed above, a table similar to my Table 5 is needed that clearly lists these flow limits. The monitoring plan will use flow thresholds established in the Final EIR that will be developed in consultation with NMFS and CDFG. It's not clear whether these consultations will occur before or after the development of flow thresholds for the Final EIR. If these consultations are to occur before, why didn't they happen before submission of this DEIR? What is the deadline for approval of the flow monitoring plan? Apparently sometime after the Final EIR because the FEIR flow thresholds are needed for development of the plan? Will the SWRCB's approval process be done under CEQA or some other board equivalent process? What other permits will be needed to implement this flow monitoring plan and how will the SWRCB incorporate the requirements of other permits? In additon, see my general comment no. 9 for a discussion on minimum bypass flow of 40 cfs from June to November.

74) Pages 4.3-43 through 45: The discussion of the changes in inflow to ground water from pumping states that there is a reduction of 0.30 cfs for every 1 cfs pumped, a 30% reduction. Elsewhere in the DEIR, values of 24% are use for losses to the river flows

3-175

from pumping. Elsewhere on page 4.2-64 the “loss of flow gain plus flow loss to groundwater” is said to be 16%. The DEIR apparently has a range for the loss in river flow during pumping from 16% to 30% without a clear explanation of the conditions causing the difference.

The statement that the maximum diversion rate attributed to the project is 1.4 cfs apparently comes from back calculating the numbers in DEIR Table 4.1-1. A project difference between baseline and 318 acre-feet for the average 30-day average rate of 5.34 cfs is 84 acre-feet. As discussed above, the maximum pumping rate is 5.84 cfs. Pumping for 27 days at 5.84 cfs produces 312 acre-feet, which is less than the 318 acre-foot 30-day average maximum. The DEIR’s approach of averaging doesn’t agree with the water right permit limits. The DEIR should include an analysis of the impact from the maximum rate of pumping, not a time average of the pumping. Fish are a biological resource; pumping impacts to fish today can’t be mitigated with future periods of non-pumping.

The statement that the increases in project pumping are relatively slight compared to baseline pumping raises the issue of whether the past un-permitted diversions can establish an environmental impact baseline. See my general comment no. 9 for a discussion of why this un-permitted baseline is inappropriate.

The flow limit in mitigation measures for Impact 4.3-4 differs from the other mitigation measures in that it sets a trigger based on one specific flow, 10 cfs. The percentile of a 10 cfs flow varies each month. See my Table 4 for the changes in monthly exceedence percentage for 10 cfs. In addition, the 10 cfs flow is less than the June through November 40 cfs bypass flow and December through May 132 cfs bypass flow I’ve recommended in my general comment no. 9. The alternative mitigation measure of installing a seasonal aeration system is based on the feasibility as determined with a future study and design, along with future permit approval. The mitigation incorrectly infers that approval of the instream aeration system lies only with the SWRCB. This system will require a Streambed Alteration Agreement with CDFG and likely permits or agreements with DPR, the land owner. What permit process will be used by the SWRCB to approve the instream aeration system? Will the approval be one under the CEQA process or some other board equivalent process? At this point in time, it doesn’t appear that the planning effort for the instream aeration system alternative has been adequate to consider it a feasible mitigation measure.

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(cont.)

75) Pages 4.3-45 through 49: See my general comment no. 10 for a discussion on the possible source of the spring in Swiss Canyon and the likely need for additional permits.

3-176

76) Page 5-3: Table 5-1 should also include the cubic-feet-per-second diversion rates because these values are needed to determine the loss in flow downstream from the USGS gage and aid in establishing bypass flow requirements. The table or another table should also include riparian diversions, existing and potential.

3-177

77) Page 6-2: The no project alternative states that without approval of the appropriate water right all future diversions would be limited to the existing riparian water right. The existing riparian water right is said to be for 25 acres. However, the 3rd Amendment to the

3-178

water rights application states that the applicant reserves the right to contend that additional lands are riparian to the Big Sur River. The April 12, 1992 memorandum by Mr. Moeller stated that the riparian acreage was 90 acres and the total annual diversion would be 270 acres, or 3 feet. Are the 90 acres and 270 acre-feet per year the numbers the applicant wants to use for the no-project alternative, or is there another set of numbers?

3-178
(cont.)

The statement that the maximum annual baseline diversion occurred in 2004 at 1,137 acre-feet seems to conflict with the justification stated in the 3rd Amendment to the water rights application for the 1,615 acre-feet annual maximum. The DEIR baseline and the water rights application aren't using the period of time to justify the diversion rates.

3-179

78) Page 6-3: Table 6-1 provides a comparison of the alternative water use. The baseline maximum instantaneous diversion rate is listed as >6.0 cfs with a footnote that this values is based on 2004 diversions in Table 6-13 in SGI's 2005 report. The copy of the 2005 SGI report that I have doesn't have a table 6-13. The 2005 SGI report has a listing of daily diversions in Table 2-2. Diversions exceeded 6 cfs on only 3 days of the 2004 study, with the maximum rate of 6.06 cfs on April 28, 2004. The 2005 SGI report Tables 3-4 and 3-5 seem to imply that the maximum pumping rate with both wells running was 5.83 cfs during the 2004 study. A similar question applies to the other alternative where 6 cfs is given as the maximum instantaneous diversion rate.

3-180

The no project alternative specifies the 20-year running average diversion rate as 80 acre-feet and an annual maximum of 106 acre-feet. What is the source of these data? The 1992 memorandum from Mr. Moeller states that 3 acre-feet per acre was a reasonable use for riparian lands. Thus the 25 acres of riparian would need 75 acre-feet per year maximum or 20-year running average.

79) Page 6-4: For the no project alternative, the maximum average 30-day diversion rate is stated as 0.53 cfs, why? Does this relate to the duty of 1 cfs per 50 acres? See my general comment 4e for a discussion of the applicability of this standard to the project. The wells can pump at a much higher rate and it's the instantaneous diversion rate that impact fisheries resources. Can the wells pumping be reduced to this low a rate? Elsewhere in the DEIR it is said that the pumping rate is in part controlled by the field that is being irrigated. What is the pumping rate know for the riparian field(s)?

3-181

80) Page 6-5: Table 6-2 compares the diversions for four alternatives. The table compares monthly maximum and seasonal average diversions in cfs. The table doesn't evaluate all six of the requested water right limits. And again the DEIR assumes that the maximum rate of 5.84 cfs won't occur, even though it was listed as part of Table 6-1. Flow losses to the Big Sur River are given as 16% of the total diversion, whereas 24% and 30% were used elsewhere in the DEIR. The diversion rates listed under Alternative 4 are the same as for the project. How is this an alternative if its diversions are the same as the project (see my comment 81)?

3-182

Table 6-3 lists flow rates for the alternatives for channel forming factors by non-exceedence percentages. As discussed above, the method for calculating the flood flows should use the annual peak flood data set, not the daily flows. In addition, the DEIR is

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using both non-exceedence and exceedence percentages, but to avoid confusion should use only one.

↑ 3-183
(cont.)

81) Page 6-6 and 7: The discussion of erosion under the no project alternative states that the vegetative cover would be reduced without irrigation and that this reduction in vegetative cover would result in increased erosion over the project alternative. One would hope that the pastures would not be over grazed, with or without irrigation. The issue of how much forage would survive with only rainfall hasn't been addressed in the DEIR so I'm not sure that the conclusion that an increase in erosion would be measurable. The DEIR also doesn't consider the impact of the irrigation on erosion of the coastal bluff, which would likely benefit from cessation of irrigation. See my general comment no. 10 for a discussion of coastal bluff stability.

3-184

82) Pages 6-20 through 23: Alternative 4 would limit diversions when specific hydrologic and water quality conditions occur. The hydrology conditions include the loss of surface water connectivity. The alternative would allow for pumping until the river goes dry. If this means that when the river dries up, pumping will be dropped to 3 cfs, just above baseline, then there doesn't appear to be much of a surface water flow bypass requirement. The concept of bypass is to cease diversion before the flows become detrimental and going dry is the extreme case of detrimental for surface water flows.

3-185

Alternative 4 also introduces the concept of an El Sur Ranch Reach, which is defined in footnote 43 as the reach from 100 yards (300 feet) upstream from the most easterly of the two points of diversion (New Well?) and 100 yards (300 feet) downstream from the most westerly of the points of diversion (Old Well?). Where on the ground are the endpoints of the El Sur Ranch Reach? Is this reach shorter in extent than the ZOI plus the 600 feet upstream loss of river flow with both wells pumping?

3-186

The low dissolved oxygen (DO) condition implies that there will be relatively frequent water quality measurements of surface water flows in order to identify when the low DO condition is reached. Where and how often are these samples or instrument measurements going to be taken, and what is the reporting requirement? This appears to be an element of the future monitoring and operations plan. The procedures for implementing this alternative monitoring program require consultation with SWRCB, CDFG and NOAA fisheries only after 14 consecutive days of deficient flow conditions. This seems presumptive that any of these agencies would approve delaying notification of an impact. According to my experience with water quality and fisheries resource permit monitoring, notification of permit violation has to occur immediately. The alternative then requires a 72-hour waiting period to determine the acceptable rate of pumping. And then a 4-party agreement has to be reached.

3-187

Alternative 4 provides specific mitigation actions to be implemented if the 4 parties can't agree on what diversions are allowable. Specifically, diversion can resume when water depth reaches 0.5 feet at the "depth location" with no loss of surface water connectivity throughout the El Sur Ranch Reach and the downstream DO level increases for 7 consecutive days. Following the second loss of connectivity and/or low DO for 7 consecutive days, the project couldn't resume diversions until the reach has at least 0.5 feet of water depth, or loss of surface water connectivity exists throughout the reach and

3-188

the flow rate exceeds the “low flow rate.” The low flow rate is defined in footnote 46 as the 7-day average at the USGS gage of 9 cfs or less, but more than 7 cfs.

The no 4-party agreement section of the Alternative 4 has some curious requirements. First, the mitigation measure specifies in advance of a meeting of the 4-parties what the minimum conditions the government agencies can require. Second, the 0.5-foot depth requirement doesn’t indicate whether this is at a point location, or a percentage of a passage-transect, or how it relates to fish passage. The third requirement is that following the second period of loss of surface water connectivity, pumping can’t resume until a depth of 0.5 feet or a loss of surface water connectivity exists throughout the El Sur Ranch Reach. The requirement that the surface water connectivity be lost “throughout” the reach implies that unless the entire river goes entirely dry that diversions can continue subject to the additional “low flow rate” condition. The definition of the “low flow rate” appears to say that it occurs only between 7 cfs and 9 cfs. If the flow is less than 7 cfs, it is not considered a “low flow rate.” Why the lower limit on definition of “low flow rate?”

3-189

Overall, Alternative 4 doesn’t appear to be feasible because of its delayed notification requirement, predetermination of government agency options, lack of information on why the trigger conditions are appropriate, the apparent requirement that the river go dry before a reduction in pumping is required, and bracketed definition of “low flow” as being only from 7 cfs to 9 cfs. The final paragraph on page 6-23 appears to reach this conclusion that the Alternative is infeasible. Can an infeasible alternative be considered an acceptable alternative under CEQA? An infeasible alternative appears to be a contradiction to the concept of alternatives analysis.

3-190

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Attachment

5 Tables
16 Figures

Table 1
Comparison of Actual to Estimated Diversion

Year	July to October Diversions			Annual Diversions		
	Actual Table 2-1	Estimated Table 2-3	Difference	Actual Table 2-1	Estimated Table 2-3	Difference
no precipitation		690			1730	
1975	608	605	-3	840	1227	387
1976	620	569	-51	1212	1210	-2
1977	661	679	18	1611	1430	-181
1978	624	686	62	940	1116	176
1979	744	623	-121	1032	1153	121
1980	645	691	46	1037	1331	294
1981	698	610	-88	1045	1176	131
1982	725	501	-224	1046	935	-111
1983	448	602	154	476	946	470
1984	944	695	-249	1737	1409	-328
1985	473	670	197	984	1262	278
1986	515	645	130	1012	1274	262
1987	675	608	-67	950	1242	292
1988	453	696	243	1054	1394	340
1989	466	580	114	572	1307	735
1990	701	652	-49	1021	1323	302
1991	613	660	47	934	1369	435
1992	575	649	74	1099	1244	145
1993	654	735	81	992	1355	363
1994	419	711	292	669	1382	713
1995	692	667	-25	862	1183	321
1996	672	699	27	973	1226	253
1997	410	654	244	800	1441	641
1998	443	703	260	468	1120	652
1999	500	658	158	675	1207	532
2000	471	508	37	714	1104	390
2001	469	645	176	697	1163	466
2002	432	642	210	767	1282	515
2003	574	633	59	760	1164	404
2004	590	568	-22	1136	1260	124
30-yr Mean =	584	641	58	937	1241	304
30-yr Median =	599	651	53	962	1243	312
Baseline Mean =	540	649	109	857	1265	408
Baseline Median =	508	653	98	898	1261	377

Table 2
Summary of Flow Data for Transects VT1, and VT2
(From Table 3-1, SGI 2005)

Date	Time	USGS	VT1	VT2	VT1-VT2	River Flow VT1 to VT2
7/23/04	Morning	14	10.29	9.49	-0.80	Losing
8/5/04	Afternoon	14	8.87	7.22	-1.65	Losing
8/6/04	Morning	13	8.77	8.16	-0.61	Losing
8/19/04	Morning	12	7.95	6.97	-0.98	Losing
8/19/04	Afternoon	12	7.21	5.90	-1.31	Losing
8/30/04	Afternoon	12	8.25	9.40	1.15	Gaining
8/31/04	Morning	11	8.20	8.63	0.43	Gaining
8/31/04	Afternoon	12	8.31	10.42	2.11	Gaining
8/31/04	Afternoon*	12	8.83	8.93	0.10	Gaining
9/1/04	Morning	11	8.40	8.81	0.41	Gaining
9/1/04	Afternoon	12	10.21	14.65	4.44	Gaining
9/1/04	Afternoon*	12	9.91	13.84	3.93	Gaining
9/2/04	Morning	11	7.22	7.28	0.06	Gaining
9/2/04	Afternoon	11	10.88	10.26	-0.62	Losing
9/15/04	Afternoon	12	6.32	6.18	-0.14	Losing
9/16/04	Morning	12	7.26	5.96	-1.30	Losing
9/30/04	Afternoon	13	8.18	7.46	-0.72	Losing
10/1/04	Morning	13	9.07	8.02	-1.05	Losing
10/14/04	Afternoon	10	9.83	12.16	2.33	Gaining
10/15/04	Morning	10	11.75	11.84	0.09	Gaining
10/28/04	Morning	48	44.00	46.74	2.74	Gaining
10/28/04	Afternoon	45	40.66	45.56	4.90	Gaining

* Second reading

N.D. = No Data - Lagoon Closed

Table 3

**Summary of Data on Changes in Flow on Big Sur River
Between USGS Gage # 11143000 and VT1**

Table 3 of Jones and Stokes, 1999

Date	USGS	S1 Andrew Molera SP	Change in Flow USGS to S1
8/22/97	19	10.1	-8.9
11/11/97	18	15.4	-2.6
9/16/98	29	27.4	-1.6
9/23/98	32	29.3	-2.7
9/25/98	32	29.5	-2.5

Table 3-1 of SGI, 2005

Date	Time	USGS	VT1	Change in Flow USGS to VT1
7/23/04	Morning	14	10.29	-3.71
8/5/04	Afternoon	14	8.87	-5.13
8/6/04	Morning	13	8.77	-4.23
8/19/04	Morning	12	7.95	-4.05
8/19/04	Afternoon	12	7.21	-4.79
8/30/04	Afternoon	12	8.25	-3.75
8/31/04	Morning	11	8.20	-2.80
8/31/04	Afternoon	12	8.31	-3.69
8/31/04	Afternoon*	12	8.83	-3.17
9/1/04	Morning	11	8.40	-2.60
9/1/04	Afternoon	12	10.21	-1.79
9/1/04	Afternoon*	12	9.91	-2.09
9/2/04	Morning	11	7.22	-3.78
9/2/04	Afternoon	11	10.88	-0.12
9/15/04	Afternoon	12	6.32	-5.68
9/16/04	Morning	12	7.26	-4.74
9/30/04	Afternoon	13	8.18	-4.82
10/1/04	Morning	13	9.07	-3.93
10/14/04	Afternoon	10	9.83	-0.17
10/15/04	Morning	10	11.75	1.75
10/28/04	Morning	48	44.00	-4.00
10/28/04	Afternoon	45	40.66	-4.34

* Second reading

Table 3 - Continued

Table 3-1 of Hanson, 2007

Date	USGS, cfs	VT1, cfs	Change in Flow USGS to VT1	Pump Status
9/1/06	21	21.92	0.92	9/01/06 Both off
9/6/06	20	19.21	-0.79	
9/11/06	23	20.54	-2.46	9/09/06 Both on
9/14/06	22	18.66	-3.34	
9/18/06	21	18.98	-2.02	9/15/06 Both off
9/21/06	20	18.48	-1.52	
9/25/06	20	18.17	-1.83	9/22/06 Old on
9/28/06	21	18.38	-2.62	
10/2/06	22	19.81	-2.19	9/29/06 both off
10/5/06	24	21.34	-2.66	
10/10/06	21	18.84	-2.16	10/06/06 New on
10/12/06	22	18.38	-3.62	10/12/06 both off

Table 17 - Transect 11 of Hanson, 2008

Date	USGS, cfs	VT1, cfs	Change in Flow USGS to VT1
8/30/07	7.3	2.40	-4.90
8/31/07	7.1	2.58	-4.52
9/5/07	6.4	1.62	-4.78
9/6/07	6.5	1.97	-4.53
9/12/07	7.0	5.03	-1.97
9/13/07	7.1	5.28	-1.82
9/19/07	7.2	5.06	-2.14
9/20/07	7.4	5.09	-2.31
9/26/07	8.2	5.27	-2.93
9/27/07	8.2	5.36	-2.84
10/3/07	8.2	5.30	-2.90
10/4/07	8.1	5.36	-2.74
10/10/07	12.0	6.93	-5.07
10/11/07	10.0	8.44	-1.56

Table 4
Daily Discharge Summary Statistics by Month in cfs
Big Sur Gage - USGS#11143000
April 1950 to August 2009

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average	238.9	275.0	222.5	146.6	67.3	37.1	23.8	17.5	15.3	17.7	42.2	104.1
Median	130.7	186.4	154.1	79.1	52.5	31.6	20.9	15.6	13.8	15.7	22.1	56.9
High	1,047.0	1,329.0	964.1	842.5	332.5	119.3	71.4	43.0	39.4	86.8	302.2	449.1
Low	8.3	11.4	16.8	9.2	8.7	6.2	4.9	3.8	4.5	5.1	5.0	7.5

Exceedance Probability - flows greater than value % of time, cfs

Percentage

Critically Dry	95	24.4	29.1	28.0	24.3	15.4	10.3	6.6	6.0	6.0	7.7	10.2	13.9	Critically Dry
	90	25.9	52.6	38.1	28.5	18.0	11.7	8.4	7.4	7.3	8.5	11.3	17.7	
	85	33.8	68.1	55.3	37.0	21.8	14.6	10.0	7.7	7.8	9.1	13.4	21.2	
Dry	80	37.4	80.2	65.7	40.7	27.0	16.8	11.8	8.9	8.1	10.1	14.4	24.7	Dry
	75	47.1	84.8	67.6	45.6	30.3	18.9	13.0	11.0	10.5	11.4	17.3	28.9	
	70	64.3	89.4	79.7	51.3	32.9	20.4	14.9	11.6	11.1	13.1	18.0	35.7	
Normal	65	83.4	100.7	98.4	58.7	36.2	23.9	15.5	12.2	11.7	13.2	18.9	38.8	Normal
	60	104.9	113.2	102.6	65.2	38.6	25.5	16.7	13.2	11.9	13.8	19.8	42.1	
	55	118.3	141.4	113.3	73.2	46.6	28.4	20.1	14.2	12.2	14.6	21.0	46.6	
	50	130.7	186.4	154.1	79.1	52.5	31.6	20.9	15.6	13.8	15.7	22.1	56.9	
	45	145.7	202.7	174.1	93.2	60.4	35.1	23.1	17.1	15.0	17.5	23.6	66.9	
Above Normal	40	179.9	217.1	242.7	107.1	65.2	41.0	26.0	18.7	17.0	18.7	24.6	90.2	Above Normal
	35	240.8	265.6	250.0	123.6	71.9	44.4	27.4	19.8	17.9	19.4	28.4	101.5	
	30	263.2	289.2	316.2	147.6	81.2	46.8	28.5	22.1	18.9	20.3	36.0	114.9	
Wet	25	331.6	359.4	324.8	167.4	85.2	50.4	32.3	23.6	20.0	21.0	41.8	137.0	Wet
	20	386.0	465.1	366.9	176.5	91.3	54.6	34.3	24.6	20.7	22.5	53.1	172.3	
	15	543.8	530.4	393.9	211.9	106.9	60.2	38.5	26.4	21.1	24.0	75.0	197.9	
	10	698.7	699.2	454.4	342.8	135.1	70.4	44.2	31.3	23.1	25.4	106.0	277.3	
	5	759.5	823.2	589.4	512.3	159.6	75.0	46.0	35.2	29.2	29.5	132.5	326.8	

Bold line drawn along interim bypass flow recommendation; December to May at 132 cfs, June to November at 40 cfs

Table 5
DEIR Mitigation Monitoring Flow Limitation Criteria

Month	Mitigation 4.2-2 Extreme Critical and Critical Dry	Mitigation 4.3-1 Extreme Critical Dry	Mitigation 4.3-2 Critically Dry
	4.4-2; 4.2-6; 4.2-10; 4.2-11; 5-4	4.3-9; 5-4	4.3-10; 5-4
January	If USGS < 5 th percentile (24.4 cfs), then baseline until > 10 th percentile (25.9 cfs)	If USGS < 10 th percentile (25.9 cfs), then baseline	
February	If USGS < 5 th percentile (29.1 cfs), then baseline until > 10 th percentile (52.6 cfs)	If USGS < 10 th percentile (52.6 cfs), then baseline	
March	If USGS < 5 th percentile (28.0 cfs), then baseline until > 10 th percentile (38.1 cfs)	If USGS < 10 th percentile (38.1 cfs), then baseline	
April	If USGS < 5 th percentile (24.3 cfs), then baseline until > 10 th percentile (28.5 cfs)	If USGS < 10 th percentile (28.5 cfs), then baseline	
May	If USGS < 10 th percentile (18.0 cfs), then baseline until 20 th percentile (27 cfs)	If USGS < 20 th percentile (27.0 cfs), then baseline	
June	If USGS < 10 th percentile (11.7 cfs), then baseline		
July	If USGS < 10 th percentile (8.4 cfs), then baseline until > 20 th percentile (11.8 cfs)		If USGS < 20 th percentile (11.8 cfs), then baseline
August	If USGS < 10 th percentile (7.4 cfs), then baseline until > 20 th percentile (8.9 cfs)		If USGS < 20 th percentile (8.9 cfs), then baseline
September	If USGS < 10 th percentile (7.3 cfs), then baseline until > 20 th percentile (8.1 cfs)		If USGS < 20 th percentile (8.1 cfs), then baseline
October	If USGS < 10 th percentile (8.5 cfs), then baseline until > 20 th percentile (10.1 cfs)		If USGS < 20 th percentile (10.1 cfs), then baseline
November	If USGS < 10 th percentile (11.3 cfs), then baseline		
December	If USGS < 10 th percentile (17.7 cfs), then baseline until > 20 th percentile (24.7 cfs)	If USGS < 20 th percentile (24.7 cfs), then baseline)	

Mitigation 4.3-4 (4.2-8; 4.3-12; 5-4): For all months, if 10 cfs or less and >18°C, then baseline diversions, unless a permitted instream aeration system is installed.

Figure 1
Mouth of Big Sur River from the USGS Digital Orthophoto Quadrangle, May 1994



Image source: USGS DOQQ file o36121c7sw.tiff

Figure 2
Big Sur River at Andrew Molera State Park, April 30, 1979
River flow at USGS Gage #11143000 at 99 cfs



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Figure 3
Close up of Swiss Canyon from USGS Orthophoto Quadrangle, May 1994



Image source: USGS DOQQ o36121c7sw.tiff

Figure 4: Swiss Canyon at El Sur Ranch – April 1979



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Figure 5: Swiss Canyon at El Sur Ranch – September 2008



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Figure 6: Cliffs at El Sur Ranch Pasture 7 – January 1989



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Figure 7: Cliffs at El Sur Ranch Pasture 7 – October 2005



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Figure 8: Cliffs at El Sur Ranch Pasture 7 – September 2008



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Figure 9: Cliffs at El Sur Ranch Pasture 7 – October 2005
Close up of groundwater sapping erosion causing scalloped erosion head scarps



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Figure 10: Close up of cliffs at El Sur Ranch Pasture 7 – September 2008



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Figure 11: Cliffs at El Sur Ranch Pasture 7 – April 1989

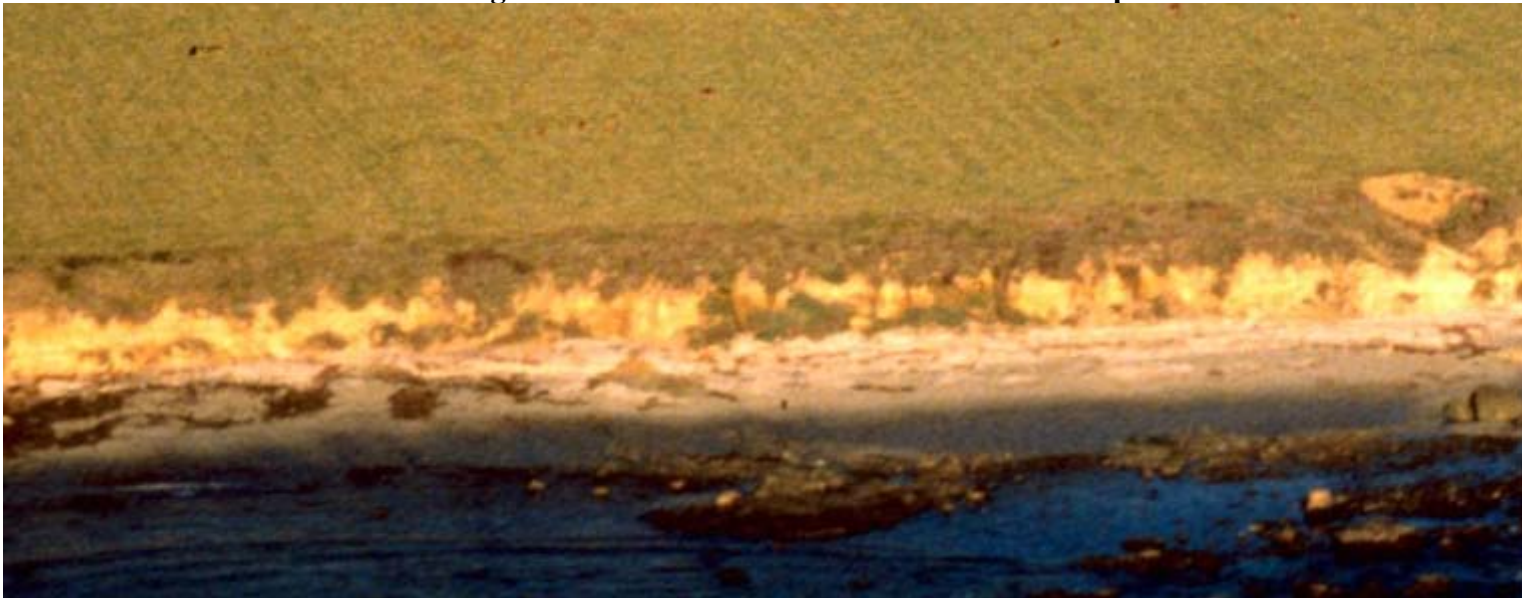


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Figure 12: Cliff at El Sur Ranch Pasture 7 – September 2002



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Figure 13: Cliffs at El Sur Ranch Pasture 7 – October 2005



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Figure 14: Cliff at El Sur Ranch Pasture 7 – September 2008



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Figure 15: Close up of seepage and pampas grass on cliff between Hanson's bluff survey points #3 and #4, October 2005.



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Figure 16: Block failure along joint sets accelerated by seepage in sedimentary rocks of northern Monterey Bay, California. Seepage imparts a dark shade to the cliff, visible at left side of photo. Note pampas grass in area of seepage. From Figure 26 of Hampton, M.A., and others, USGS Professional Paper 1693, 2004.



Letter 4: California Coastal Commission (Katie Morange)

CALIFORNIA COASTAL COMMISSION

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STATE WATER RESOURCES
CONTROL BOARD



2009 DEC 14 PM 2:29

DIV OF WATER RIGHTS
SACRAMENTO

December 14, 2009

Paul Murphey
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000

Subject: Draft EIR for El Sur Ranch Water Right Application No. 30166 (SCH No. 2006061011)

Dear Mr. Murphey:

The Central Coast District office of the Coastal Commission is in receipt of the Draft Environmental Impact Report (DEIR) for the El Sur Ranch Water Right Application No. 30166 dated October 2009, prepared by PBS&J. This office previously received an Initial Study and Notice of Preparation (NOP) for a DEIR in June 2006 for the same application, and an earlier NOP for the same application in October 2002. We also received the "Technical Memorandum: Draft CEQA Project Description and Baseline Discussion for Possible Use in the Upcoming EIR for Water Right Application A030166 [30166]" dated August 24, 2007, for which we provided comments on September 22, 2008. We understand that the current application, based originally on a 1992 application that was last amended in 2006, requests an appropriative right to divert a 20-year running average of 1,200 acre-feet per year of water (afy), and to divert a maximum of 1,615 afy in any particular year, from points of diversion at the Big Sur River in Andrew Molera State Park. The appropriated water would be used to irrigate a 267-acre portion of the El Sur Ranch that is located just upcoast of Big Sur River and Andrew Molera State Park in Big Sur.

4-1

As we noted previously, the DEIR forms the basis for further review of the water right application not only by the SWRCB but also other regulatory entities, including the Coastal Commission, and as such, it is important that it thoroughly analyze the potential impacts of the project. And given the coastal resource values associated with the Big Sur River and the surrounding area, including the fact that the Big Sur River is one of last remaining undammed rivers in the Central Coast that supports the Federally-endangered South-Central Coast Steelhead trout, the importance of a thorough and accurate analysis is heightened.

To that end, the DEIR analysis must be based on a correct baseline, and we are disappointed that the document relies on a baseline that relies on historic and not legally recognized diversions from the river. The Project Description states that the "proposed project" is the water right application. As such, the DEIR should evaluate and provide impact determinations for the total amount of water requested in the water right application. Instead, the DEIR uses the average difference between the historic pumping and the maximum expected demand that is being requested in the water right application as the proposed project for impact evaluation purposes, and uses the historic average pumping as the baseline. The project itself cannot also constitute the baseline. Please explain why the DEIR describes one proposed project in the project description and then uses a different proposed project for the impact evaluation, and please include the appropriate CEQA regulations section(s) and any legal precedents that may have

4-2

Paul Murphey, SWRCB
El Sur Ranch Water Right Application (30166) DEIR
December 14, 2009
Page 2

made this possible. As we commented previously, it seems clear that the baseline against which to measure project impacts is not what has been historically diverted, but rather that portion of what has been historically diverted that is based on an existing and established legal right for diversion. The proposed project, i.e. the water right application, should be evaluated against any existing legal diversions and legally permitted well and water distribution infrastructure. We note that the DEIR avoids our previous comment regarding the coastal development permit (CDP) history of the wells and infrastructure, particularly the "new well." Please describe definitively if the applicant did/did not receive all necessary permits, including a CDP, for this well, and please provide all relevant documentation for same. In short, the DEIR provides an unclear history related to the timing and permitting of this well, and these facts need to be clearly established in order to understand the project and its potential impacts.

4-2
(cont.)

4-3

The DEIR's incorrect representation of the proposed project and baseline leads to incorrect impact determinations. The DEIR states that baseline pumping rates have had a substantially larger effect on Big Sur River underflow, surface water elevations, and flow rates than would be caused by the anticipated additional increase that is being requested in the application. The DEIR demonstrates that the reductions in flow amounts and water levels caused by historical pumping have resulted in various effects on biological resources associated with the river, and allows the reader to conclude that these effects would be considered significant under CEQA thresholds, were they actually being evaluated in this DEIR. For example, evidence shows that Basin Plan fish passage and dissolved oxygen criteria have not been met over various study periods as a result of historic pumping, and the significance thresholds indicate that failure to meet these criteria would result in a significant project impact. However, the DEIR only evaluates a small increase above historic pumping levels, and finds less-than-significant impacts with that small amount of additional pumping. The DEIR shows, and the reader can infer, that if considered as a whole, the water right application would likely have significant and unavoidable hydrologic and biological impacts; however, it fails to make those findings because only a portion of the actual project is evaluated. This incorrect proposed project evaluation also results in incorrect analyses for cumulative impacts and alternatives (discussed below).

4-4

It remains unclear why efficiency measures (such as those described under the Alternate Irrigation Efficiency alternative) are not already being employed on the site. An irrigation efficiency of only 60-70% on the site seems unacceptable given the highly sensitive resources of the Big Sur River that are at stake, and the DEIR does not adequately explain the reasons why irrigation methods on the site are this inefficient. If evaluated properly (i.e., if the entire requested diversion amount were evaluated in this DEIR), the Alternate Irrigation Efficiency alternative would possibly show that efficiency measures could reduce the whole project's significant impacts to a less-than-significant level. The DEIR states that the Alternate Irrigation Efficiency alternative raises consistency issues with the local land use plan related to new development in the coastal zone. The Big Sur Land Use Plan (LUP) does contain strict policies regarding new development in the "critical viewshed," which this site is within; however, the LUP includes exceptions to those policies for essential ranching structures, including water pumps and associated infrastructure, under careful design and siting controls (LUP Policy 3.2.5.B). A properly sited and designed tailwater recovery system would likely qualify under this exception, and because of its benefits to the overall Big Sur River system, would also likely

4-5

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be consistent with other LUP resource protection policies. Please revise the DEIR to reflect that local plan consistency would not be a disadvantage of this alternative.

↑ 4-5
(cont.)

We disagree that the No Change in Existing Practices/Historical Diversions Alternative should be considered the environmentally superior alternative. The benefits of reduced pumping associated with the Alternate Irrigation Efficiency alternative far outweigh any impacts of constructing a tailwater recovery system, and as shown in the DEIR, any reduction in pumping would improve Big Sur River resources. Because it is clear that existing and historic pumping (which is essentially the No Change in Existing Practices/Historical Diversions Alternative plus some additional diversion amount) is having deleterious and significant impacts to Big Sur River resources, we do not see how this alternative can be selected as environmentally superior. The DEIR states that this alternative would perpetuate the environmental baseline conditions by continuing historical irrigation practices on the project site. It is clear from our reading of the DEIR that the baseline conditions constitute exceedance of required thresholds for surface water flow and associated fish passage and dissolved oxygen criteria, and perpetuation of these conditions should be considered significant and certainly should not be considered "environmentally superior." Selection of this alternative illustrates, once again, the problem with the incorrect proposed project and baseline that are used in this DEIR.

4-6

In sum, we continue to believe that the SWRCB is charged with an important and demanding task in evaluating the proposed water right application. We believe that the DEIR provides ample and helpful information regarding the effects of historic and existing diversions on Big Sur River resources, but that it is flawed because it does not actually evaluate those historic and existing diversions against CEQA requirements. The entire amount of water diversion requested in the water right application (much of which has been illegally diverted for over 50 years) has never been evaluated under CEQA, and the DEIR fails to do so now. It appears clear that a DEIR that actually analyzes the "proposed project" (i.e., the water right application) should be prepared and re-circulated.

4-7

Thank you for the opportunity to comment and we look forward to reviewing a revised DEIR. If you have any questions, please do not hesitate to contact me at the address and phone number above.

Sincerely,



Katie Morange
Coastal Planner

cc: Victoria Whitney, SWRCB (SWRCB Deputy Director, Division of Water Rights)
Rick Hanson, PBS&J (SWRCB DEIR Consultant for Water Right Application 30166)
Janet Goldsmith, Esq. (Applicant's Representative for Water Right Application 30166)
Mat Fuzie, State Parks
Brad Torgan, Esq., State Parks
Supervisor Dave Potter, Monterey County

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Carl Holm, Monterey County Planning Department
W.E. Loudermilk, CDFG
Julie Means, CDFG
Deb Hillyard, CDFG
Dave Pereksta, USFWS
Stacey Li, NOAA Fisheries
Joyce Ambrosius, NOAA Fisheries
James Crenshaw, California Sportfishing Alliance
Hank Smith, Carmel River Steelhead Association

Letter 5: Kronick, Moskovitz, Tiedemann and Girard (Janet K. Goldsmith)



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December 14, 2009

Paul Murphey
Division of Water Rights
1001 I Street, 14th Floor
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VIA HAND DELIVERY

Re: Water Right Application No. 30166
Comments on Draft Environmental Impact Report

Dear Mr. Murphey:

The Applicant provides the following comments to the Draft EIR issued October 23, 2009 by the State Water Resources Control Board's Division of Water Rights. As a fundamental premise, the DEIR has concluded that there are no potentially significant project impacts outside of the critically dry periods. Accordingly, these comments focus on only DEIR material relevant to critically dry years.

5-1

I. Material Factual Errors and Inconsistencies in Defining the "Net Change Evaluated in the DEIR".

A. Input mistakes were made in the description of "project" and "baseline" as set forth in Chapter 4. The DEIR defines the proposed project for the purpose of impact analysis in terms of change in the "30-day average rate" of deliveries from the New and Old Wells combined. (See, e.g., Table 4.1-1 (attached for convenience), pages 4.3-32 and 4.3-3, Impacts 4.3-1, 4.3-2, 4.3-4 and 4.3-7.) However, there are representational and labeling errors in Table 4.1-1. The author of Table 4.1-1 erroneously transferred data (which is correctly stated in Tables 2-1, 4.2-2 and 6-1) and mislabeled rates of flow, specifically:

5-2

1. The "30-day average rate (5.34 cfs)" Diversion Type is mislabeled and incorrectly includes a flow rate (5.34 cfs) that is applicable only to "Proposed Project" flow rates and not to "Baseline". 5.34 cfs is intended to be the maximum 30-day average rate for the Proposed Project, as defined in the water right application.

5-3

2. The "30-day average rate" for "Baseline" incorrectly inputs 234 AF, which is an error, presumably made when transferring the accurate inputs from Table 6-1. The corrected label describing this diversion type is "Maximum 30-Day Average Rate" and the corrected baseline input should be 339 AF (5.70 cfs)

5-4

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over the 30 day period of June, 1986, as correctly stated in Table 6-1. When the correction is made the "Net Change Evaluated in the DEIR" for "Maximum 30-Day Average Rate" becomes -21 AF (-0.36 cfs), rather than the 84 AF at 1.4 cfs stated in the DEIR. This erroneous input of data and resulting calculation are the premise for impact analyses, including without limitation, at pages 4.3-32, 4.3-37, 4.3-41, 4.3-43, and 4.3-47. Corrections of such errors in inputs, calculations and resulting impact analyses are required.

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 5-4
 (cont.)

3. Further, the "30-day average rate" depicted in the DEIR's Table 4.1-1 (234 AF for Aug/Sept 1997) purports to reflect the highest 30-day average rate within the 20 years analyzed. In fact, the averaged rate of diversion based on usage for Aug/Sept 1997 is 1.58 cfs and 2.03 cfs respectively (based upon DEIR Table 2-1, with monthly diversions AF/month converted to cfs). Averaging those two months does not result in a defensible highest 30-day average rate that can be contrasted with the "Proposed Project". The correct label, consistent with the DEIR's Table 6-1, should be "Maximum 30-Day Average Rate," and the correct maximum 30 day average rate of diversion should be 5.70 cfs, consistent with baseline usage of 339 AF in June 1986. This 339 AF figure is also consistent with the Maximum Monthly Pumping Volume (AF) correctly reported in "Table 4.2-2, Statistical Analysis of El Sur Ranch Baseline (1985-2004) Irrigation" of the DEIR.

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 5-5

4. The Maximum monthly rate heading is confusing since it is really the Instantaneous Rate and, to be consistent with Table 6-1, would be >6.0 cfs. This correction would result in a "Net Change Evaluated in the DEIR" of -0.16 cfs instead of zero (0.0) cfs.

↑
 5-6

5. Similarly, the irrigation season baseline "Maximum Monthly Diversion (July 1-Oct 31)" misstates the year for determining baseline maximum as 1997; the correct maximum monthly diversion occurred in September 1990 at an average rate of 4.52 cfs. Because of the Proposed Project's limitation on maximum monthly diversion (235 af/month for July through October), the correct maximum monthly diversion rate for the proposed project is 3.87 cfs, resulting in a "Net Change Evaluated in DEIR" of -0.65 cfs. The text analysis at pages 4.3-41 and 4.3-43 should be referencing a reduction of 0.65 cfs, because it looks at impacts during the July 1 – October 31 period (see DEIR Table 4.1-1). The data input error materially influenced the characterization of impacts, primarily of Impact 4.3-2 and Impact 4.3-4, as "potentially significant," and those impact sections must be rewritten in light of the correct data.

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 5-7

6. Please note that the 20-Year Annual Rolling Average erroneously compares a straight average baseline for 20 years (857 AF) against a rolling

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 5-8

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average of 1,200 AF to define the maximum change in pumping volume being evaluated. The Applicant reiterates its earlier comments that these are not like measures and cannot be compared to define project pumping. In the same vein, in instances where baseline flows and pumping characteristics can more specifically be determined, as opposed to a 20-year average of years of differing water year categories and monthly variations in flow and diversions, the more refined and therefore accurate baseline should be used, rather than Table A.

5-8
(cont.)

The foregoing corrections are made in the below table identified as "Corrected Table 4.1-1". Attached are copies of Tables 2-1, 4.2-2 and 6-1 from the DEIR, for ease of reference.

Corrected Table 4.1-1¹

Diversion Type	Baseline 1985-2004	Proposed Project	Net Change Evaluated in DEIR
Maximum Annual Usage	1,136 AF (2004)	1,615 AF	+479 AF
Maximum Annual Calculated Diversion Demand ²	1,441 AF (1997)	1,615 AF	+174 AF
20-Year Annual Rolling Average ³	857 AF	1,200 AF	+343 AF
Maximum 30-Day Average Rate	339 AF (June 1986) ^{4,6} (5.70 cfs)	318 AF (5.34 cfs) ⁴	-21 AF (-0.36 cfs)
Maximum Instantaneous Rate ⁵	> 6.0 cfs	5.84 cfs	< -0.16 cfs
Maximum Monthly Diversion (July 1 - Oct 31)	269 AF (Sept 1990) ⁶ (4.52 cfs)	230 AF (3.87 cfs)	-39 AF (-0.65 cfs)
Maximum Seasonal Diversion (July 1 - Oct 31)	701 AF (1990) ⁶	735 AF	+34 AF

5-9

Table Notes:

- 1) Recommended changes are highlighted.
- 2) The term "maximum calculated usage" in existing Table 4.1-1 is used to represent the calculation of irrigation diversion demands based on crop water requirements and assumed irrigation efficiencies. This term should be rewritten to more appropriately

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reflect its intended meaning; using “maximum annual calculated diversion demand” would be more appropriate.

- 3) The 20-Year Annual Rolling Average erroneously compares a straight average baseline for 20 years (857 AF) against a rolling average of 1,200 AF to define the maximum change in pumping volume being evaluated. The Applicant reiterates its earlier comments that these are not like measures and cannot be compared to define project pumping.
- 4) The 30-day average rate of 5.34 cfs is a maximum in the El Sur Ranch water right application and the DEIR references the +84 AF (1.4 cfs) as a maximum; therefore, it appears that diversion type was mislabeled. The maximum 30-day average baseline value of 339 AF is found in DEIR Tables 2-1, 4.2-2, and 6-1. The origin of 234 AF in the DEIR Table 4.1-1 appears to have been the average of historical diversions in September (269 AF) and October (199 AF) of 1990 DEIR Table 2-1, which is not the maximum 30-day average pumping. The August and September of 1997 historical pumping was 97 and 121 AF, respectively (DEIR Table 2-1).
- 5) The maximum monthly diversion listed in DEIR Table 4.1-1 appears to be the maximum instantaneous rate, because the maximum monthly rate in the El Sur Ranch water right application is 5.34 cfs, not 5.84 cfs. The instantaneous baseline rate of greater than 6.0 cfs is taken directly from DEIR Table 6-1.
- 6) The dates referenced on lines 4, 6, and 7 are incorrect, the dates have been updated in the table. The month and year changes can be confirmed in DEIR Table 2-1.

5-9
(cont.)

B. As a consequence of the data input errors in Table 4.1-1 being carried forward into the DEIR analysis, including Impact 4.1-2 and Mitigation Measure 4.2-2, the allowable diversion rates during dry years would reduce diversions to less than historical levels during dry years such as 1988 and 1990. Therefore, the affected Mitigation Measures are not mitigating for conditions that result from the Project described in the October 2006 El Sur Ranch water right application, but for historical baseline conditions.

5-10

C. The errors in Table 4.1-1, on which the direct project impact analyses rely, also affect the cumulative impact analyses; therefore all those conclusions should be modified accordingly.

5-11

II. Material Errors in Methodology for Determining Impacts to Flows and Water Quality from Diversions

A. The DEIR’s determination of streamflow adjacent to the project site relies on a formula that does not always hold true. The formula used is: Monthly Average USGS Flow Rate multiplied by 1.3352, and the product then reduced by 7.771 cfs.

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This relationship between flows at the gage and flows entering the POD holds true only if the monthly average flows at the gauge are less than 20 cfs. Further, the formula is not valid for daily flows. See Page 4.2-56. The analyses in Impact 4.2-2 and at page 4.2-66 incorrectly rely upon this formula for conditions when the flow at the USGS gage exceeds 20 cfs.

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 5-12
 (cont.)

B. Further, the DEIR misuses the only data available that describes the drawdown potential for the river system, including the underflow, to conclude that the drawdown potential of 0.17 feet is occurring totally within the surface river stage. The DEIR then uses this mischaracterization to make erroneous findings of impact and frame mitigation. See, e.g., pages 4.2-32, 4.3-40 and Impact 4.3-2, as well as the related cumulative impact analyses. Attached for the convenience of the Consultant, and to ensure a complete record, is piezometer data relevant to this topic (in the form of a CD identified as "App. 30166, SGI 2007 Study, Piezometer Data"), as well as data (in the form of a CD identified as "Hanson Environmental, Inc. El Sur Ranch, DATA FROM 2007 STUDY: BIOLOGY & HYDROLOGY", also marked "burned 6.11.08" and with the word "COPY"), previously submitted to the State Board.

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 5-13

C. The DEIR reflects no evidence upon which to conclude the existence of measurable river stage impacts due to project diversions. The piezometer data collected by SGI in 2007 does not support this conclusion. It shows that the calculated surface water drawdown effects of the project pumping (assuming the +84 AF "Maximum Monthly Rate" erroneously stated in Table 4.1-1) were not measurable based upon the accepted techniques used to measure fish passage. Effects on fish passage of this low magnitude are merely speculative and necessarily *less than significant* under CEQA. However, when the data input errors in Table 4.1-1, and the impact analyses based thereon are corrected, proposed project pumping, as defined in the DEIR, is less than baseline rates. (See Corrected Table 4.1-1, *supra*.) As such, not even a theoretical nexus between project pumping and surface water drawdown or river stagnation (low DO impact) can be hypothesized. Each of the affected direct and cumulative project impacts assessments should be modified in light of the correct data found in DEIR Tables 2-1, 4.2-2 and 6-1.

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 5-14

D. Impact 4.3-4, of the DEIR relies upon 2007 Study data for August 31 through September 8 that reflect low dissolved oxygen (DO) concentrations (less than 7.0 mg/L) at several of the River sensors, suggesting a widespread condition. While concluding impact, no data is referenced that specifically correlates the DO readings to diversions. Similarly, for that same period, August 31 through September 8, the DEIR fails to reference the following:

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- 1 The average pumping rate during the August 31 through September 8 period was only 2.37 cfs, a rate less than the baseline pumping rate for the month of September (2.60 cfs - DEIR Table A) and thus any effects from this pumping can only be included in baseline conditions.
- 2 The August 31 through September 8 time period included the Labor Day weekend. Heavy upstream water use related to tourism during that period resulted in extremely low flows within the Study Area. Background low flows across some parts of the Study Area were overcome by contributions of low DO in underflow, surfacing from beneath Creamery Meadow.
- 3 The benefit of increased DO concentrations in surface flows resulting from diversion pumping, which reduces the contribution of low DO inflow introduced to the River from beneath Creamery Meadow (SGI 2007 and SGI 2008).

The DEIR should be corrected to describe any link between pumping and water stagnation as well as the low DO levels recorded between August 31 and September 8.

Further, the DEIR's reliance upon low flow data between September 28 and October 4, (a period of low River flow and when both irrigation wells were pumping a combined 5.02 cfs) fails to consider that the low DO concentrations relied upon were measured at a single sensor located near a circumscribed stagnant point in the River, and existed contemporaneously with daily average DO concentrations of 7 mg/L at similar points across the River, including one approximately 22-feet away. These data support the conclusion that project pumping during low River conditions did NOT create widespread low DO conditions within the River. Given the limited area potentially affected, the availability of good DO concentrations in directly adjacent areas, and the extremely low frequency of occurrence, any pumping-related DO impacts should be considered less than significant.

In addition to there being no potentially significant impact on DO requiring mitigation, Mitigation Measure 4.3-4 b is too narrowly constrained. Rather than limiting the permittee to only a possible single method to increase DO levels, the measure should set forth a performance standard or standards to be attained, and should be expanded to allow for any method that achieves the performance standards. See Impact 4.3-4 in summary of Table 3-11.

- E. The DEIR fails to consider the actual Study conditions and arbitrarily chooses to rely upon statistical generalities concerning rainfall year type, based on conditions



5-15
(cont.)

5-16

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that occurred after the Study was concluded. See Page 4.2-46. The DEIR thus mischaracterizes the hydrologic conditions under which the 2004 Study was conducted, stating that it “was conducted during a hydrologically Normal July through October season (mean daily flow rate of 18.42 cfs at the USGS gage station)”. In fact, the 2004 Study ended in mid-October and flow conditions during the study period met the criteria for a “Dry” year type. Late October rainfall, occurring *after conclusion of the study* had the effect of raising the average monthly flows into the “Normal” category.

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 (cont.)

- F. Mitigation Measures, including MM 4.2-2 as depicted in Table A, on page 4.2-68, erroneously include “mitigation” for diversions that are included in the baseline. The diversions listed in Table A would reduce allowable diversions to a level *below* baseline diversions.

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 5-17

III. Failure to Establish Nexus between Mitigation Measures and Protection of Resources As Required By CEQA

- A. As noted above, Impact 4.3-1 and Impact 4.3-2 erroneously conclude that project-related draw downs would impact fish passage at transects 4, 10 and 11. There is no evidence of pumping effects on fish passage outside Zone 2 through Zone 4, such as at Passage Transect 11. Passage Transect 10 (PT10) is at the upstream end of the ‘Zone 2 through Zone 4’ section of River and thus, in theory, could be minimally affected by pumping ***at the levels erroneously stated in Table 4.1-1 and evaluated in the impact analyses text.*** However, when the errors in Table 4.1-1 and the impact analyses based thereon are corrected, the project pumping, as defined in the DEIR, is less than baseline pumping.

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 5-18

As such, not even a theoretical nexus between project pumping and surface water drawdown or river stagnation (low DO impact) can be hypothesized anywhere in or out of the Zone of Influence. Each of the affected direct and indirect resource impact assessments which are based on the erroneous data must be reconsidered in light of the correct data found in DEIR Tables 2-1, 4.2-2 and 6-1. See also Corrected Table 4.1-1, above.

- B. The mitigation measures premised on exceedance flows at the gage (MM 4.3-1, 4.3-2, 4.3-4) are not directly related to river stage requirements for fish passage. Due to the data input errors in Table 4.1-1, they “mitigate” for conditions associated with baseline pumping, which by definition are not project impacts. See Table A, page 4.3-38. Even analyzed by comparing total volumes of water, the DEIR cannot make a nexus to resource or water quality impacts without first showing an impact related to seasonal rates of flow.

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 5-19

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C. The limitations set forth in Table A are inconsistent with the text of Mitigation Measure 4.2-2 and inconsistent with historical flow exceedance records. The values for USGS limiting flow rates in Table A are different than the values in Tables 4.2-1 (page 4-2.5), 4.3-7 (page 4.3-36) and 4.3-9 (page 4.3-40) and those calculated from USGS daily flows.

5-20

Table 1 - Summary of the Differences between the Mitigation Measure Description in the Text and DEIR Table A.

Months	Mitigation Measure Text (DEIR Page 4.2-69)	DEIR Table 6 (DEIR Page 4.2-70)
July August September October	Limit diversion to monthly baseline rates when Big Sur flows are below 10 th percentile and until Big Sur flows exceed 20 th percentile (mean daily flows).	Limit diversions to monthly baseline rates when Big Sur flows are below 20 th percentile (mean daily flows).
January February March April	Limit diversion to monthly baseline rates when Big Sur flows are below 5 th percentile and until Big Sur flows exceed 10 th percentile (mean daily flows).	Limit diversions to monthly baseline rates when Big Sur flows are below 10 th percentile (mean daily flows).
June November	Limit diversions to monthly baseline rates when Big Sur flows are below 10 th percentile (mean daily flows).	Limit diversions to monthly baseline rates when Big Sur flows are below 10 th percentile (mean daily flows).

D. Impact 4.2-4 Implementation of the proposed project could substantially alter the existing drainage pattern of the POU through increased irrigation rates that could result in substantial erosion or siltation on- or off-site (page 4.2-70). The DEIR characterizes this as a potentially significant impact. The impact statement does not consider the provisions of the operational limitations and continuing operating principles in the water right application that prevent substantial erosion or siltation. Additionally, the greatest runoff and erosion potential occurs from precipitation events, not irrigation, which is negligible by comparison.

5-21

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IV. Failure to Assess Feasibility of Mitigation Measures

CEQA requires that mitigation measures be feasible, which is defined as a measure “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” Guidelines section 15364. In addition to proposed mitigation measures that are unjustifiably broad requiring “mitigation” for pumping that is part of the baseline, and remediation of fish passage and water quality characteristics that are part of the existing environmental setting and unrelated to the Project, the DEIR has failed to assess the feasibility of its proposed mitigation measures, in light of known labor, facility and economic constraints of the ranch.

5-22

V. The DEIR’s Cumulative Impact Analysis Is Flawed

A. Cumulative Impact Context:

The Cumulative Impact Analyses of the DEIR must be re-written to address fundamental data input errors requiring changes to “Net Change Evaluated in the DEIR” and any resultant impact and mitigation analyses. In addition, the following issues should be considered. The following discussion of cumulative impacts is not intended to be exhaustive, but illustrative.

5-23

A cumulative impact results from the combination of an adverse impact of the project together with related impacts caused by "other projects causing related impacts". Guidelines section 15130(a)(1). A project’s incremental effect is only cumulatively considerable if it is significant when viewed in connection with the effects of other past, current and probable future projects. Guidelines 15065(a)(3).

B. Cumulative Impact 4.3-1

In the discussion of Impact 4.3-1, the statement appears that, “While baseline pumping conditions by definition do not require mitigation under CEQA, the effect of baseline pumping on fish passage in critically dry conditions, serves to magnify any adverse cumulative effect of project pumping on aquatic resources.” Similar statements appear elsewhere in the DEIR. Such statements are incorrect. The total impact of all pumping (as well as upstream diversions) on fish passage is already documented by the measurements made by SGI and Hanson Environmental during the 2004, 2006 and 2007 studies, when pumping included both baseline and project pumping levels, and was conducted in the context of and any other upstream project pumping. Accordingly, these measurements do in fact document the “cumulative” effect of the ESR project pumping and any "other

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projects causing related impacts", regardless of those "other projects causing related impacts" not being adequately identified in the DEIR.. Since these measurements and the corrected data demonstrate the lack of El Sur Ranch pumping impacts on fish passage, habitat and aquatic water quality, there is no "cumulative impact" to be found, magnified or otherwise.

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 5-24
 (cont.)

C. Cumulative Impacts 4.3-9, 4.3-10 and 4.3-12

The cumulative impact analyses contained within Impacts 4.3-9 (page 4.3-49), 4.3-10 (page 4.3-50) and 4.3-12 (page 4.3-51) are conclusory, lacking a minimal degree of specificity or detail. Each of these impacts statements recite without evidentiary support that there are other existing water users within the Big Sur River whose extractions are expected to continue. On this basis, the DEIR concludes that reductions in stream flow due to diversions of these other water uses, combined with direct project impacts (which are erroneously assessed for the reasons described in this letter), could lead to a significant cumulative impact. The mere identification of existing water users within the lower river falls short of the CEQA requirement to identify past, present and future projects. Guidelines 15065(a)(3). Analysis premised on such non-specific cumulative development is legally inadequate. (See *San Joaquin Raptor/Wildlife Rescue Center v County of Stanislaus* (1994) 27 CA4th 713.) Rather than identifying past, present or future projects, the DEIR impermissibly treats baseline environmental conditions as related projects. Furthermore, as discussed above, any diversions from past or present projects are already folded into the existing conditions and measurements documented by the 2004, 2005 and 2007 studies. No future projects are identified. Unless some additional future projects are identified and the incremental effects of those projects are estimated, there is no basis to conclude that direct project impacts may "make a cumulatively considerable incremental contribution to a significant cumulative effect." Guidelines Section 15130(a).

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D. Cumulative Impacts 4.2-11

The DEIR acknowledges at page 4.2-81 that "potential project-related increases in erosion and sedimentation in no way affect cumulative conditions within the Big Sur watershed upstream of the project site." However, the DEIR errs in concluding that "the cumulative context for this impact, therefore, is limited to past and ongoing irrigation practices **within the proposed project site boundaries**, and the potential for erosion and sedimentation related to those practices." (Page 4.2-81, emphasis added.)

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This approach, which conflates the existing environmental setting and baseline conditions **within the proposed project site boundaries** with "**other projects causing related impacts**" under Guidelines section 15130(a)(1), is inconsistent

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with the description of the baseline conditions elsewhere in the DEIR, and contrary to the purpose of cumulative impact analysis under CEQA and the Guidelines.

More specifically, the internal inconsistency is as follows: he DEIR concludes that the environmental setting when the NOP was issued on June 2, 2006 constitutes the baseline physical conditions against which impacts of the project will be evaluated. By attempting to characterize effects associated with "increases in irrigation on the project site ***“in combination with past and ongoing practices within the POU”***, as cumulative (page 4.2-81, emphasis added), the DEIR creates an irreconcilable inconsistency with the established environmental baseline. *Baseline* conditions on the project site cannot combine to produce cumulative impacts. Guidelines Section 15355 (cumulative impacts consist of two or more individual *project* effects which, considered together, are considerable or increase other environmental impacts).

As a result of improperly including the baseline conditions on the EI Sur Ranch as part of "other projects", the cumulative impact analysis effectively modifies the definition of the "project" for the purpose of cumulative impact analysis. This shifting project definition for purposes of cumulative impact analysis is inconsistent with CEQA's requirement of a stable project definition.

The analysis of Impact 4.2-11 is also contrary to the purpose of the cumulative impact analysis, which is to avoid considering project impacts in a vacuum, due to the failure to consider cumulative harm. (*Whitman v. Board of Supervisors* (1979) 88 Cal.App.3d 397, 408.) Since the DEIR acknowledges that no other projects affect cumulative conditions within the Big Sur watershed upstream of the project site (page 4.2-81), there is no cumulative harm to assess. Any potentially adverse effect of the project on erosion and sedimentation is necessarily limited to direct project effects.

The analysis of Impact 4.2-11 can be rendered internally consistent with the balance of the DEIR, and compliant with the Guidelines and CEQA, by determining that "the proposed increase in pasture irrigation in combination with past practices on the project site do not contribute to substantial alterations in the drainage pattern of the POU and increased erosion or siltation on- or off-site."

VI. General Comments

The DEIR contains numerous inconsistent statements within its text and as between tables purporting to represent data and analysis. Several of the comments herein, including the errata set forth below, highlight such inconsistencies, but in no way reflect



5-26
(cont.)

5-27

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all such errors. ESR requests the Board to conduct a thorough review of the document and correction of all such inconsistencies. .

↑ 5-27
 (cont.)

A. Mitigation Measure 4.2-2 on Page 4.2-68 inappropriately contains a statement that the measure would reduce the proposed project impacts to less than significant, but that continued pumping at baseline levels would result in adverse effects. This statement, also found elsewhere in the document, has no place in a CEQA evaluation, because the baseline diversions are part of the existing environmental conditions. This statement should be removed from the mitigation measure. However, based on the errors in Table 4.1-1 described earlier, this entire Mitigation Measure should be deleted from the DEIR.

5-28

B. Page 4.2-71: The last paragraph states that, “a greater intensity of cattle grazing (as a result of increase irrigation) could cause or contribute to surface conditions more susceptible to erosion.” Increased irrigation levels do not dictate herd size. The DEIR’s conclusion based on its faulty assumption should be corrected.

5-29

C. Mitigation Measure 4.3-2(a) establishes a 20 percentile threshold between July 1 and October 31, whereas Mitigation Measure 4.2-2 establishes a 10 percentile for the same period in the text on page 4.2-2. The text of MM 4.3-2 does not match MM 4.2-2. However, based on the errors in Table 4.1-1 described earlier, both of these Mitigation Measures should be deleted from the DEIR.

5-30

D. At Page 4.3-43, the DEIR makes a reference to Section 4.1 in support of the conclusion that the project maximum diversion rate is 1.4 cfs per day based upon an 84 AF increase in pumping. Then at 4.3-47, Section 4.0 is cited in support of this conclusion. Neither Section supports this erroneous 84 AF increase.

5-31

Sincerely,

KRONICK, MOSKOVITZ, TIEDEMANN &
 GIRARD



Janet K. Goldsmith

Attachments:

1. Copies of Tables 2-1, 4.2-1, 4.2-2 and 6-1 from the DEIR, for reference
2. Application 30166 cd SGI 2007 Study Piezometer Data
3. ESR Data from 2007 Study Biology & Hydrology

cc: Rick Hanson
 James J. Hill, III

ATTACHMENTS

Copies of Tables 2-1, 4.2-1, 4.2-2 and 6-1 from the DEIR, for reference:

TABLE 2-1													
EL SUR RANCH HISTORICAL DIVERSIONS (ACRE-FEET) ¹													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0	0	0	0	36	193	206	208	133	83	1	3	940
1976	3	34	48	58	212	186	190	201	189	40	51	0	1212
1977	0	0	138	203	198	228	190	190	183	108	119	64	1611
1978	0	0	0	0	164	153	125	125	221	153	0	0	940
1979	0	0	0	0	59	229	206	208	188	162	0	0	1032
1980	0	0	0	0	23	226	196	188	186	75	107	37	1037
1981	0	0	0	0	143	204	215	230	160	93	0	0	1045
1982	0	0	0	0	120	200	202	184	203	136	1	0	1048
1983	0	0	0	0	14	15	208	133	61	46	0	0	476
1984	30	0	0	241	262	262	253	301	177	213	0	0	1737 ²
1985	0	0	0	0	240	272	231	210	32	0	0	0	984
1986	0	0	0	0	105	339	199	199	127	0	32	0	1012
1987	0	0	0	0	0	275	284	205	196	10	0	0	950
1988	0	0	0	239	21	265	88	71	99	215	78	0	1054
1989	0	0	0	0	35	71	92	79	161	134	0	0	572
1990	0	0	0	50	143	62	80	173	269	199	64	0	1021
1991	17	0	0	0	52	196	191	136	116	170	0	57	934
1992	0	0	0	0	267	257	116	99	241	119	0	0	1099
1993	0	0	0	0	159	178	202	218	147	87	0	0	992
1994	0	0	0	0	111	139	102	102	182	33	0	0	669
1995	0	0	0	0	87	83	225	155	201	111	0	0	862
1996	0	0	0	0	129	164	170	184	190	128	8	0	973
1997	0	0	0	118	150	122	94	97	121	98	0	0	900
1998	0	0	0	0	0	20	140	123	109	71	5	0	468
1999	0	0	1	0	85	89	106	177	127	90	0	0	675
2000	0	0	0	0	37	206	129	116	191	35	0	0	714
2001	0	0	0	0	39	188	174	116	158	21	0	0	697
2002	0	0	0	0	161	174	135	104	105	88	0	0	767
2003	0	0	0	0	6	144	205	125	142	102	37	0	760
2004	0	0	0	94	253	199	156	161	177	96	0	0	1126
30-year average	2	1	6	33	110	178	168	161	159	97	17	5	937
20-year rolling average 1985-2004	1	0	0	37	104	172	152	143	155	90	11	3	957

Notes:
 1 Based on analysis of electrical energy usage by pump motors and pump efficiency test.
 2 New well added in 1984.
 Source: El Sur Ranch Water Right Application No. 30156, revised October 17, 2006.

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TABLE 4.1-1			
WATER RIGHT APPLICATION NO.30166			
SUMMARY OF BASELINE ASSUMPTIONS AND PROPOSED CHANGES (1985-2004)			
AS EVALUATED IN THIS DEIR			
Diversion Type	Baseline ¹ 1985-2004	Proposed Project ² 19 years plus next year	Net Change Evaluated in the DEIR
Maximum annual usage	1,136 AF (2004)	1,615 AF	+479 AF
Maximum calculated usage	1,441 AF (1997)	1,615 AF	+174 AF
20-year annual rolling average	857 AF	1,200 AF	+343 AF
30-day average rate (5.34 cfs)	234 AF (Aug/Sept 1997)	318 AF	+84 AF
Maximum monthly rate	5.84 cfs	5.84 cfs	+0 cfs
Maximum monthly diversion (July 1 – Oct 31)	269 AF (Sept 1997)	230 AF	- 39 AF
Maximum seasonal diversion (July – Oct 31)	701 AF (1997)	735 AF	+34 AF
Notes:			
1. See Table 2-1, this DEIR (1985-2004 historic average with two wells in operation).			
2. El Sur Ranch Application No. 30166, revised October 17, 2006			
Source: El Sur Ranch Application No. 30166, revised October 17, 2006; ESR Technical reports (SGI 2005, 2006).			

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TABLE 2-1													
EL SUR RANCH HISTORICAL DIVERSIONS (ACRE-FEET) ¹													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0	0	0	0	36	193	206	206	133	63	1	3	940
1976	3	34	49	58	212	186	190	201	189	40	51	0	1212
1977	0	0	138	203	198	228	190	190	183	108	119	64	1611
1978	0	0	0	0	184	153	125	125	221	153	0	0	940
1979	0	0	0	0	59	229	206	208	168	162	0	0	1032
1980	0	0	0	0	23	226	196	188	186	75	107	37	1037
1981	0	0	0	0	143	204	215	230	160	93	0	0	1045
1982	0	0	0	0	120	200	202	184	203	136	1	0	1046
1983	0	0	0	0	14	15	208	133	51	46	0	0	476
1984	30	0	0	241	262	262	253	301	177	213	0	0	1737 ²
1985	0	0	0	0	240	272	231	210	32	0	0	0	984
1986	0	0	0	0	105	339	189	199	127	0	32	0	1012
1987	0	0	0	0	0	275	264	205	196	10	0	0	950
1988	0	0	0	239	21	265	68	71	99	215	76	0	1054
1989	0	0	0	0	35	71	92	79	161	134	0	0	572
1990	0	0	0	50	143	62	60	173	269	199	64	0	1021
1991	17	0	0	0	52	196	191	136	116	170	0	57	934
1992	0	0	0	0	267	257	116	99	241	119	0	0	1099
1993	0	0	0	0	159	178	202	218	147	87	0	0	992
1994	0	0	0	0	111	139	102	102	182	33	0	0	869
1995	0	0	0	0	87	83	225	155	201	111	0	0	962
1996	0	0	0	0	129	164	170	184	190	128	8	0	973
1997	0	0	0	118	150	122	94	97	121	98	0	0	900
1998	0	0	0	0	0	20	140	123	109	71	5	0	468
1999	0	0	1	0	85	89	106	177	127	90	0	0	675
2000	0	0	0	0	37	206	129	116	191	35	0	0	714
2001	0	0	0	0	39	188	174	116	158	21	0	0	697
2002	0	0	0	0	161	174	135	104	105	88	0	0	767
2003	0	0	0	0	5	144	205	125	142	102	37	0	760
2004	0	0	0	94	253	199	156	161	177	96	0	0	1136
30-year average	2	1	6	33	110	178	168	161	159	97	17	5	837
20-year rolling average 1985-2004	1	0	0	37	104	172	152	143	155	90	11	3	957

Notes:
 1 Based on analysis of electrical energy usage by pump motors and pump efficiency test.
 2 New well added in 1984.
 Source: El Sur Ranch Water Right Application No. 30166, revised October 17, 2006.

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TABLE 4.2-2												
STATISTICAL ANALYSIS OF EL SUR RANCH BASELINE (1985-2004) IRRIGATION												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monthly Average Pumping Volume (AF)												
Minimum	0	0	0	0	0	20	60	71	32	0	0	0
25th percentile	0	0	0	0	37	114	105	103	120	34	0	0
Median	0	0	0	0	96	176	148	130	152	93	0	0
75th percentile	0	0	0	0.1	152	218	194	179	190	121	6	0
Maximum	17	0	0.6	239	267	339	264	218	269	215	76	57
Mean	0.8	0	0	25	104	172	152	143	155	90	12	3
Standard Deviation	4	0	0.1	60.4	84	83	57	46	54	62	24	13
Monthly Average Pumping Rate (cfs)												
Minimum	0	0	0	0	0	0.34	0.98	1.15	0.54	0	0	0
25th percentile	0	0	0	0	0.60	1.92	1.71	1.68	2.01	0.55	0	0
Median	0	0	0	0	1.56	2.96	2.41	2.12	2.56	1.52	0	0
75th percentile	0	0	0	0	2.47	3.67	3.15	2.91	3.20	1.97	0.10	0
Maximum	0.27	0	0.01	4.01	4.35	5.70	4.29	3.55	4.52	3.50	1.27	0.93
Mean	0.01	0	0	0.42	1.69	2.89	2.48	2.32	2.60	1.47	0.20	0.05
Standard Deviation	0.10	0	0	1.02	1.36	1.40	0.93	0.75	0.91	1.01	0.41	0.21
Notes: Pumping rates are based on relationships developed between electrical usage and pump flow measurements at the well head. Source: PBS&J 2008 and SGI 2008.												

**Letter 6: Center for Biological Diversity et. al.
(Adam Lazar and Tom Hopkins)**



Ventana Wilderness Alliance



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Via electronic and United States Mail

December 14, 2009

Paul Murphey
Hearings & Special Projects

Division of Water Rights
State Water Resources Control Board
Sacramento, CA
pmurphey@waterboards.ca.gov

**RE: El Sur Ranch, Water Rights Application No. 30166
Draft Environmental Impact Report**

Dear Mr. Murphey:

On behalf of the Center for Biological Diversity (“CBD”), Ventana Wilderness Alliance, Los Padres Forest Watch, the Ventana Chapter of the Sierra Club, Friends of the River, and the California Sportfishing Protection Alliance, we respectfully submit the attached comments on the Draft Environmental Impact Report for Water Rights Application No. 30166, for El Sur Ranch (“El Sur” or “Applicant”), in Monterey County, California. These comments also reflect the input of Big Sur riparian resident Lorri Lockwood and Carmel area residents MaryAnn Mathews, and Brian LeNeve.

6-1

I. Introduction and Summary of Concerns

As explained below, approval of this critically flawed DEIR would violate CEQA and the California Water Code.

We are deeply concerned that the SWRCB has yet to bring an enforcement action against the project applicant, despite the Board’s awareness of at least 20,000 acre-feet of illegal diversions since 1992, which equates to 17 years of violating the permitting requirements of the California Water Code. The evidence contained in this DEIR moreover proves the amount and length of the violation. While we understand that the Board has limited resources to enforce against illegal diversions, the scope and breadth of these violations demand accountability and enforcement. It is also clear that El Sur has used the water rights application process to delay remedial action and avoid culpability. The Board’s failure to enforce against this matter encourages project applicants to delay applications indefinitely in order to escape liability in the interim. We ask that the Board issue a proposed Penalty and Draft Cease-and-Desist Order regarding this violation, and hold a hearing on making this order permanent. We also request pursuant to California Water Code that the SWRCB conduct a hearing on the approval of this DEIR.

6-2

The proposed appropriation will adversely impact the Big Sur River. A portion of the Big Sur River is in the National Wild & Scenic Rivers System. The river is also a major feature of Andrew Molera State Park and Los Padres National Forest. The Forest Service considers the Big Sur River to be an "Area of High Ecological Significance" where a number of ecologically significant features overlap (Southern California Mountains and Foothills Assessment, USDA Forest Service, 1999, pg. 352). Such areas

6-3

are considered key parts of California's ecological heritage requiring public and agency awareness and effective stewardship. The Big Sur River is a major stream that flows unimpeded to the ocean, with a high level of ecological integrity and aquatic habitat with few invasive non-native species. Endangered steelhead can spawn in the river, which also supports populations of endangered California red-legged frog and sensitive foothill yellow-legged frog and Pacific giant salamander. Appropriating and diverting more water from the Big Sur River will further degrade the river's extensive natural values and ecological integrity.

↑
6-3
(cont.)

The Water Board's determination of jurisdiction, and of illegal diversions by El Sur, compelled Applicant to apply for a water rights permit in the first place. Yet the Board is now asked to abdicate the very public trust responsibilities it so vigorously propounded. This DEIR and the associated water rights application are El Sur Ranch's attempt to legitimize decades of illegal water diversions from the Andrew Molera State Park. Before the El Sur ranch began illegally diverting water, the Big Sur River was once a spawning run for steelhead. However, El Sur's illegal diversions destroyed the run.

6-4

The El Sur Ranch Water Rights Appropriation DEIR lacks crucial and required information that would enable the SWRCB and the public to make an informed decision. In fact, the DEIR is so fundamentally flawed that its likely rejection by the SWRCB should be seen as yet another intentional delay tactic by El Sur. Likewise, if this DEIR is approved despite such glaring inadequacies, the likelihood of its being rejected by the courts is so great that the Board may reasonably expect years of additional delay.

6-5

Key omitted information in this DEIR includes:

- Development and conservation agreements between El Sur, Monterey County, and the California Coastal Commission, for easements and residential and hospitality development on the Ranch, including but not limited to the County of Monterey Agreement 3030 (Nov. 13, 1984) Larry Seeman Associates' DEIR for El Sur Ranch Dedication and Development Agreement with County of Monterey, Ordinance 3030 of Nov. 13, 1984., or development permit #3-85-12 which is currently used for ongoing development.
- Reports and studies used to demonstrate that the project satisfies the State's obligations concerning the Public Trust Doctrine.
- Discussion of the water rights protests, including those by State Parks, California Sportfishing Protection Alliance and Cal. Department of Fish & Game.
- Information on the Three Springs source that provided water to Molera Ranch and is now controlled by El Sur.

6-6
6-7
6-8

The DEIR ignores multiple conservation agreements for which the Applicant has received millions of dollars, makes no mention of the luxury residences and 100-room hotel planned for the property, and fails to include the Three Springs water source in any

6-9
↓

if its calculations. The DEIR also substitutes government information with the self-produced “studies” that unsurprisingly reach the opposite conclusions. The mitigation measures suggested are both impossible to enforce and do nothing to offset the impacts of the proposed project. Likewise, the monitoring requirements fail because they do not require reporting on the monitoring to the Board. The baseline used in the DEIR—the average historical amount already diverted by the ranch—does not even approach legality. Thus the DEIR’s measure of impacts is limited to the difference between the amount already diverted and the maximum allowable for pasture production. The analysis thus utterly fails to accurately describe and analyze the project’s impacts and is useless for determining proper avoidance and/or mitigation measures.

6-9
(cont.)

6-10

The EIR is entirely premised on the applicant’s apparent desire to appropriate water for pasture irrigation. Yet the applicant’s place of use already has sufficient access to piped-in well water and Three Springs water for pasture irrigation, without adding a single appropriated drop. This is the same water, in fact, that irrigated the Molera Ranch prior to its conversion into state parkland.

6-11

The DEIR ignores the far more likely goal of the project: to provide water for future development. It ignores decades of attempts to develop the property, despite the existence of development agreements with government agencies, and despite the lack of any other conceivable purpose that would require sustained flows at the level requested in the application. Remarkably, the DEIR fails to even consider development as a likely *impact* of the issuance of the water rights permit, even though it is entirely foreseeable and an obvious cumulative impact.

6-12

The water availability analysis used to support the Ranch’s conclusions is critically flawed. Assuming low-flow conditions and including the (otherwise omitted) riparian diversions, the river is already fully appropriated.

6-13

Finally, the endangered steelhead population is not “large and healthy” as the DEIR states. The DEIR glosses over the protests by the Department of Fish and Game and State Parks even though new studies provide no evidence to contradict decades of decline of the steelhead spawning run.

6-14

II. Inadequate Project Description

A. Inadequate Background and History

6-15

The applied-for diversions are merely the latest salvo in a decades-long effort by El Sur Ranch to take water from Andrew Molera State Park.

No Explanation for Amendments to Water Rights Applications



The “project background and overview” correctly notes that the original application was filed in July 1992, but other than noting that the amendment is contained in an appendix, does not explain what happened to that original application and how and why it was modified in 2005 and 2006. DEIR p.3-1. While the DEIR reveals that protests were filed by numerous parties, it does not inform what was wrong with the old application, nor how the revised applications satisfy these protests.

6-15
(cont.)

Delay and Board Leniency Unexplained

The DEIR does nothing to explain why it has taken applicant 17 years to reach this stage of the application process (the Board’s average estimate is around 4 years), nor does it explain how so many years of illegal diversions has not resulted in penalties and injunctive action by the Board.

6-16

Inadequate Discussion of Water Rights Protests

Other than mentioning their existence, the DEIR does not go into detail about the water rights protests that first blocked the water rights application in 1992. Importantly, the DEIR ignores that the protests have not been resolved by the subsequent reports. The protests claimed that the Big Sur River was being de-watered by the unauthorized diversions, and that El Sur ranch used excessive amounts to irrigate pastureland. The studies used in the DEIR do not in any manner contradict these assertions, but rather place irrelevant qualifiers on them. For example, the DEIR explains away the river’s de-watering, claiming that the combination of groundwater and subterranean streams invalidates claims of dewatering due to applicant’s diversions. Even if there is groundwater mixed with a subterranean stream at the two points of diversions, the withdrawal of 1,600 AFY is still a diversion and not as a groundwater extraction. And will still remove the 1,600 AFY from the available water for the river. The DEIR then suggests it was faulty calculations by State Parks that did not take into account drought years. Yet if the de-watering calculations by State Parks did indeed use data from dry years, there is no reason that dry years will not continue or increase, as has been the case.

6-17

Nature Conservancy

While the SWRCB only asserted jurisdiction in 1992, the illegal diversions by El Sur Ranch date back to the 1965 land grant by Francis Molera that was held in trust for five years by the Nature Conservancy. Under the agreement, both the land and the resources underlying that land, including the subterranean portion of Big Sur River, should be protected from outside development. These restrictions on use are still in place, but are not discussed in the EIR.

6-18

No Extra-Appropriative Right from Easement

6-19

In the DEIR, the 1982 easement is cited that purports to give El Sur an extra-appropriative right to the water requested, even beyond the riparian right granted by the Board. (see DEIR p.2-13) If such an extra-appropriative right actually existed, however, then El Sur would not need to file the application to appropriate water. It is precisely the fact that the SWRCB determined that the Ranch’s easement does not give it an appropriative right that the permit was (and is) required.

↑
6-19
(cont.)

Conservation Easement

The Project applicant was paid by the state to maintain scenic conservation values on the El Sur ranch property. There is no mention of this easement in the DEIR. (See Attachment X)

6-20

Monterey County “Big Sur River Protection Waterway Management Plan”

The DEIR fails to address that this Monterey county plan requires that for adult fish migration the water in Big Sur River must be 0.6 feet in depth with 25% of the total stream width, 10% of which is contiguous. As Brian LeNeve points out in his comments, Page 61 of the California Sport Fishing Regulations states that the Big Sur River shall be closed to fishing when flows are inadequate to provide safe fish passage. The regulations then set the flow requirement at 40cfs measured at the U.S.G.S. gauging station. These restrictions are missing from the flow and diversion requirements set forth in the DEIR.

6-21

Coastal Development Agreement

Project applicant also entered into a coastal development agreement with the California Coastal Commission that would have permitted construction. The DEIR does not assess this development as a clearly foreseeable impact of approving the water rights application for El Sur Ranch. (See Attachment X)

6-22

Endangered Species Act Restrictions

The DEIR correctly reveals that the Big Sur River is designated as Critical Habitat for steelhead under the federal Endangered Species Act. DEIR at p. 4.3-25. But the DEIR fails to adequately discuss what impact such designation has on the Project and/or future permit requirements. Although Critical Habitat designation does not directly impose restrictions on private landowners, federal agencies are prohibited from taking actions that could result in the destruction or “adverse modification” of the designated critical habitat. Federal permits, including permits under the Clean Water Act, Clean Air Act, and Endangered Species Act, are all federal “actions” subject to this restriction. The DEIR fails to adequately discuss the various federal permits the Project (and future foreseeable impacts of the project, like land development) would require.

6-23
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In addition, the Project’s impact on designated Critical Habitat is an impact of the Project that should be analyzed under CEQA regardless of the likelihood of federal permitting requirements being implicated.

↑
6-23
(cont.)

Riparian Rights Holders

The EIR likewise omits many riparian water users that use Big Sur River, which has the effect of making the river appear not fully appropriated. However, when these other riparian users are taken into account, including unpermitted riparian diverters and that of the federal reserved water rights for endangered species, there is little, if any, water remaining to appropriate. See DEIR 5-2 (Table). It is the goal of the DEIR to take into account all diversions, even if those diversions are unpermitted and/or unlisted riparian diversions. Finally, the water rights reserved for Los Padres National Forrest have not been included.

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6-24

Big Sur Wild & Scenic River and Fully Appropriated Stream Status

This comment is provided by Steve Evans of Friends of the River:

The EIR fails to recognize that the Big Sur River is protected in the National Wild & Scenic Rivers System. Although the river segment protected in the system is upstream of the proposed diversion site, increased diversions could harm the protected values of the designated river, including migrating steelhead. As a practical matter, the State Water Resources Control Board has a standing policy designating federal and state Wild & Scenic Rivers as fully appropriated streams (Order WR 98-08, section 5j, pg. 26). The EIR fails utterly to consider impacts on the upstream Wild & Scenic River segment or the fact that the Big Sur River is, under Water Board policy, a fully appropriated stream. In addition, federal designation comes with a federally reserved water right to implement the river protection purposes of the National Wild & Scenic Rivers Act. The EIR fails to consider how the proposed water rights allocation will impact the federally reserved water right (in this case, held by the U.S. Forest Service).

↑
6-25

B. Improper Baseline and Measure of Reasonable Use

Baseline Problems

The DEIR acknowledges that government agencies are concerned by the “use of historical diversion rates as the environmental baseline for purposes of determining potential impact on hydrological conditions and aquatic resources.” DEIR p.3-3. Despite these concerns, this DEIR does not revise the baseline. The DEIR’s use of such a high baseline diversion level renders an evaluation of environmental impacts useless when compared to a “no project” situation, for the “no project” situation assumes the unpermitted diversions will continue unchecked.

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6-26
↓

The DEIR uses the Ranch’s historical diversion average as the baseline to assess impacts of the proposed project. Thus the impacts reflect “the difference between baseline diversions for El Sur Ranch irrigated pasture and diversions that would occur under the proposed project.” DEIR p.4.1-5. The DEIR calculates this figure to be 343 AFY averaged over 20 years; for a 1600+ AFY diversion, only 343 AFY are considered as impacts. Even using the false standards of the DEIR, with a baseline set at the historical diversion rate ca. 850 AFY, this would still leave nearly 800 AFY as the project impact, more than twice than the paltry 343 AFY measurement. In other words, impacts described in the DEIR are limited to those caused by the difference between what El Sur already pumps and the maximum which it could pump in the future if the maximum amount of water requested for appropriation is approved. Likewise, any impacts resulting from the Ranch’s current diversions, including the destruction of the steelhead spawning run, are logically omitted. This is a totally inappropriate measure of impacts, because the application is not for the mere difference between current and future use, but the entire amount under illegal diversion by El Sur.

6-26
(cont.)

Under the no-project scenario, the only water El Sur is entitled to is its riparian right, which is a tiny fraction of the appropriative right at issue here. Any water above the riparian amount, *i.e.* all of the water at issue here, is currently diverted illegally and should not be included in the baseline.

Reasonable Use Problems

The reasonable, beneficial use of water, and prevention of its waste, are fundamental water principles required by Art. 10, Section 2 of the California Constitution, Unfortunately, the EIR confuses “reasonable use” with “any use whatsoever,” arguing that the reasonable use standard for the pasture is the theoretical *maximum* of what could be used to irrigate pasture. El Sur justifies its wasteful irrigation methods by noting that, by DWR’s estimates, similar practices actually use more water for “similar locations and conditions.” DEIR p.2-16. While this observation may demonstrate that other operations are *more* wasteful, it fails to prove that El Sur is in any way using its illegal diversions reasonably or beneficially. It also fails to consider whether the other locations are irrigating animal pasture.

6-27

A separate reasonable use issue is why the applicant requires appropriated water from these wells, period, when the pastureland in question is already connected to the groundwater well irrigation system as well as the Three Springs source. There is no suggestion that the groundwater and Three Springs sources are insufficient; in fact, El Sur ignores these other sources as if they didn’t exist. Yet if these other sources are already connected and capable to supply the pasture with sufficient water, how, then, is the amount requested in this Application to be considered “reasonably used”?

6-28

C. Inadequate Description of Applicant’s Existing Water Use, Rights, and Sources

Current Illegal Status Ignored

The EIR does not explain that the current diversions are illegal, and that El Sur has operated these wells illegally without a water rights appropriation permit for literally decades. Moreover, El Sur has successfully used the permitting process to delay permit consideration for 27 years, dragging their feet in order to preserve the status quo. Yet the Water Code makes clear that there can be no unpermitted diversions. Unequivocally and unapologetically, El Sur has violated the Water Code since 1982, when the SWRCB made its jurisdictional determination over the subterranean source. The ongoing violation is for the difference between the riparian right determined by the SWRCB and the amount actually withdrawn by El Sur during the 27-year interim. In fact, the table of historical withdrawals listed in the permit application provides yearly proof of the extent of the illegal diversions. CBD formally requests that SWRCB staff conduct an investigation into bringing an enforcement action, and if appropriate, to issue a Draft Cease-and-Desist Order and Proposed Penalty as soon as possible.

6-29

Riparian Rights Improperly Excluded

The applicant improperly conflates El Sur’s existing riparian water right with the appropriative right permit application. The EIR explains that the amount of water requested in the El Sur Water Rights Application “includes water needed to irrigate the application’s claimed existing riparian 25 acres.” DEIR 2-17. This means that El Sur has requested water for the same area twice, as El Sur has already been awarded riparian rights by the SWRCB in 1992. Granting additional use as part of this application would be a classic example of “double dipping.” The DEIR explains that this application has nothing to do with riparian water rights, DEIR p. 2-18, so the corresponding amount should not have been included in what is purely an appropriative right being permitted.

6-30

Use of Three Springs Omitted

The agreement between El Sur and the California Department of Parks to use water from the Three Springs location on the north end of the property should provide sufficient water for the pastures, and the DEIR makes no effort to demonstrate otherwise. The Three Springs source was used by Molera Ranch to irrigate its pastures prior to it becoming a park, and thus the Three Springs source is connected by a network to the pasture lands in the POU. There is no mention of this source in the DEIR. (See Three Springs Agreement).

6-31

Efficiency Equated with Under-Irrigation

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The DEIR admits that the ranch was more efficient in past years with its water use, albeit apparently unconsciously, and actually uses this as a reason to increase the water appropriation. DEIR, p.2-19. The DEIR reasons that a year with high irrigation efficiency should be interpreted as a year of under-irrigation. In other words, the application bases its requested entitlement on the maximum amount that could have been used. DEIR 2-22 (“maximum historical diversions have occurred in 1997 and 1984, respectively”). This conclusion gets the beneficial use analysis exactly backward, and undermines the very concept of “efficiency.” The admission of historical “high irrigation efficiency” is empirical evidence that the pasture requires a small fraction of the amount requested in this Water Rights Application.

6-32
(cont.)

Leaching Requirement Lacks Fish Impacts

The DEIR’s discussion of leaching correctly identifies increases salinity in the water. DEIR p.2-22. This increase can endanger plant and animal life, yet this impact is ignored in the “leaching requirement” description, particularly in regards to how changing salinity levels can impact steelhead spawning.

6-33

False Equation of Irrigation Requirements with Diversion Requirements

The DEIR attempts to map the “irrigation diversion requirement” but then assumes in Table 2-3 that the irrigation needs for El Sur Ranch are 100% synonymous with the need for water diversions, when this is clearly not the case, as there are multiple ground wells already drawing irrigation water on the property. Again, the DEIR omits any mention here of the Ranch’s use of Three Springs water and of its extensive and interconnected groundwater wells.

6-34

D. Inadequate Analysis of Current Conditions and Impacts of Diversion

Although the EIR mentions several reports that were supposed to assess the impacts of the diversions on the Big Sur River, these reports lack sufficient historical comparisons to provide any real insight into the status of the river before and after the pumping. Along with setting a baseline too high to consider actual harm, these reports serve to confuse and mislead.

6-35

Steelhead

For example, Table 4.3-5 compares the number of steelhead observed in 2004 and 2007. Yet the appropriate measures for steelhead population should be before and after El Sur began pumping from the old and new wells.

6-36

The EIR assumes the results of these environmental studies remain valid even though the requested appropriation is far greater than any historical use. The EIR passes off the addition of 400+ AFY above any historical withdrawal by concluding that years in

which there was “high irrigation efficiency” were actually years of “under-irrigation.”
DEIR p. 2-22

↑ 6-36
(cont.)

Adequacy of Flow in Big Sur River

The amount of water present above and below the point of diversion is not a useful measure of the health of the steelhead spawning run. The fact that some fish appear to be numerous and healthy below the points of diversions likewise does not analyze the loss of the endangered steelhead spawning run, nor assesses the potential to mitigate the impacts and restore the run to its pre-pumping condition.

6-37

Impacts of Flow on Fish Passage

Additional impacts on steelhead are described by Brian LeNeve of the Carmel River Steelhead Association, who also criticizes the DEIR’s conclusion of adequate water supplies for adult and juvenile steelhead passage:

6-38

“Impact 4.3-1 Adult fish passage. Keep in mind that steelhead are a federally threatened species and that minimum requirements will not recover the species, we must have optimal conditions. The EIR uses the convoluted measurement of 0.6 feet of water over a certain distance for adult fish passage. This is unworkable because after every heavy rain event the stream bed changes so you cannot use a particular cfs as a minimum unless you measure the stream bed after each storm and then on pumping days. CA Dept of Fish and Game has the responsibility for steelhead in a CEQA document and they have already stated that it takes 40cfs to move adult fish safely so no pumping should take place when the U.S.G.S. gauging station is below 40cfs. The EIR states that the normal migrating period for steelhead is Dec. to May yet their own surveys show adult steelhead in the river in Oct. so the 40cfs should extend from Oct. to May.

6-39

“Even if one uses the convoluted riffle measurement, the EIR on page 4.3-36 and 4.3-37 states that with 12 cfs many transects did not meet the riffle criteria. At two dates in October of 2006 flow rates of 24cfs and 21cfs was not enough to meet the criteria. Yet under the baseline allowable pumping the ranch could still operate the pumps, remove more water and lower the riffle even more. This would result in “take” under the ESA by altering a stream bed. If 24cfs resulted in riffles that were below the criteria for adult passage then the 40cfs as listed by DFG would be a fair amount so as not to have to re-measure each riffle after each rain.

“Impact 4.3-2 Juvenile fish passage. (keep in mind that juveniles are also steelhead and federally protected.) The EIR again uses the convoluted measurement of 0.5 feet of water over a certain distance. Again this is unworkable for the same reasons listed above.



“If we use the same ratio for juvenile passage (.0.6” for adults and 0.5” for juveniles) then no pumping should occur when the U.S.G.S. gauging station is below 36cfs. As most of the ranch pumping occurs in the summer this is critical. Even if the DFG requirements are not accepted the ranch cannot say they can pump their baseline amounts as their baseline amount resulted the river going dry in 1990 resulting in the lawsuit in 1992. The summer pumping must relate to juvenile fish passage and not to some pre-determined amount. Table A on page 4.3-38 shows allowing baseline pumping to continue regardless of water conditions. In dry and critically dry years between the months June, July, August, and September under the baseline pumping regime the ranch would be allowed to pump an average of over 28% of the flow. This is the worst time to divert water from fish and unacceptable. A baseline pumping regime does not take into consideration what conditions are on the river. While on page 4.3-29 the EIR established a minimum depth of water as 0.5 feet on their summary of facts for Impact 4.3-2 on page 4.2-40 the EIR has lowered the depth requirement to 0.3 feet and even then they found that pumping violated the riffle rule, so a depth of 0.5 feet would be even harder to maintain if at all.

6-39
(cont.)

“Page 6-7 and 6-8 state that baseline pumping, (not increased pumping) lowers the river by 2” and enough that the shallower riffles did not meet the criteria of 0.3 feet. (Note again the EIR lowers the juvenile passage criteria from 0.5 feet to 0.3 feet.) The only alternative that meets the fish passage limits is the “No Pumping alternative.”

Under any alternative no pumping should be allowed or could be allowed under ESA rules when juvenile fish could not migrate and that appears to be around 36cfs.”

Inadequate Surveys of Biological Resources

The following comments on Biological Resources are provided by Julie Anne Hopkins, a wildlife biologist and botanist and former career scientist with the United States Bureau of Land Management:

Two visits were conducted by consultants to survey biological resources: The first on November 2, 2005 to Andrew Molera State Park (i.e. not the place of use) and the second on July 21, 2006 on a guided ranch tour for "reconnaissance-level" overview. Both visits occurred outside of plant flowering and avian breeding seasons. Additional visits should be conducted during flowering plant season and avian breeding seasons (March through June); without such visits, the biological surveys are not reliable and incomplete.

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Misuse of California Natural Diversity Database (“CNDDDB”)

The California Natural Diversity Database (“CNDDDB”), while an excellent resource, is only as accurate as the data input. Since the El Sur Ranch is privately owned,

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the inputs for El Sur have been supplied by the Ranch itself. Given the existing knowledge of endangered and threatened plant and animal species in the El Sur vicinity, including the adjacent Molera State Park, it is highly questionable whether there have been thorough and timely biological surveys conducted by qualified biologists. Without qualified experts and timely surveys, there is a conspicuous absence of Rare Species Reports to California Department of Fish and Game for inclusion in the CNDDDB. Surveys for known listed species that could occur on El Sur Ranch should be conducted by qualified biologists, and the results included in both the CNDDDB and the EIR.

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6-41
(cont.)

Lack of Support for Biological Conclusions.

The DEIR fails to include the biological reports by prior consulting agencies (Hanson Environmental, 2004, 2006, 2007 and M. Green and Associates, 2007), both of which the current DEIR relies upon.

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Due to the lack biological field visits at appropriate seasons, reliance on applicant-supplied information in the CNDDDB, and the lack of supporting documentation, the "likelihood of occurrence" decision for potential and occurring species is arbitrary for both aquatic and terrestrial plant and animal species.

The federal- and state-endangered California condor (*Gymnogyps californianus*) warrants in-depth consideration regarding potential use of local foraging habitat. The Ventana Wildlife Society ("VWS"), lead organization for the reintroduction of the condor on the Big Sur coast, is not on the list of addressees. This lack of notice to the VWS further exacerbates the likelihood that endangered species have not been considered.

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Likewise, the Western/Southwestern Pond Turtle has not been inadequately addressed. Outdated records and reliance on self-supplied information in the CNDDDB, coupled with inadequate recent field visits, are cited in the DEIR. Further research and surveys are needed to determine the effects that water withdrawal and (both cumulative and foreseeable) upland habitat modification will have on this sensitive species.

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Finally, inadequate research and surveys have been conducted for the presence and potential effects to known bat species in the vicinity of the project.

6-45

Public Trust Impacts

The DEIR claims that a series of reports funded by the project applicant serve to allay concerns about the ongoing damage to public trust resources. This is incorrect. The river was de-watered due to El Sur's unsustainable historical diversions, and it is only because the DEIR's baseline was set so high that the diversions do not appear to have such impacts, for implicitly the public trust resources (primarily the steelhead spawning run) was already destroyed. Likewise, the studies referenced in Section 4.2 of the DEIR

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all measure the impacts of additional diversions, and not the historical condition of the spawning run. The mitigation measures should be focused in protecting and restoring those resources, not on preserving and exacerbating the abysmal status quo.

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6-46
(cont.)

Limitations of Studies

The DEIR itself acknowledges serious limitations of the studies’ conclusions, including only one trial run for each pumping conditions, which make the conclusions “not necessarily indicative of the more critical conditions that would occur during a critical or dry year;” meaning that “in general, these studies do not provide for a means to correlate diversion effects on the Big Sur River or groundwater conditions.” DEIR at pp. 4.2-46 and 4.2-47. Studies that do not correlate effects on Big Sur River or groundwater cannot possibly serve as appropriate evidence for impacts cause by water diverted by El Sur. As previously mentioned, the effects of diversions on streamflows are also inappropriately based on the difference between historical diversions and the proposed average diversions under the permit.

6-47

Missing Cumulative Impacts

A Cumulative Impacts Analysis in an Environmental Impact Report must assess the impacts of the proposed project combined with reasonably foreseeable impacts from past, present and future activities. This DEIR does not correctly account for cumulative impacts, in no small part because the document does not consider the impacts of the full amount of appropriated water requested, but rather considers only the impacts of the difference between the amount already diverted illegally, and the amount it could deliver under the permit. (DEIR p. 5-9). Until the full amount requested is considered as an impact, the analysis is fundamentally flawed and does not pass muster under CEQA.

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Along the same lines, the cumulative impacts should include the combined total appropriated amount requested and the total riparian diversions in operation; such a calculation is impossible because the DEIR lacks a complete listing of riparian diverters.

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Third, if the project baseline is wrongly set at the historical average diversion level, then the cumulative impacts should assess the additional diversions in this project combined with the historical diversion level. In this manner, at least some part of the DEIR would assess the total impacts of El Sur’s diversions.

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Fourth, resulting low flow, low dissolved oxygen and high temperatures are clear proximate and cumulative impacts that must be discussed together for their combined effects on habitat and steelhead fish passage. Whether or not El Sur’s diversions by themselves cause the low flow and high temperatures, these problems are well-documented and should be analyzed (and mitigated).

6-51

Finally, cumulative impacts should include the expected residential and commercial development in the area spearheaded by El Sur, including a discussion of the development agreements, the fire suppression and municipal water requirements for those developments, and how those fire suppression and municipal water requirements would be met without using the water diverted from Big Sur River.

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Missing Growth-Inducing Impacts

Separately, the DEIR neither evaluates the probability of development nor transfer of the water as a growth-inducing impact. Yet if the appropriate right is awarded, development is a near-certainty due to development agreements already in place. These diversions fit both CEQA definitions of growth-inducing impacts, as it would (a) generate direct effects on employment and (b) encourages expansion of development into a pristine area. The proof of using the well sources for development is in the development agreements, as there is no other source that meets the gallons-per-minute minimums for fire protection.

6-53

Inaccurate Water Quality Assessment

As noted in our discussion of fish passage above, the DEIR does acknowledge critical low flow caused by pumping, resulting in blocking fish spawning upstream (and/or fish swimming upstream to spawn) in Big Sur River. DEIR 5-5 (Impact 4.3-10). Instead of mitigating this impact, however, the document merely acknowledges what the government agencies have been arguing for years: that low flows mean “large segments of the steelhead population could be at risk.” Id.

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The DEIR’s discussion of temperature changes are also rendered useless by setting an inappropriate baseline for measurement. If the actual 1600AFY were measured, then the analysis would reveal significant temperature changes in low-flow periods due to the project applicants’ diversions.

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Likewise, dissolved oxygen is not mitigated by inclusion of an aeration system, for the seemingly obvious reason that the system cannot aerate water that is not flowing and indeed non-existent. Moreover, if the water level has fallen below 10cfs at the Fish and Wildlife gauge, then the ability to aerate the water to improve the dissolved oxygen content is totally irrelevant, because the steelhead will be unable to . Moreover, even the DEIR acknowledges “the overall feasibility of such a study is unclear.” The proper mitigation for this impact is to reduce pumping in low-flow conditions.

Inappropriate No-Project Alternative

The alternatives analysis in Chapter 6 of the DEIR is fundamentally flawed because of the presumption that under a “No Project” situation the ranch would continue to pump at its previous rates. DEIR p.6-2. The SWRCB is aware that El Sur’s current

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use of Big Sur River water— of the entire amount not considered riparian—constitutes an ongoing illegal diversion in violation of the Water Code. Therefore it would be, by definition, illegal for El Sur to continue diverting this amount if the permit is denied. As noted elsewhere in these comments, the most appropriate “no project alternative” is the Board’s issuance of a Cease-and-Desist Order and Proposed Penalty on the existing illegal diversion, and a total cut-off of any water not considered a riparian right by the Board.

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(cont.)

CBD is aware of certain “no project” exceptions, such as for re-licensing of hydropower dams, that may consider a continued unpermitted condition as a “no project” alternative, even though the continued presence of the project would be illegal. However, the dam example is exceptional because of the distant causal connection between denying a dam’s permit renewal and actual removal of the dam. Moreover, prior to the re-permitting, the “no project” dam was presumptively permitted and legal. In contrast, here the diversions have been illegal since 1982, and the pumping can be reduced with the mere turn of a dial. Therefore the DEIR has no excuse for assuming the historical diversion rate as the “no project alternative.”

Lack of Riparian-Only Alternative

The DEIR omits a critical alternative in its analysis that would only deliver the riparian allowance already determined by the SWRCB, and would rely on groundwater and Three Springs sources for the rest. This omission makes the alternatives analysis incomplete, as it is the only alternative that correctly balances the riparian rights of the ranch with the interests of the Molera State Park.

6-57

E. Misleading Discussion of Project Goals

One of the great mysteries of the Water Rights Application and DEIR is why a pasture with more-than-sufficient water supply requires an additional 1,600 AFY of water with a guaranteed minimum pumping rate of 5.34 CFS and 30-day running average flow of 2,400 GPM. DEIR p. 2-17. Answering this mystery is not helped by the DEIR’s omission of discussion of Three Springs, which already supplies water to the pastures under a separate agreement, nor is it helped by the omission of the long-standing development agreements for this land.

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The Project Applicant commissioned numerous studies to reach conclusions at direct odds with earlier reports, state and federal agencies, and common sense. Incredibly, one of the reports actually concludes that flood irrigation is an “efficient and appropriate” means of irrigating pasture land. DEIR at 2-16. As explained above, the “efficiency” designation is awarded based on comparisons to even greater flood irrigation by other Ranches. Drawing a conclusion of “efficiency” is one that only a flood irrigator of pastureland could reach. Yet even the flood irrigation employed by El Sur fails to

account for the amount of water requested, as historical use hovered around 60% of the amount requested.

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(cont.)

The DEIR makes no mention of the decades-long struggle by the Hill family to create residential and hotel development on its El Sur Ranch property. This omission is particularly important since fire suppression requirements are the most likely reason that El Sur would need guaranteed GPM's as specified in the EIR. Big Sur resident Lorri Lockwood observed that the LSA report and DEIR for County of Monterey Agreement 3030, which Hill signed Nov. 13, 1984, states:

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6-61

"Site 8 would receive its domestic and fire protection water supply from an existing well in the Molera grazing area to be deeded to the ranch. This well supplies 1200-2200 gpm....An additional backup well supplying 20 gpm would be available should the need arise."

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LSA p. 95.

III. Inadequate Mitigation

CEQA mandates mitigation for environmental impacts. However, the project appears to have confused "mitigate" with "react to disaster." While offering nothing to the State Park to actually offset the diversions, the proposed project's "mitigation" is to cut-off of pumping in extreme low flow conditions. DEIR p.3-6. This does not offset the withdrawals' long-term, sustained impacts on the Big Sur River, and thus does not qualify as mitigation.

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The El Sur diversions have caused low flows in the Big Sur River that have historically impeded Steelhead spawning. Mitigation measures should therefore function to improve year-round adult and juvenile fish passage in Big Sur River, but fail to do so:

6-64

Discussion of Impacts and Mitigation

1. The requirement that the pumps reduce pumping when the river reaches a certain level is a too-little, too-late approach that does nothing to promote recovery of the steelhead spawning run in the Big Sur River. DEIR p.3-5; impact 4.2-2.
2. A proper mitigation measure in this instance would be to provide State Parks with veto control over any withdrawals subject to successful spawning of steelhead in the river.

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3. The DEIR incorrectly assumes that no mitigation is required for impacts to the lagoon, when losing the lagoon is and has been a very significant impact. DEIR p. 6-6; impact 4.2-3.

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4. The mitigation measures for monitoring and reporting of erosion do not provide for penalties or any other incentive for the project applicant to comply, nor do the measures require submitting actual reports to the SWRCB. These flaws render the monitoring ineffective; the lack of reporting requirements ensure hiding any potential violation in the files of the "Applicant or operations manager."

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Finally, mitigation measures must be included to limit maximum withdrawals below the GPM required for fire protection, require that no water from this permit be moved from these pastures, and require that no water from these sources will ever qualify as fire protection sources for new development.

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IV. Conclusion

For the foregoing reasons, we request that approval of the EIR be denied. In the alternative, we request that the Board conduct a hearing on approval of this environmental document. Finally, we request that the Board conduct an investigation into bringing an enforcement action against the applicant for nearly three decades of illegal diversions and systemic delays. Because the El Sur Water Rights Application requests permitting only for diversions above and beyond its (unpermitted) historical diversion rate dictates that the baseline diversion level remains unpermitted regardless of the outcome of the WRA. Given the proof provided by this DEIR, a Draft Cease-and-Desist Order and Proposed Penalty should be the logical next step. Thank you for your time and consideration.

6-69

Sincerely,

Adam Lazar
Center for Biological Diversity

Tom Hopkins
Ventana Wilderness Alliance

Letter 7: Monterey Coastkeeper (Steve Shimek)

475 Washington Street, Suite A
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831/646-8837



December 13, 2009

Mr. Paul Murphey
Division of Water Rights
State Water Resources Control Board
Post Office Box 2000
Sacramento, CA 95812
Via email: wrhearing@waterboards.ca.gov; PMurphey@waterboards.ca.gov

RE: El Sur Ranch. Water Right Application No. 30166. DENY PROPOSED PROJECT

Dear Mr. Murphey, Water Board, and Staff:

Thank you for the opportunity to comment on the El Sur Ranch Water Right Application 30166. I offer these comments on behalf of Monterey Coastkeeper, The Otter Project, and our 3000 members. Monterey Coastkeeper is a program of The Otter Project. Monterey Coastkeeper is affiliated with the California Coastkeeper Alliance and the international Waterkeeper Alliance.

7-1

We urge the Board to reject the Proposed Project and instead conditionally approve the Environmentally Superior Alternative as identified in the Draft Environmental Impact Report (DEIR): No change in Existing Practices/Historical Diversions Alternative (Alternative 2).

Environmental Baseline

We believe the environmental baseline for this project is as stated in the No Project Alternative, Alternative 1. We do not understand the logic stated throughout the document that the historical use is a more appropriate baseline and that the proposed project is only a slight increase over the historical use baseline. Studies have clearly shown that both the New and Old Wells draw water from the Big Sur River. Studies have shown that pumping operations, in fact, have drawn down the surface water levels of the river to a condition that restricts fish passage. Finally, studies have shown that pumping contributes to extremely low – in fact lethal to steelhead – levels of dissolved oxygen. See the following pages in the DEIR:

7-2

4.2-64 The average flow rate was higher at the furthest downstream station (VT2) compared to the station within the section of the Big Sur River adjacent to the area of diversions (VT3), except when both pumps were pumping. The higher flow rate at the downstream flow station and lack of ambient precipitation or other direct contributions to stream flow indicates that this section of the river is typically a gaining reach with groundwater inflow contributing to stream flow. However, when both pumps were in operation, flow at VT2 was 0.4 cfs lower than flow at VT3 (Figure 3-12 SGI 2008). This suggests that the diversion of up to 5.02 cfs may cause or contribute to the section of the river between VT3 and VT2 to lose surface water to groundwater and thus transition from a gaining reach into a losing reach.

7-3

4.2-65 During the Critical Dry irrigation season, ambient flow within Zones 4 though 2 during September was as low as 2.3 cfs. Baseline pumping would reduce this flow rate to about 1.84 cfs (2.60 cfs average September diversion rate; see Appendix G, El Sur Ranch Monthly Pumping (cfs) in this DEIR). The proposed project would reduce this flow rate to about 1.82 cfs during average July through October diversion conditions and 1.68 cfs at the maximum monthly July through

October diversion rate. Consequently, there would still be flow within Zones 4 through 2, but flow would be reduced by about 0.48 to 0.62 cfs.

4.2-66 A reduction in flow rate within Zones 4 through 2 of the Big Sur River caused by increased diversions would be critical during extreme low flow conditions. The sustained maximum diversion rate of 5.34 cfs could increase flow losses by an average of 1.28 cfs, while the average irrigation season diversion rate could be up to 3.09 cfs, with average flow losses of 0.74 cfs.

4.2-81 The incidences of no-flow conditions that currently occur in the river, however, may increase slightly as would the incidence of less-than-1 cfs. Although these anticipated increases would be very small, as noted above, the river supports critical habitat for endangered fish species and, therefore, this project’s contribution to the cumulative impact is potentially considerable and, therefore, cumulatively potentially significant.

4.3-43 These studies indicate that pumping reduces groundwater inflow to the river by at most 0.30 cfs per cfs pumped. So at the increase in maximum diversion rate attributable to the project of about 1.4 cfs per day (Section 4.1 of this DEIR), streamflow would be reduced by 0.4 cfs. Further, the 2007 study indicates that when pumping is occurring during periods of low flows, stagnant conditions are created in the zone of influence where DO [dissolved oxygen] levels were extremely low (SGI 2008; page 3-16)... Pumping contributes to the decline in flow and thereby exacerbates reductions in DO in the lower Big Sur River by facilitating formation of stagnant water.

5-6 The impact analysis presented in Section 4.3 found that pumping-generated decreases in water depths would impair the movement of these fish in the study area. In the spatial context of the watershed, the study area is the link to the ocean from upstream rearing habitats. If juvenile steelhead are impaired or unable to reach the lagoon or the ocean, large segments of the population could be at risk.

Given the considerable evidence that pumping at historic levels is impacting hydrology, water quality and the passage of ESA threatened steelhead, it seems entirely appropriate for the Board to seriously consider the No Project Alternative. Or, given the repeated study and volume of evidence, it seems the Board has every right and obligation to place conditions on the ‘business as usual’ historic practice.

Waste

The California Constitution Article X, Section 2 states in part: “The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.” This section of the California Constitution restates riparian rights but concludes that the use must be reasonable. Only approximately 25 acres of the project area are entitled to riparian use.

That water must not be wasted is stated in the DEIR at page:

2-20. The law also requires that this water be put to reasonable use and that waste or unreasonable use of water be prevented (i.e., the amount required to supplement the water



naturally provided by precipitation and other climatic factors should reasonably match the requirements of that use so that the water is not wasted).

The proposed project is the result of the applicant stating that they need additional water. The DEIR states:

2-21 According to the applicant, in many years the Ranch applied less water for irrigation than was required for optimal crop production. Ranch foremen have described the historic levels of irrigation as being generally adequate for irrigation of the pasture for ordinary grazing purposes. In a few instances, the annual diversions exceeded crop irrigation diversion requirements; such occurrences have been rare, although it can be reasonably expected that such conditions could occur again in the future.

No data or evidence appears to have been presented supporting the need for additional water. It appears the applicant wants more water, but the Ranch foremen think they are doing alright with the water they have, and at times they even overwater.

The DEIR itself appears to question the need for additional water.

4.2-70 However, no measurements have been made to identify specific conditions on the POU and verify the accuracy of these calculations; calculations are based on average values for the types of soils within the POU and not any actual measurements of infiltration, uptake, and evapotranspiration. Consequently, the use of additional irrigation water that calculations indicate could be effectively used may not, in reality, be effectively used.

We believe there is no strong claim for additional water.

The DEIR is at times contradictory stating that irrigation efficiency is around 65% and at other times around 85%. We have relied upon the 65% efficiency estimate provided by the applicant. The DEIR states that the applicant provided new information including the information in the following table:

TABLE 2-2

CRITERIA AFFECTING REASONABLE IRRIGATION EFFICIENCY ON THE EL SUR RANCH

Criteria	Optimal	El Sur Ranch
Irrigation method	Based on soils, crops, slopes, economic considerations.	Limited to border surface irrigation to help maintain natural view of the coastline, regulatory prohibitions on natural landform alteration, grazing requirements, and economics.
Slope	Based on soil border length, soils, crops, and water supply.	Limited to existing slope due to soil profile, regulatory prohibitions on natural landform alteration, grazing requirements, and need to maintain natural view of coastline.
Border flow rates	Variable with the ability to apply water at optimal rates (i.e., generally order large flow rates for short durations of 1-2 days)	Limited to flow from two existing wells, and spring tide constraints on the Old Well that can limit pumping.
Border irrigation set times	Based on soil border length, soils, crops, and water supply.	Limited based on available ranch labor.
Labor	Full-time irrigator during irrigation that occurs over a few days at timely scheduled irrigation intervals.	Limited to periodic checking and two set changes per day, based on available ranch labor and herd size conditions.
Irrigation scheduling	Irrigation scheduling based on crop needs.	Limited based on water supply that limits the irrigation interval.
Tail water recovery	Installed to capture and use tail water for irrigation	May be limited due to regulatory, environmental and cost constraints on expanded tail water recovery.
Irrigation efficiency	75 to 85 percent	60 to 70 percent (65 percent typical)

Source: El Sur Ranch Water Right Application No. 30166, revised October 17, 2006.

7-5
(cont.)

7-6

7-7

El Sur Ranch demonstrates in their own table that they are using the water with less than optimal efficiency. Considerations such as labor and border irrigation set times are at the discretion of the Ranch and should not be accepted as true limitations. Further, limitations such as limited flow rates and irrigation scheduling are stated as caused by the limited flow from the existing wells; we fail to see how these limitations are relieved by allowing additional pumping (additional flow). We believe the applicant has not demonstrated a need for additional water and may in fact be wasting the public resource they are taking. More than enough water to satisfy the applicants stated needs can be obtained through more efficient use of the water they are historically taking.

7-7
(cont.)

Regulatory Setting Not Completely Considered

The Marine Life Protection Act was passed by the legislature and signed by the Governor in 1999 and requires California to reevaluate all existing marine protected areas (MPAs) and potentially design new MPAs that together function as a statewide network. In April 2007 The California Fish and Game Commission created the Point Sur State Marine Reserve.

7-8

The El Sur Ranch discharges directly into the Point Sur State Marine Reserve.

California Fish and Game Code Section 1, Chapter 10.5, 2852(d) states: "Marine life reserve," for the purposes of this chapter, means a marine protected area in which all extractive activities, including the taking of marine species, and, at the discretion of the commission and within the authority of the commission, other activities that upset the natural ecological functions of the area, are prohibited. While, to the extent feasible, the area shall be open to the public for managed enjoyment and study, the area shall be maintained to the extent practicable in an undisturbed and unpolluted state [emphasis added].

Because California's network of marine protected areas is so new, regulators have yet to interpret exactly what "shall be maintained to the extent practicable in an undisturbed and unpolluted state" really means. We believe that new or expanded discharge should not be permitted.

The DEIR states:

4.2-73 [T]he proposed project could increase excess irrigation runoff rates. Irrigation runoff could carry pollutants such as nutrients from fertilizers and animal waste, and pathogens from animal waste to the tailwater pond, Swiss Canyon Creek, or the Pacific Ocean. The El Sur Ranch typically fertilizes and aerates the pastures on an annual basis. This potential impact is potential degradation of surface waters such as the Pacific Ocean.

Reject the Proposed Project

The proposed project increases both take of public water resources and discharge of polluted water beyond acceptable levels. We believe the proposed project should be rejected.

7-9

Although the hydrology and biological resources of the Big Sur lagoon and lower reaches have been studied, each investigation has experienced confounding factors making data interpretation difficult. Further, the DEIR relies on 1977 as the example of critically dry conditions. 1977 was preceded by a year of unusually wet conditions and it is possible that groundwater was in reserve. Given that historic practices have been shown to have impacts we do not believe the proposed project impacts can be mitigated to less than significant levels. To restate from the DEIR what has already been presented:

7-10

"Further, the 2007 study indicates that when pumping is occurring during periods of low flows, stagnant conditions are created in the zone of influence where DO [dissolved oxygen] levels were extremely low (SGI 2008; page 3-16).... Pumping contributes to the decline in flow and thereby exacerbates reductions in DO in the lower Big Sur River by facilitating formation of stagnant water."

“The impact analysis presented in Section 4.3 found that pumping-generated decreases in water depths would impair the movement of these fish in the study area. In the spatial context of the watershed, the study area is the link to the ocean from upstream rearing habitats. If juvenile steelhead are impaired or unable to reach the lagoon or the ocean, large segments of the population could be at risk.”

According to Table A, in the driest summer months, even during critically dry years, the applicant apparently would be allowed to pump at high levels.

7-10
(cont.)

TABLE A		
EXTREME CRITICAL DRY AND CRITICAL DRY FLOW RATE LIMITATIONS ON PROJECT DIVERSIONS		
Month	USGS Limiting Flow Rate^a cfs (flow rate percentile)^f	Baseline (Allowable) Diversion Rate^b cfs
January	18 (10 th)	0.01
February	23 (10 th)	0.00
March	31 (10 th)	0.00
April	26 (10 th)	0.42
May	22 (20 th)	1.69
June	11 (10 th)	2.89
July	10 (20 th)	2.48
August	8.4 (20 th)	2.32
September	7.7 (20 th)	2.60
October	7.9 (20 th)	1.47
November	9.8 (10 th)	0.20
December	17 (20 th)	0.05

Notes:
 a. When flow rates at the USGS gage drop below this value, Project diversions shall not exceed Baseline (Allowable) Diversion Rate
 b. The 20-year historic Baseline average diversion rate is the allowable diversion rate when flow at the USGS gage drops below the USGS Limiting Flow Rate
 c. These numbers represent the USGS daily flow rate at the with the corresponding 20-year historic flow rate percentile in parenthesis. For example, in January, 18 cfs at the USGS gage station corresponds to the 10th percentile flow rate.
 Source: PBS&J 2009.

As stated in the DEIR, “Section 10002 requires that the Director of Fish and Game prepare proposed streamflow requirements, in terms of cfs, for each stream or watercourse identified pursuant to Section 10001. The Director of Fish and Game has not yet provided streamflow requirements for the lower Big Sur River. However, in accordance with Public Resources Code, the Director of Fish and Game would review the proposed project water right application and, if necessary, impose stream flow requirements (DEIR 4.2-38).” As stated, the Director of Fish and Game has yet to provide streamflow requirements. However, such a study for the Big Sur River was funded by the California Ocean Protection Council and undertaken by DFG in 2008. The Director could provide an instream flow requirement in 2010. The applicant should be required to stop irrigating if flows drop below the requirement.

At 4.2-66 the DEIR states: “Because no minimum flow has been established, a flow rate of at least 1 cfs was used to estimate potential proposed project effects on maintaining minimum flows.” We could find no justification for the 1 cfs number and it seems arbitrary especially in light of the fact that the proposed project can reduce flows by as much as 1.28 cfs .

7-11

4.2-66 A reduction in flow rate within Zones 4 through 2 of the Big Sur River caused by increased diversions would be critical during extreme low flow conditions. The sustained maximum diversion rate of 5.34 cfs could increase flow losses by an average of 1.28 cfs, while the average

irrigation season diversion rate could be up to [a sustained rate of] 3.09 cfs, with average flow losses of 0.74 cfs.”

4.2-81 The incidences of no-flow conditions that currently occur in the river, however, may increase slightly as would the incidence of less-than-1 cfs. Although these anticipated increases would be very small, as noted above, the river supports critical habitat for endangered fish species and, therefore, this project’s contribution to the cumulative impact is potentially considerable and, therefore, cumulatively potentially significant.

According to Table A the proposed mitigation reduces diversion to a sustained rate of between 2.32 and 2.89 cfs during the summer months during critically dry years. These diversions would leave little more than one-quarter of one cfs in the lower reaches. We find it difficult to understand how these reduced flows could be less than significant.

We also note that the DEIR consistently considers impacts at a sustained diversion rate of 5.34 cfs but instantaneous rates of diversion of 5.84 and 6.0 cfs are actually permitted. No analysis is offered of the responsiveness of the flow to these peak diversions.

Conditionally Approve Alternative 2: No Change in Existing Practices/Historical Diversions Alternative (Alternative 2).

As shown in the DEIR, the existing practices can have serious hydrological, water quality and biological impacts. The Monterey Coastkeeper believes the Board would be justified in considering the “no project” alternative. However, given the historic nature of the property and given that the Ranch has deeded property to the State Park system, Monterey Coastkeeper “can live with” conditional approval of Alternative 2, the No Change in Existing Practices/Historical Diversions Alternative.

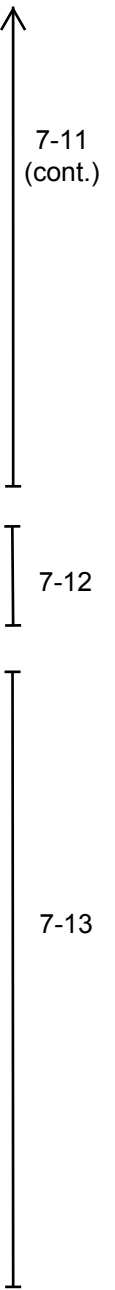
Conditions

- Monterey Coastkeeper believes that all conditions and mitigations required of the proposed project should apply to the existing use.
- The DFG should be encouraged to expedite the determination of a streamflow requirement for the Big Sur River. Permit conditions should be amended as soon as the required flow is determined.

Thank you for this opportunity to comment on the El Sur Ranch water rights application.

Sincerely,

Steve Shimek
Monterey Coastkeeper



Letter 8: Carmel River Steelhead Association (Brian LeNeve)

Paul Murphy
 Division of Water Rights
 State Water Resources Control Board
 Post Office Box 2000
 Sacramento, CA 95812

December 11, 2009

**RE: El Sur Ranch Water Right Application No. 30166
 Draft Environmental Impact Report**

Dear Mr. Murphy:

The Carmel River Steelhead Association (CRSA) has serious concerns in regards to the Draft Environmental Impact Report (DEIR) for the El Sur Ranch (Ranch) Water Right Application Number 30166. CRSA finds the DEIR critically flawed, inaccurate, biased and not in conformance with CEQA guidelines.

CRSA feels it is astounding that the Ranch has been allowed to continue pumping water after the determination in 1992 that the Ranch had only rights to riparian water for 25 acres. If the State Water Resources Control Board (SWRCB) knowingly allowed the Ranch to pump an average of 857 AF of water for the last 17 years, the SWRCB in fact gave the Ranch a water right without permit process, without public comment, and without regard to the environmental consequences and would be liable, along with the Ranch, in a suit based on the Endangered Species Act, illegal take provisions. CRSA insists that the SWRCB immediately issue a Cease and Desist notice to the Ranch and hold hearings.

CRSA believes that because this DEIR is critically flawed, inaccurate, biased and lacking CEQA elements, this DEIR should be set aside and a new DEIR issued by a company competent in dealing with CEQA requirements. The following is a list of flaws in the DEIR.

1: *The DEIR is flawed in using a historic use of 857 AFA as the basis for evaluating the DEIR.*

In 1992 the SWRCB determined that the Ranch only had riparian rights to 25 acres of land. At that time the SWRCB could have and should have issued a Cease and Desist Order to the Ranch. It does not appear that the Ranch was issued orders to stop illegal pumping so they continued with what was best for the Ranch. To use non-permitted pumping as a base for “historical pumping rates” and then use that illegal rate as a base to evaluate the impacts of the water right application is illogical if not illegal.

8-1

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 El Sur Ranch WRA No. 30166, DEIR Comments
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The Ranch is not requesting an average of 375 AF per year, it is requesting an average of 1,200 AF per year and the impacts must be evaluated based on the total request not the increase from water that was not permitted. If the SWRCB uses 857 AF as the baseline then the SWRCB is in fact giving the Ranch a permit for water without CEQA review, public comment, or regards for the environment.

8-1
 (cont.)

2: *The DEIR (page 2-18) is flawed and inaccurate in stating the steelhead population is large and healthy.*

The preparers of the DEIR only offer surveys from the two years of 2004 and 2007 for this statement (Table 4.3-5). One cannot state the health of a run of fish from two very recent years. An accurate statement would require a comparison from before the Ranch started pumping to a recent year and this was not done. It is hard to ignore the bias of the report when the DEIR fails to recognize the listing of steelhead as a threatened species by the federal government during the time of illegal pumping. By the admission of the DEIR, the Ranch has pumped the river far below what is necessary for fish passage and therefore undoubtedly contributed to the listing, and makes the Ranch subject to an Endangered Species Act (ESA) lawsuit for illegal “take.” Illegal “take” can result from habitat alteration.

8-2

3: *The DEIR is flawed and misleading on page 2-18.1 when it says the flow below the POD is greater than the flow above the POD.*

Most rivers gain flow in the lower reaches as the river cuts lower into the valley floor and therefore lower into the groundwater basin. As the groundwater basin is exposed, water from the subterranean flow joins the river. The statement is further misleading in that major impacts to fish are occurring at the POD as well as above and below.

8-3

4: *The DEIR is flawed in the amount of water needed to irrigate the pasture land.*

The DEIR is requesting a water right to irrigate pasture land and using theoretical needs based on efficiency tables and crop needs rather than historic use.

The DEIR (page 2-20 table 2-2) states that the Ranch is 65% efficient compared to an optimal efficiency of 80%, yet the DEIR makes no attempt to increase efficiency by better monitoring of soil moisture, properly setting borders, further leveling the land, or better monitoring of irrigation. The Ranch must maximize their efficiency or the water will not be “put to beneficial use.”

The DEIR (page 2-21) states that in past years the Ranch applied less water than was needed for optimal crop production. Yet the DEIR makes no mention of increasing

8-4

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Ranch labor to better monitor proper amounts of water. It is implied that the Ranch will now use enough water to make sure it has optimal crop production even if it wastes water.

The DEIR (page 2-22) talks about the amount of leaching required because of salinity, noting that the salinity comes mainly from the “Old Well” which is closer to the ocean and affected by the tides. The Ranch can reduce water needs by better monitoring of the “Old Well” or by drilling another well above the tidal influence and then abandoning the “Old Well.”

The DEIR further states (page 2-20 table 2-2) that controls are limited to available labor. It appears that the Ranch is asking for the maximum amount of water because the Ranch is not willing to hire additional or professional help.

The DEIR (page 2-14) states that when the SWRCB determined that the Ranch only had riparian rights and not groundwater rights, the SWRCB decided that 3 AF of water is what is needed to irrigate an acre of water. As there are 262 acres of land to be irrigated, then 786 AF of water is all that should be used, yet the DEIR is requesting an average of 1,200 AF or approximately an increase of 35% over what the SWRCB said was reasonable.

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8-4
(cont.)

5: *The DEIR is flawed by not noting the requirements of minimum low flow as set by the California Department of Fish and Game.*

The DEIR on page 4.2-38 states that the California Department of Fish and Game (DFG) is to list rivers where a minimum flow level needs to be established in order to assure the continued viability of stream-related wildlife resources. While the DEIR makes this point it does not mention the requirement in the DFG fishing regulations on page 61 which states that the Big Sur River will be closed to fishing when flows are inadequate to provide safe fish passage. The regulations then set the flow limit on the Big Sur River as 40 cfs measured at the U.S.G.S. gauging station. While not specifically addressing this DEIR, DFG has already set the low flow limits at 40 cfs. Therefore, any diversions below that level would be in violation of DFG regulations.

↑
8-5

6: *The DEIR is flawed and inadequate in that there was not an adequate survey made for sensitive plants or plant communities.*

The DEIR (page 4.3-3) states that the preparers of the DEIR only visited the site once on July 21, 2006 and documented plant 68 species. The DEIR then indicates that it relied on another report (Miriam Green and Associates) for the complete list of plants. The Miriam Green report stated it was made in May and June. Later on page 4.3-12 the DEIR states that it used the California Natural Diversity Data Base (CNDDDB) and the California Native Plant Society (CNPS) databases to determine if any CNPS list 1B or list 2 plants could be present in the area.

The DFG Protocols for Surveying and Evaluating Special Status Native Plant Populations and Natural Communities, states that plants requiring surveys include CNPS

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8-6
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List 1A, 1B, and 2, plants considered a locally significant species, or special status natural communities. Most types of wetlands and riparian communities are considered special status natural communities.

The DEIR does not explain the nature of the Miriam Green report, what the expertise of the botanist who made the survey is, or what the reported study area was. The DEIR does state that all visits were made between March and June. The DFG protocols state that surveys must be made as necessary to accurately determine what plants exist on the site. Without a copy of the Miriam Green report, one cannot comment on the validity of the report or if it fits the other criteria of the DFG protocols. One can state that surveys that do not include visits from July to the following March do not capture the total plant community. Using the CNDDDB and CNPS sites (as done by PBS&J) does not substitute for field visits, in fact the DFG protocols state that “‘Focused Surveys’ that are limited to habitats known to support special status species or are restricted to lists of likely potential species are not considered floristic in nature and are not adequate to identify all plant taxa on site to the level necessary to determine rarity and listing status.”

Because of no adequate description of the site visits, because of inadequately timed visits, and because of the nonfloristic nature of the report, the surveys for special status plants are unacceptable.

7: *The DEIR is flawed in Impact 4.2-1 ground water to surface water gradient, by not evaluating conditions of the no pumping alternative.*

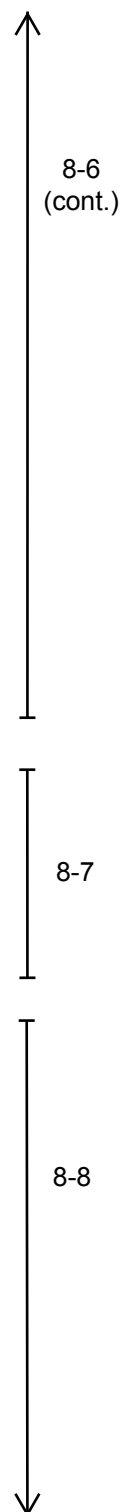
The DEIR allows pumping in Critically Dry years to continue at the “baseline” rate. There is no permit for the 857 AF of water included in the baseline rate and therefore the analysis is not valid. To evaluate the effects of this DEIR, comparisons only to legal diversions can be used.

8: *The DEIR is flawed in Impact 4.3-1 (adult fish passage) by allowing “baseline” pumping to continue below legal depths for adult fish passage and by not using DFG regulations.*

The DEIR lists this impact as Potentially Significant. Blocking fish passage for a federally threatened species is a Significant Impact not a Potentially Significant Impact and should be listed as such for evaluation.

The basic premise of the DEIR is that pumping will be reduced to “baseline rates” during periods of dry or critically dry conditions. As there is no legal right to these “baseline” diversions, using this as mitigation measure will not reduce a Significant Impact to a Less than Significant Impact. The impact is still there, the DEIR just ignores impacts resulting from “baseline” rates as well as rules by Monterey County and DFG.

There must always be enough flow in the river to allow adult steelhead to migrate any time they are in the river. The problem is what is enough water?



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Monterey County has adopted a “Big Sur River Protection Waterway Management Plan.” This plan states that for adult fish to migrate, water must be 0.6 feet in depth with 25% of the total stream width, 10% of which is contiguous. Page 61 of the California Sport Fishing Regulations states that the Big Sur River shall be closed to fishing when flows are inadequate to provide safe fish passage. The regulations then set the flow requirement at 40 cfs measured at the U.S.G.S. gauging station.

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8-8
(cont.)

The County Management Plan, while giving actual measurements that can be taken on riffles, is unworkable in that every time there is a high water event, sediment moves down the river and changes the profile of the riffle. To use this measurement of flow needs would require someone other than Ranch employees to constantly monitor riffle profiles which is unworkable. The only adequate measurement is the DFG requirements of 40 cfs.

Regardless of listed “baseline rates,” the river cannot be lowered to a level that would not allow adult steelhead to migrate. On pages 4.3-36 and 4.3-37 the DEIR states that at 12 cfs several transects did not meet the depth for adult fish passage, yet the “baseline” rates could still be used. The DEIR further states that on two dates in Oct. of 2006 flow rates of 21 cfs and 24 cfs did not meet the criteria, yet the “baseline” rates could still be used. Therefore, the only way to insure safe fish passage is to set the standard for diversions at 40cfs, before any diversions could be used including “baseline” diversions, and then diversions could not lower the river to below 40 cfs.

The DEIR is further flawed by using the date of December 1 as the starting point for adult fish migration. PBS&J made two visits to the site in October of 2004 and 2007. In one of those visits they observed an adult fish in the river. When 50% of visits show adult fish present in October, it is impossible to state the migration begins in December.

9: *The DEIR is flawed in Impact 4.3-2 (juvenile fish passage) by allowing baseline pumping to continue below legal depths for juvenile fish passage and inaccurately listing the depth of water needed for juvenile passage.*

The DEIR once again uses the Monterey County Big Sur River Protection Waterway Management Plan as a basis for measuring flow requirements. The County Plan lists a depth required for juvenile fish passage as 0.5 feet, yet the DEIR on page 4.3-40 lists a depth of 0.3 feet as the base. While this is inaccurate and requires the analysis to be done over, it is worthwhile to note that even with a depth of 0.3 feet the DEIR admits on page 4.3-40 “When both pumps were operating on September 5, both thresholds were violated (the 10 percent contiguous width deeper than 0.3 feet and 25 percent of the total stream width over 0.3 feet.)”

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8-9

The DEIR in fact notes many times when pumping resulted in illegal water depth as well as depth being below legal limits without any pumping. “Depth at passage transect 11 were in violation of the criteria on all sample dates in 2007 regardless of flow and pumping operations” (Page 4.3-40). Even noting the illegal water depth, the DEIR allows for pumping at the “baseline rates” further complicating an unacceptable event.

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In fact, page 6-7 notes that “Baseline pumping at a maximum 30-day average diversion rate of 5.7 cfs has been measured to reduce water elevations within the Big Sur River by .017 feet; about 2 inches.” Lowering the water depth by 2” when it is already below both DFG and County standards is criminal.

As noted above, the County Plan of measuring water depth is unworkable and one must use another measurement. If the passage of 0.6 feet is required for adult passage and 0.5 feet the requirement for juvenile passage, that is a 20 percent reduction. If one uses this same ratio with the 40 cfs required by DFG for adult passage, then 32 cfs must be required for juvenile fish passage.

One cannot prevent juvenile fish from passage without being in violation of DFG codes, County ordinances, and the Endangered Species Act. I must further point out that “baseline” diversion rates caused the river to go dry in 1990 bringing on the situation that has been allowed to continue.

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8-9
(cont.)

10: *The DEIR is flawed in Impact 4.3-4 (dissolved oxygen levels) in that the mitigation measures are unacceptable and untested.*

Once again allowing for “baseline” diversion rates is not mitigation when the river is below or near legal levels. Pumping at those times would further increase an unacceptable condition. Allowing unpermitted pumping to continue will increase the severity of the problem by lowering flows below legal levels and is unacceptable.

The second mitigation measure of using an air pump and pipe to increase oxygen levels has not been proven and probably will not work. The responsibility for beginning and maintaining this measure would be left to the Ranch labor. The DEIR already (page 2-20) stated that controls are limited to available labor. Preventing the extinction of a species cannot be left to available labor or untested theories.

8-10

11: *The DEIR is flawed in Impact 4.3-11 (cumulative impacts of temperature) in that it did not consider the cumulative impact of low flows combined with high temperatures.*

Juvenile steelhead migrate both upstream and downstream. Fish migrate upstream when conditions are unhealthy in their existing habitat. While the DEIR found that the proposed project did not raise water temperatures more than the legal limit, it did not analyze the effect of increased temperatures when the flows were low enough to prevent juvenile fish from migrating back upstream to cooler water. This affect must be analyzed.

8-11

12: *The DEIR is flawed in Impact 4.3-12 (cumulative impacts of low Dissolved Oxygen) in that it did not consider the cumulative impact of low flows combined with low dissolved oxygen levels.*

Using the same reasoning listed in 11 above, fish must be able to migrate upstream when low dissolved oxygen levels make it unhealthy in their existing habitat. The DEIR did find that the project contributed to low levels of dissolved oxygen, but it

8-12
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 El Sur Ranch WRA No. 30166, DEIR Comments
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did not analyze the effects of low dissolved oxygen and low flows. This must be analyzed.

↑ 8-12
(cont.)

13: *The DEIR is flawed in the list of existing and potential water rights, in that Table 5-1 did not list riparian water rights and that omission is deceptive.*

The DEIR uses the combined permitted and unpermitted water rights which includes 1136 AF of Ranch unpermitted water to come to a total of 1,411.8 AF for existing and potential diversions. The table then shows adding the same Ranch proposed project water of 1,615 AF to come up with the total water usage on the Big Sur River of 1,890.8 AF of diversions (adding 1,411.8 and 1,615 totals 3,026.8 not 1,890.8). The table artificially lists a higher existing and potential diversions of water to make it look like this project would only add 479 AF of diversions.

8-13

The DEIR also does not list the riparian water rights in the table. To be accurate in determining total water use, the table must combine all the riparian users with the permitted and unpermitted users to come up with total river diversions.

14: *The DEIR is flawed by omitting pertinent information.*

The Ranch was paid \$11 million by the state of California to maintain scenic conservation easement values on the Ranch.

The Ranch entered into a coastal development agreement with the California Coastal Commission that would permit development.

The Ranch has an agreement with DPR that would allow use of water from the “Three Springs” location on the north end of the property. As this source was used by the Molera Ranch to irrigate its pastures prior to becoming a park, and because the “Three Springs” is connected by piping to the POU it would be an alternative source of water.

8-14

All of these items must be noted and analyzed for the public to properly evaluate the DEIR.

Even if this DEIR is considered by the SWRCB, CRSA believes the only alternate that would be acceptable under CEQA would be alternate 1: No Project / No Permit Alternative. CRSA believes this because “Significant” and “Potentially Significant Impacts” to Steelhead can not be mitigated to “Less than Significant” as stated in this DEIR. Other reasons will become apparent when a proper DEIR is issued.

CRSA further believes that this DEIR proves the Ranch has pumped illegal water for years further damaging the federally listed Steelhead Trout and that a Cease and Desist Order should be issued and an investigation into ESA violations conducted.

Sincerely,

Brian LeNeve
 CRSA Board Member

Letter 9: Carmel River Steelhead Association (Hank Smith)

From: <f8hawk@aol.com>
To: <pmurphey@waterboards.ca.gov>
CC: <bjleneve@att.net>, <iiwinos@aol.com>, <BarryBrandt@msn.com>, <pchua@mba...>
Date: 12/12/2009 1:35 PM
Subject: El Sur Ranch Water Right App 30166

Dear Mr. Murphy,
 Thank you for the opportunity to respond to the DEIR for the El Sur Ranch Water right application 30166. I have mailed a hard copy to your Sacramento PO Box 2000 on 12/12/09 and emailed the same to you with this email.
 Thank you for what you and your staff do for us EVERYDAY.
 Sincerely,

Hank Smith
 Carmel River Steelhead Association
 1314 Josselyn Canyon Road
 Monterey, CA 93940
 831-372-8226

Paul Murphey
 Division of Water Rights
 State Water Resources Control Board
 Post Office Box 2000
 Sacramento, CA 95812

December 11, 2009

RE: El Sur Ranch Water Right Application No. 30166
 Draft Environmental Impact Report

Dear Mr. Murphy:

I have serious concerns in regards to the Draft Environmental Impact Report (DEIR) for the El Sur Ranch Water Right Application Number 30166. It is seriously flawed, inaccurate, and does not conform to CEQA guidelines.

Because the applicant continues to illegally divert Public Trust resources resulting in damage to environmental and public resources, I request that the State Water Resources Control Board (SWRCB) immediately issue a Cease and Desist Order to the applicant and hold hearings on the application.

The following is a list of the flaws in the DEIR:

- 1: The DEIR is flawed by not noting the requirements of minimum flow as set by the California Department of Fish and Game (CDFG).

9-1



Letter 9

CDFG has set 40 cfs minimum flow rates as measured at the U.S.G.S. gauging station to assure continued viability of stream-related wildlife resources. CDFG has specified this minimum flow requirement to assure safe fish passage. The DEIR does not mention this critical specific cfs CDFG requirement and therefore is flawed.

9-1
(cont.)

2: The DEIR is flawed in Impact 4.3-1 (Adult fish passage) by allowing baseline pumping to continue below legal depths for adult fish passage and by ignoring CDFG regulations relating to minimum flow rates for safe fish passage.

9-2

Established safe adult fish passage criteria are 0.6 feet water depth for 25% of stream width of which 10% is continuous. High water events can move sediment plumes such that riffle profiles change so much that safe fish passage is impaired. The DEIR, on pages 4.3-36 and 4.3-7 states that at 12cfs several transects did not meet the depth requirements for safe adult fish passage. California agriculture has a long history of adapting to the changes in precipitation amounts each year and crop planning in accordance with these changes. This DEIR ignores this reality by allowing pumping to occur in disregard to the negative environmental impacts of such diversions when flow rates are low
The DEIR is further flawed by using the date of December 1 as the starting date for adult fish migration from only two visits to the site. Fish migrate when precipitation amounts contribute to water conditions that allow safe passage. and not by a date an observer notes on his or her calendar.

3. The DEIR is flawed in Impact 4.3-4 (dissolved oxygen levels) in that the mitigation measures are untested and contradictory.

9-3

"Baseline" diversion pumping does not mitigate low river water quality levels. Low river water quality levels are exacerbated by pumping. The DEIR fails to identify sites and sources where the employment of pumps and pips have been successfully used to mitigate for decreases in water quality due to low flows. Lastly, the DEIR (page 2-20) stated that the lack of available labor is a limiting factor in Ranch management. It is clear a major contradiction exists in suggesting the implementation of a labor intensive and unproven strategy where those labor assets to carry out that strategy are not available.

4. The DEIR (pages 2-28) is flawed and inaccurate in stating the steelhead population is large and healthy.

9-4

The DEIR only offers surveys for the years 2004 and 2007 for this statement (table 4.3-5). To state that a population of fish is large and healthy flies in the face of the listing of a species as threatened, which the steelhead are in the Big Sur River. These surveys were completed during the time when the illegal pumping was occurring and therefore would be subject to an Endangered Species Act (ESA) lawsuit for illegal "take" as a result of habitat alteration. To further degrade the habitat by even more water diversions from the Big Sur can only exacerbate the health of this listed species.

5. The DEIR is flawed in using historic use of 857 AFA as the basis for evaluating the DEIR.

9-5

In 1992 the SWRCB determined that the Ranch only had riparian rights to 25 acres of land. The SWRCB should have issued a Cease and Desist Order for all diversions above that amount because it was not permitted. The Ranch has since continued illegal diversions and added these non-permitted diversions as their basis for " historical pumping rates". These illegal diversions have been so excessive as to flow beyond the Ranch property boundaries and cause erosion damage to other properties and degrade the riparian habitat. The Ranch "historic pumping rates" must undergo a CEQA review, public comment and

Letter 9

evaluated under the "beneficial use" doctrine criteria.

It is clear this DEIR provides evidence the Ranch has pumped water illegally from the Big Sur River for years and has contributed to the potential "take" of a listed species under the ESA and an immediate Cease and Desist Order should be issued together with an investigation conducted into the specifics of ESA violations.

Sincerely;

Dr. Hank Smith
Carmel River Steelhead Association
1314 Josselyn Canyon Road
Monterey, CA 93940

=

↑
9-5
(cont.)

Letter 10: Helping Our Peninsula's Environment (David Dilworth)

Bringing you HOPE -
Helping Our Peninsula's Environment
 Box 1495, Carmel, CA 93921 Info7 at 1hope.org
 831/ 624-6500 www.1hope.org

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Forest Ecology

State Water Resources Control Board December 12, 2009

**Big Sur's El Sur Ranch Water Rights Application No. 30166
 Proposes a Titanic Increase in Water Pumping,
 Justified Purely by Historic Illegal Pumping
 Causing a Colossal Waste of Public Trust Resources.**

- 1. This is a proposal to pump more than 1,600 acre feet of water a year (1,200 af annual average); an amount that would supply water to more than five thousand (5,000) - three bedroom homes on the nearby Monterey Peninsula.¹**

The context to this proposal is that it facilitates a multi-decade attempt to secure water for a second stage attempt to develop a hotel and mansions on the 7,000 acre Pt Sur Ranch. The original hotel / resort proposal on this property was unanimously rejected by the Coastal Commission decades ago.

The second reality is this DEIR goes to great lengths to avoid recognizing that this project would greatly facilitate this development - in spite of its clear legal requirement to do so.

"California law requires environmental consideration be given at the earliest possible stage, even though more detailed environmental review may be necessary later." *McQueen v. Board of Directors* (1988) 202 Cal.App.3d 1136, 249 Cal.Rptr. 439

- 2. While torture of humans is prohibited by the Geneva Convention and many other international agreements, **tortured logic, tortured data and tortured conclusions** are completely legal under freedom of speech liberties - until they are used in California to support or justify state government actions, such as this proposal, that are false or harmful.**

HOPE respectfully objects to the DEIR as legally inadequate and requests it be re-written with a full evaluation of the potential environmental impacts and re-circulated after incorporating the best available science and clearly identifying all the arguments which have been refuted.

¹ **Monterey Pen. Water Management District tables - One 3 bedroom home uses ~ 0.25 afa (acre feet annually)**

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10-1

10-2

3. HOPE respectfully objects to the proposed project itself as a **colossal, shameless and baseless overreach** for water and requests that it be denied. 10-3

4. **Ambiguity is not allowed in an EIR:** We find the project description is legally inadequate because it obscures the intent, locations and legal categorizations of the proposed water use. 10-4

This ambiguity makes our response (and everyone else's) from here on - akin to boxing in the dark - we don't and can't know the full extent of what we are dealing with until the project description is complete and clear.

5. HOPE respectfully requests the actual letters submitted by the California Department of Fish and Game to each of the applications and amendments be made a part of this administrative record, any hearings and considered. 10-5

6. HOPE finds that the DEIR did not respond to each concern, raised by Department of Fish and Game in the NOP. 10-6

So now, without wasting space by duplicating them here, HOPE repeats each and every concern and objection made by Department of Fish and Game on every version of this application and respectfully requests that the DEIR discuss and respond in unambiguous detail to each concern and objection raised by the Department of Fish and Game to each of the applications and amendments, and on the Notice of Preparation to this document.

7. Perhaps because of the improperly myopic and legally inadequate scope of the Initial Study when applied to the genuine physical potential for environmental impacts, the DEIR does not adequately recognize the potential for the conversion of the use of the water for development. **Sixteen hundred (1,600) acre feet of water could be used to develop several hotels and hundreds of mansions with massive landscaping having nothing to do with cattle raising.** 10-7

This property once had an application to develop a hotel / resort and mansions that was **unanimously rejected by the state Coastal Commission.** That size and type development is not speculative and a reasonable place to start an analysis of potential impacts due to the conversion of the use of the water for development. 10-9

8. HOPE respectfully requests the actual Findings of denial by the Coastal Commission and the Commissioner's packets for that proposal, be made a part of this administrative record, any hearings and considered. 10-8

9. HOPE respectfully requests the DEIR adequately recognize the potential for the conversion of the use of the water for development. 10-9

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10. We cannot help but be amused by the remarkable (Harry Potter) concept that a study this DEIR relies upon shows there is more water in the Big Sur river after El Sur Ranch pumps it - than upstream.² This means that when El Sur Ranch takes water out of the Big Sur river it has the magical ability to increase the water in the river; pumping fresh water out of the ground by El Sur Ranch adds fresh (drinking/potable) water to the Big Sur river !!!

10-10

Unless the laws of physics and rules of arithmetic have been repealed, and this were physically true, we should be asking El Sur Ranch to PUMP ALL WATER from the Big Sur river - so that below its pumps - we would have a enchanted fountain able to solve all of California's water supply problems; and of course these study authors should be given medals - from Hogwarts.

Please explain this paradox in plain English - using speculation-free conventional physics and hydrogeology.

10. HOPE respectfully requests the DEIR discuss in numbers and percent how close to "Fully Appropriated" the Big Sur river is - the statement that it is not yet "Fully Appropriated" is inadequate to understand. It appears a large number of upstream appropriators were left out.

10-11

11. What year./ date did SWRCB initially find that the water was underflow from the Big Sur river? Pg 1-1 Please revise the footnote.

10-12

12. The objectives state "beneficial use of water for irrigation of 267 acres of pasture for cattle grazing"

10-13

Please explain in plain English - What is the basis, the evidence and reasoning that cattle grazing is a "beneficial use of water?"

Please explain in plain English - What is the quantitative threshold for when water use here would be "waste" as opposed to beneficial use as both are defined by California law?

13. Cattle Grazing has a broad range of severe environmental impacts --

Grazing has severely degraded, destroyed or at least permanently altered entire ecosystems on hundreds of millions of acres of Western Public and private lands. "No other human activity in the West is as responsible for the decline or loss of species as is livestock production." ("Welfare Ranching", Island Press, 2002)

10-14

² "studies showed that river flow below the POD exceeds that upstream of the POD" (POD = Point of Diversion or "pumping location") pg 2-18

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HOPE respectfully requests the following impacts from existing and the potential increase in Cattle Grazing be analyzed in this DEIR: (If you need help with references - we can assist. We have included a few references of substantial evidence to one of the following impacts (Decreased Infiltration from grazing) at the end.)

GRAZING'S DIRECT IMPACTS include: Trampling from Grazing, Soil Compaction from Grazing, Grazing caused Vegetation Biomass loss, Grazing caused Riparian Vascular Plant Cover Loss;

SOIL IMPACTS FROM GRAZING include: Grazing caused Litter (Soil cover or "Duff") Loss, Decreased Infiltration from grazing, Increased Water Runoff from Grazing, Doubled Water Erosion from Grazing, Wind Erosion from Vegetation Cover loss from Grazing;

STREAM IMPACTS FROM GRAZING include: Sedimentation Doubling, Grazing caused Streamflow Timing & Flow change, Flash floods increase from plant cover loss from grazing, Stream Temperature Increases from Grazing, Animal Waste Harm to Waterbodies;

WILDLIFE IMPACTS FROM GRAZING include: Endangered & Sensitive Species Harm from Grazing, Raptor prey species habitat reduced by Grazing, Wildlife Deaths due to Grazing Fences, Wildlife Deaths due to Utility Lines, Grazing caused Trout Biomass loss, Fish kills from Cattle Wading;

VEGETATION IMPACTS FROM GRAZING include: Riparian Willow cover loss from Grazing;

GRAZING ECOSYSTEM IMPACTS include: Grazing Induced Desertification, Grazing caused Biotic Productivity loss from Sediment increase, Riparian environment Shade Loss from Grazing, Bird diversity loss caused by vegetation diversity loss from Grazing, Hydraulic Conductivity loss from Grazing, Grazing harming nesting success, Soil Temperature increase from grazing, Fecal coliform increase from grazing, Sedimentation increase from overgrazing affecting stream hydrology, Cryptosporidium increase from grazing.

Essentially none of the impacts were evaluated by the DEIR.

Here we have included a sample of references for just one of the above mentioned impacts - **Grazing caused Decreased Infiltration.**

Decreased Infiltration From Grazing - References

Infiltration rates decrease when grazing intensity increases and causes increasing soil compaction. Data from 25 grazing studies show Infiltration rates decrease approximately 25% on light-to-moderately grazed lands, and approximately 50% on heavily grazed land.

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Smiens, F.E. 1975 Effects of livestock grazing on runoff and erosion. Proceedings of the Watershed Management Symposium. American Society of Civil Engineers, New York, NY. As soil compaction increases, infiltration rates decrease, and surface runoff increases. As grazing intensity increases, water runoff increases.

Gifford, G.F. and R.H. Hawkins. 1978 Hydrologic impact of grazing on infiltration: a critical review. Water Resources Research 14:305- 313. Correlates data from 25 grazing studies. Infiltration rates decrease approximately 25% on light-to-moderately grazed lands, and approximately 50% on heavily grazed land.

Meeuwig, R.O. 1965 Effects of seeding and grazing on infiltration capacity and soil stability of a subalpine range in central Utah. Journal of Range Management 18:173-180.

In fine textured soils, infiltration capacity is influenced primarily by soil bulk density and noncapillary porosity, and secondarily by amount of protective cover afforded by plants, litter, and stone.

Soil stability (i.e. erosion) is influenced primarily by density of protective cover and secondarily by soil bulk density. When bulk density is low, run-off is also low, so protective cover is less important to soil stability. When bulk density is high, run-off is also high, so protective cover is more important. On coarse textured granitic soils, protective cover is almost entirely responsible for controlling run-off and erosion - bulk density has less effect. Grazing reduces infiltration and soil stability. "The differences in infiltration capacity and soil stability between grazed and ungrazed plots demonstrate that even moderate grazing can have pronounced residual effects on these factors. Grazing must be carefully managed so that protective cover is not reduced nor soil compacted to the extent that severe summer storms will cause excessive overland flow and soil loss."

Weltz, M. and M.K. Wood. 1986 Short duration grazing in central New Mexico: Effects on infiltration rates. Journal of Range Management 39(4):365- 368. "Short duration grazing at both sites had no beneficial impact on the hydrologic condition of the range over continuous grazing at similar or different stocking rates after 2 and 3 years....The reduction in grass standing crop and litter load, and the correlated increase in the percentage of bare ground on the short duration system after grazing, was the reason attributed to the significantly reduced infiltration rates of both grazed short duration systems...Exclusion from grazing resulted in higher infiltration rates than any of the grazing treatments.

*** The exclusive, sole, and only reason given for the permit is cattle grazing.** This means that if any part of the permit is granted **the Water permit must be void when the water is no longer used for cattle grazing.**

10-14
(cont.)

10-15

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Regarding **California Red-legged Frogs** :

The DEIR says "Tadpoles are less mobile than steelhead and would be less able to avoid these areas." Pg 4.3-34

10-16

This doesn't make sense. Please quantify, explain, and re-write.

As the DEIR noted: this is a Federally listed Threatened species as of May 23 1996 (61 FR 25813). Monterey County is well within the range of this species.

10-17

Mark Twain became famous when he wrote an account of a jumping frog contest in Calaveras County. Those Celebrated Frogs of Mark Twain's article, the red-legged frogs, as the only large native frogs in California, were undoubtedly the contestants in that event.

This native california frog ("CRLF") is now gone from the Sierras including Calaveras County, but it still hangs on in a very few places. One of those few places is the El Sur Rancho project site.

10-18

DRY-LAND TRAVELERS

California Red-Legged frogs (CRLF) have been documented as moving as much as two miles (3.2 km) from aquatic sites "without regard for topography." Federal Register Sept, 11, 2000, pg 54894

10-19

(The following is quoted from the US Fish & Wildlife Service - "Guidance on Site assessment and Field surveys for California red-legged frogs, Appendix - California red-legged frog ecology and distribution." Dated February 18, 1997.

"Movement California red-legged frog may move up to 1.6 km (ONE MILE) UP OR DOWN A DRAINAGE and are known to wander throughout riparian woodlands up to several dozen meters from the water. On rainy nights california red-legged frog may ROAM AWAY FROM AQUATIC SITES AS MUCH AS 1.6 KM (ONE MILE). California red-legged frog will often move away from the water after the first winter rains, causing sites where California red-legged frog were easily observed in the summer months to appear devoid of this species."

According to the USFWS Biological Opinion on nearby Rancho San Carlos (dated September 6, 1996) the - "California red-legged frog could inhabit any aquatic and riparian areas within the range of the species and also any landscape features near riparian areas that provide cover and moisture."

"Any aquatic and riparian areas within the range of the species"



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The Federal Register ESA Listing of the Frog expands on and gives additional examples of Frog habitat. "California red-legged frogs have been found up to 30 m (98 feet) from water in adjacent dense riparian vegetation for up to 77 days."

↑
10-19
(cont.)

"Estivation habitat is essential for the survival of California red-legged frogs within a watershed."

"Estivation habitat for the California red-legged frog is potentially all aquatic and riparian areas within the range of the species and includes any landscape features that provide cover and moisture during the dry season within 300 feet of a riparian area. This could include boulders or rocks and organic debris such as downed trees or logs; industrial debris; and agricultural features, such as drains, watering troughs, spring boxes, abandoned sheds, or hay-ricks. Incised stream channels with portions narrower than 18 inches and depths greater than 18 inches may also provide estivation habitat." (From the Federal Register for Thursday, May 23, 1996)

THESE FROGS CAN LIVE WITHOUT PONDS OR WETLANDS

A US-FWS letter to Monterey County in Mar 1998 on the "September Ranch" FEIR states "Concluding the CRLF does not occur on the project site because the site does not have ponds or other wetland habitat with riparian vegetation is erroneous because this species exhibits complex temporal variations in behavior and habitat use."

CALIFORNIA RED-LEGGED FROG HABITAT MAP NEEDED

Since the California Red-Legged Frog can range up to a mile in any direction from aquatic sites that makes a circle two miles in diameter as potential habitat for the frog from each known aquatic location within its range.

↑
10-20

Please prepare a Meaningful Map of all Potential Habitat

Since California Red-Legged frog can "roam away from aquatic sites as much as 1.6 km", a complete map of potential California Red-Legged frog habitat for the project site is needed to determine which areas potentially contain California Red-legged frog habitat.

POTENTIAL PREDATOR INCREASE FROM FLOODING LAND

Bullfrogs are predators of the California Red-Legged Frog. As weak swimmers bullfrogs are susceptible to being washed out of a river into the ocean as opposed to the California Red-Legged Frog which can avoid high natural, temporary flows by leaving the stream. Other CRLF predators include crayfish and centrarchid fishes as well as herons, egrets, opossums and raccoons. "Trash left during or after project activities could attract predators such as raccoons to work sites which in turn could harass or prey on the listed species." US-FWS Biological Opinion on Arroyo Seco Bridge Replacement. April 27 1999

↑
10-21
↓

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This proposal would flood land and increase the land where water is used - perhaps dramatically. That flooding and increased use would increase the amount Bullfrog predators of this endangered species.

↑
10-21
(cont.)

HOPE respectfully requests this potentially significant impact to the California Red-Legged frogs endangered species be evaluated. Please keep in mind CEQA section 15065 requires a finding of significant impact if there is a potential loss of a single individual, or the loss of as little as a quarter of an acre of habitat, of a listed species.

10-22

M.M. Homeowners vs San Buenaventura Cty. Etc. 165 Cal.App.3d 357, 212 Cal.Rptr. 127 (Cal.App.2 Dist. 1985)

Perhaps stronger, California's Coastal Act requires avoidance of any activity that would potentially cause the loss of a single individual of a listed species.

10-23

Diet "Invertebrates are the most common food item for adults. Larvae probably eat algae. Vertebrates, such as the Pacific Tree frogs and California mice (peromyscus californicus), represented over half the prey mass eaten by larger frogs."

10-24

Hazards "Accidental spills of hazardous materials or careless fueling or oiling of vehicles or equipment could degrade water quality or upland habitat to a degree where CRLF are adversely affected or killed." The contamination of the stream by wet concrete could cause potential skin and respiratory system irritation in CRLFs. Work in live streams or in floodplains could cause unusually high levels of siltation downstream. This siltation could alter the quality of habitat downstream and preclude its use by CRLF." US-FWS Biological Opinion on Arroyo Seco Bridge Replacement. April 27 1999

10-25

Nitrite and Nitrate hazards Oregon State University researchers "have named the nitrogen based compounds found in fertilizers as likely suspects in the rapid decline of at least one frog species in the Pacific Northwest."

10-26

The maximum recommended nitrite limit for drinking water, 1 milligram per liter, was sufficient to kill well over half of the Oregon spotted frog tadpoles and about half of the northwestern salamander tadpoles.

Nitrate compounds can be readily converted to nitrites through a number of environmental processes including bacteria.

Please Consult with Fish and Wildlife Service and the California Dept of Fish and Game for each of these topics.

10-27

Pesticides in Runoff:

↓
10-28

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We cannot find where existing or potential pesticide use is recognized, let alone described - except for one tiny anecdotal mention.

Cattle grazing typically uses hundreds of pounds of pesticides a year to narrow the crops the cattle feed upon, dozens of books have been written about how Pesticides contaminate runoff water, US -EPA has an entire Division dedicated to this subject - yet according to this DEIR this proposal would have ZERO runoff containing pesticides.

10-28
(cont.)

Please explain this.

As mentioned above HOPE respectfully objects to the DEIR as legally (and scientifically) inadequate and requests it be **re-circulated** after it is re-written with the best available scientific knowledge and a full evaluation of the potential environmental impacts as clearly required by law.

10-29

To Conclude --

This property once had an application to develop a hotel / resort and mansions that was **unanimously rejected by the California Coastal Commission.**

10-30

Independent of how gracious, pleasant and personable as the applicant may be as a person, that was a colossal, shameless overreach.

The unanimous rejection by the state - is the same result that should be reached for this new version of a proposed colossal, shameless overreach.

With all due respect,

David Dilworth for the Board of Trustees

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Letter 11: California Native Plant Society (Mary Ann Mathews)

Monterey Bay Chapter California Native Plant Society

FILE ~~REVA~~
Letter 11
A30166

P. O. Box 221303
Carmel, CA 93922
Dec. 12, 2009

2009 DEC 14 PM 1:47

DEPT. OF WATER RIGHTS
SACRAMENTO

Mr. Paul Murphey
Division of Water Rights
State Water Resources Control Board
Post Office Box 2000
Sacramento, Ca. 95812

RE: El Sur Ranch Water Right Application No. 30166
Draft Environmental Impact Report

Dear Mr. Murphey:

The Monterey Bay Chapter of CNPS has a long-standing interest and involvement in the protection of environmentally sensitive habitats of Central California Coast. For that reason we are deeply concerned about the adverse impacts on the plant and animal habitats of the Big Sur River by over-pumping from wells on State Park lands by the El Sur Ranch. Because the DEIR for the expanded operation omits many important facts that have a direct bearing on these issues, we urge that this application be denied.

11-1

1) PLANT SURVEYS: According to the DEIR, the only site visit was on July 21, 2006 a date that does not meet Dept. of Fish and Game (DFG) protocol for rare, threatened and endangered plant determination, which requires site visits during the blooming season. The DEIR apparently relied on searches of various data bases, which can be a helpful starting point, but which can never be considered dispositive because of habitat shifts, weather and climate variations, fire effects, land use impacts, vandalism, and even nomenclatural changes. The DEIR appears to rely on the Miriam Green Report, but provides no copy of said report indicating its validity and extent. Further, DFG protocol requires surveys of Special Status Communities that have critical values and protections, such as the riparian and wetland communities that exist along the Big Sur River. The DEIR is woefully lacking in meeting these requirements.

11-2

2) WILD AND SCENIC STATUS: The Big Sur River above the point of diversion, officially listed as a Wild and Scenic River, is intimately affected by El Sur Ranch pumping that dewater the lower portion of the river, reducing the survival of both plant and fish habitat within the protected area. The over-pumping documented by other commentators has been going on for several decades without any attention to the impacts; thus there is no credible data base that would show the obvious decline in the health of the habitats over time. Frankly, it is shocking that this immense amount of pumping has gone on for so long without any apparent effort by the trustee agencies to assure that the legal requirements are clearly established. The DEIR fails to identify or mitigate these serious issues.

11-3

3) IMPAIRED STATUS: In 1998 the Big Sur River was identified at a Category 1 (Impaired) Priority Watershed by the California Unified Watershed Assessment, which means that it qualified for significant restoration activities to protect and restore its natural aquatic resources. This fact lends credence to the assertion by CNPS and many others that heavy over-pumping without clear entitlements has resulted in serious damage to a watershed with extraordinary natural resource, scenic, scientific, and recreational values. The DEIR fails to acknowledge and/or propose mitigations for any of these impacts.

The Big Sur River is clearly already a fully appropriated watershed. Instead of trying to increase its pumping from this impacted resource, El Sur Ranch should be utilizing its other water sources outside this watershed.

The Monterey Bay Chapter of CNPS therefore wishes to reiterate its request that this application for an increased appropriation be denied. Further, we urge the State Water Resources Board issue a Cease and Desist Order to limit El Sur Ranch pumping to existing riparian rights until these critical issues can be resolved.

Sincerely yours,



Mary Ann Matthews
Conservation Chair



Dedicated to the preservation of California native flora



Letter 12: L. Lockwood

L. Lockwood
P.O. Box 264
Big Sur, Ca, 93920
10 December 2009

Mr. Paul Murphey
Division of Water Rights
State Water Resources Control Board
Post Office Box 2000
Sacramento, Ca. 95812

COMMENTS ON DEIR FOR JAMES J. HILL III, EL SUR RANCH IRRIGATION APPLICATION NO. 30166 FROM BIG SUR RIVER UNDERFLOW, OCT.'09.

Dear Mr. Murphey:

My family and I have lived on the Big Sur River since 1977 when we purchased a parcel with about 1600' adjacent to the Big Sur River. We have enjoyed the river at a mere inch or two in depth - 1977 - and at flood stage, almost yearly, when it enters our road. Why have riparian diverters been omitted from your diverter chart Table 5-1 on page 5-3? The scouring and drawdown of the river can be seen from the campgrounds at Pfeiffer State Park and from the River Inn Resort most easily which is across from our home. See enclosed picture of son Bob and friend fly fishing. I have a look out the window real time hydrology report daily as I see the river flowing four to five feet below the tree line that once was its bank in 1977. The trees are similar to a bath tub ring but remind us of the good fishing days. I walk across the Clear Ridge Road bridge daily to retrieve my newspaper and pause to look for fish. None. No more sea birds flying up river for an easy pick snack either.

12-1

PROJECT OVERVIEW

Correction. The 150 year old ranch historically watered by Mother Nature or the Three Springs area behind ranch headquarters as per agreement of Frances Molera with The Nature Conservancy 10 Feb. 1965, Monterey County Recorder Reel: 396, Page 866, wherein it was noted that water supplied Molera ranching north of the Big Sur River, west side of Hwy. 1. 100 years of history here. Why does Hill need to appropriate ANY water. In 1984 the Ranch had a well at the Little Sur River, at the Dairy Barn, at Morro Field west of Hwy. 1 and in Swiss Canyon. See enclosed p.94 of Larry Seeman Associates, DEIR for El Sur Ranch Dedication and Development Agreement with County of Monterey, Ordinance 3030 of Nov. 13, 1984.

12-2

Page 1-2 . Second paragraph states POU is existing irrigated pasture north of the Park and West of Highway 1. However, above cited Development Agreement with Monterey County signed by Hill in 1984 states at page 94 there are several wells on land near the mouth of the Big Sur River...."for the use of El Sur Ranch, one of which produces about 2,000 GPM and the other about 250 GPM".

12-2
(cont.)

At p 95 of the LSA report and DEIR for County of Monterey Agreement 3030, which Hill signed Nov. 13, 1984, states:

"Site 8 would receive its domestic and fire protection water supply from an existing well in the Molera grazing area to be deeded to the ranch. This well supplies 1200-2200 gpm....An additional backup well supplying 20 gpm would be available should the need arise."

Site 8 is a 100 room hotel complex with restaurants and auxiliary uses to be built north of the mouth of river wells and irrigated pastures.

DENY APPLICATION. HILL DECEPTIVE AS TO USE AND PLACE.

PROJECT DESCRIPTION

At 2-2 paragraph 3 . Correct. A permittee CAN apply to the SWRCB to change the place of use or purpose stated in the permit application. See page 5 of SWRCB Guide to Ca. Water Right Appropriations and confirmed by email to me by SWRCB staff. An error and deception unworthy of the SWRCB as it is responsible for this DEIR.

12-3

2-14 admits the Ranch can vary its irrigation needs by reducing herd size.- paragraph 1. This should be implemented immediately to size of first 100 years of ranching without irrigation.

We locals know the Ranch has not only 7,000 acres with numerous pasture areas but also twenty springs and seeps. Ranch water has often closed our Old Cost Road. In fact a sign on Hwy. 1 at road entrance states Not Passable in Wet Weather.

12-4

2-15, Table 2-1 provides yearly Ranch unpermitted, illegal, diversion quantities. These years coincide almost 100 % with fish and habitat decline. No fishing for our kids. This chart alone with F & G numbers should be enough evidence Ranch is destroying the River from which it seeks large diversions.

2-18 as to Water Availability . Answer should be not enough. Hill expects the Big Sur River to serve his irrigation needs, his development needs at Site 8 hotel but declines to factor in riparian users and

12-5

needs of the damaged river flora and fauna nor a restoration plan on a dramatically down drawn river. Chart 5-1. page 5-3.

↑ 12-5 (cont.)

The Ranch has shown no concern for anything or anybody during its pump-career, even pumping during low water years of 1977 and 1997 as admitted at 2-22 and 2-24. This flagrant self-destructing act alone should be enough to DENY HILL'S APPLICATION as they admit that controlling irrigation is beyond their control because of limited available labor. 2-20. Where are plans for drought years ranching? Where are professionally trained hydrologists needed to monitor wells? Hill has shown no interest in mitigation . He continues to pump illegally in any quantities.

12-6

DENY APPLICATION. HILL SHOWS NO AWARENESS HE IS KILLING OFF OUR ENDANGERED AND THREATENED SPECIES, WILDLIFE HABITAT, COLD AND WARM WATER HABITATS, SPAWNING REPRODUCTION, SPORT FISHING, CONTACT AND NON CONTACT WATER SPORTS, GROUND RECHARGE AND RIPARIAN CORRIDORS. F-1 OF THIS DEIR.

12-7

I believe estuarine health and riparian corridor borders, ground recharge should remain your primary concerns.

12-8

4.1-5. Comparing damage done by the pumps in the past with the damage they could do in the future is ludicrous. Legal or illegal, Hill pushes the limits of belief. Can we trust this man?

12-9

The SWRCB can use its powers to order Hill and El Sur Ranch to stop pumping at once and order a ten year cease and then study the Protected River and State Park Trust obligations after the ecosystem has been given the opportunity to restore itself.

30166 is an application to deceive the Board, the Public and maybe even itself. Hill has destroyed the ecosystems the SWRCB, Molera State Park, Protected Big Sur River Management Plan were created to protect.

12-10

Many locals believe Hill wants the Big Sur River water so that he save the ecosystem and estuary of the Little Sur River for the good fishing of the guests at his El Sur Inn and Conference Center at Site 8 in his development plan as noted above, on the coast at False Point Sur.

Since we moved here in '77, it's been catch and release and since the 90's going, going gone , dear river. Is it truly impossible to determine the

↓

total water available and total currently diverted? In this space world?

↑ 12-10
| (cont.)

PLEASE STOP THE ILLEGAL PUMPING AT ONCE. PLEASE PULL
THE DECEPTIVE APPLICATION. PLEASE ORDER HILL TO ATTEND
ECOLOGY CLASSES AT CSUMP TO ATONE FOR HIS YEARS OF
NEGLECTING ENVIRONMENTAL NEEDS AND ILLEGAL PUMPIN

| 12-11

Letter 13: Robert William Lockwood

Subj: **El Sur Ranch Irrigation Application 30166 from Big Sur River**
Date: 12/12/2009 9:27:21 A.M. Pacific Standard Time
From: Lorribigsur
To: pmurphey@waterboards.ca.gov
BCC: Blockwood@hewittcabinets.com, puffin@mbay.net, bileneve@att.net

2009 DEC 14 PM 1:47

Paul Murphey
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, Ca. 95812

Re: EL SUR RANCH 30166 FOR WATER FROM BIG SUR RIVER

Dear Mr. Murphey:

My father has taken me to the Monterey Bay Aquarium where I have seen a display showing me how a Central California trout stream should look. It even has trout in it. It's beautiful.

| 13-1

I hope the lagoon on our river looks the same soon. We visit it often when we go to Nana's house.

| 13-2

Please ask the SWRCB to visit a restaurant which serves farmed steelhead trout. Boy, it really tastes good - sort of a salmon/trout combination. Once you taste it you want to save all those fish and their home in the river. It's being imported from Canada now, expensive but worth it.

| 13-3

How long must I wait to fish my river?

Sincerely,

Billy Bob

Robert William Lockwood - Age 10
414 7th Street
Tacoma, Wa. 98403 and
Nana's House
P.O. Box 264
Big Sur, Ca. 93920

Letter 14: Shute Mihaly & Weinberger (Amanda Garcia)

SHUTE, MIHALY
& WEINBERGER LLP

396 HAYES STREET, SAN FRANCISCO, CA 94102
T: 415 552-7272 F: 415 552-5816
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AMANDA R. GARCIA
Attorney
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June 3, 2010

Paul Murphey
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000
wrhearing@waterboards.ca.gov
pmurphey@waterboards.ca.gov

Re: Draft Environmental Impact Report for El Sur Ranch Water Right
Application No. 30166

Dear Mr. Murphey:

This firm represents Trout Unlimited in its review of the draft environmental impact report (“DEIR”) for Water Right Application No. 30166 (the “Project”). The Project proposes to issue an appropriative water right permit to the El Sur Ranch (the “Ranch”) to divert a maximum of 1,615 acre feet per year from the Big Sur River, via two existing wells located in Andrew Molera State Park. As your agency is aware, the Ranch has been illegally diverting nearly 1,000 acre feet per year for the past sixty years to flood irrigate pastures for cattle ranching.

The purpose of this letter is to inform the State Water Resources Control Board (the “Board”) that the DEIR for the Project fails to comply with the requirements of the California Environmental Quality Act (“CEQA”), Public Resources Code § 21000 *et seq.*, and the CEQA Guidelines, California Code of Regulations, title 14, § 15000 *et seq.* (“Guidelines”). Specifically, the DEIR for the Project improperly incorporates the Ranch’s historical level of illegal diversions into the baseline for environmental review, and therefore fails to analyze or mitigate the environmental consequences of any decision to approve the application. The DEIR’s use of the Ranch’s historical average level of diversion as the baseline for evaluating impacts cannot be reconciled with precedent interpreting the baseline requirement, including the California Supreme Court’s recent decision in *Communities for a Better Environment v. Southern California Air Quality Management District* (2010) 48 Cal.4th 310.

14-1



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The mandate of CEQA is simple. Lead agencies must analyze and disclose the environmental impacts of their decisions. (Pub. Resources Code § 21002.1.) Here, the Board is considering whether to grant a permit for the Ranch's future use of water. Accordingly, the environmental impact to be evaluated in the DEIR is the difference between denying the water right application, where future diversions would be limited to the valid riparian right of 75 acre feet annually (AFA),¹ and granting the application, where future diversions would be equal to a rolling 20-year maximum of 1,200 AFA.

The courts have consistently held that the baseline cannot include previously unauthorized and unanalyzed levels of use, such as the Ranch's diversion, when the effect would be to exempt analysis of those levels of use from CEQA. *Riverwatch v. County of San Diego* (1999) 76 Cal.App. 4th 1428 and its progeny, which approve an agency's decision to incorporate prior illegal construction into the baseline, do not alter that basic analysis. While it is true that illegally built physical structures (such as the Ranch's wells) and even past effects of prior illegal diversions are part of the existing environment, the Ranch's future diversions are not. The prior level of diversions will not continue absent the Project approval and therefore must be analyzed as part of the Project.

Further, the courts have repeatedly recognized that levels of water availability and use, by their nature, fluctuate over time, requiring a flexible approach to establishing the appropriate baseline conditions for the particular project under review. (See, e.g., *Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 123-24.) The Supreme Court expressly approved this approach in

¹ The Board originally determined that the Ranch's riparian right was limited to 90 acres of pasture, with a corresponding diversion limit of 270 AFA. (DEIR at 2-13.) The Ranch subsequently proposed that its riparian right was limited to 25 acres, and 75 AFA. (*Id.* at 2-13 n. 4.) We concur with the Department of Fish and Game ("DFG") that the Board should make a determination regarding the scope of the Ranch's riparian right in order to evaluate the effects of the proposed appropriative right. (DFG, Memorandum to Paul Murphey from Jeffrey R. Single re: El Sur Water Right Application No. 30166 Draft Environmental Impact Report, December 14, 2009 ("DFG letter") at 5.) Although the Board does not issue permits for riparian rights, it routinely issues appropriative rights that limit diversions under all bases of right to a specified amount.

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Communities for a Better Environment, acknowledging that the selection of a specific high or low “may be as important environmentally as average conditions.” (48 Cal.4th at 517.) Thus, in selecting a baseline, an agency must consider whether a particular baseline will allow the agency to evaluate the full scope of a project’s environmental impacts.

Here, the central question to be answered in the DEIR is how the Project’s proposed level of diversion will affect the river environment and the sensitive species that depend upon it for survival. That question can be answered only by comparing the in-stream flow levels without the Project with the in-stream flow levels that will occur if the Project is approved. (See *Communities for a Better Environment*, 48 Cal.4th at 507; *Woodward Park Homeowners Ass’n v. City of Fresno* (2007) 150 Cal.App.4th 683, 707 [EIR should “compare what will happen if the project is built with what will happen if the site is left alone”].)

As discussed more fully below, the DEIR for the Project must employ a baseline that does not effectively exempt the Ranch’s illegal diversions from CEQA review. To comply with CEQA, the Board must revise the DEIR to evaluate the Project against the environment absent the Project and circulate the revised DEIR for public review.

I. Background

A. The Project Is Likely To Have Significant Impacts On Steelhead.

Trout Unlimited’s mission is to protect, reconnect, restore, and sustain California’s salmonoid fisheries, their watersheds, and the diversity of their populations. Trout Unlimited is concerned that if the Project is approved as proposed in the DEIR, it will have severe impacts on the South-Central California Coast Steelhead (“steelhead”), which is listed as threatened under the federal Endangered Species Act. (62 Fed. Reg. 43950 (1997); 71 Fed. Reg. 834, 857 (Jan. 5, 2006).) The Project is located near the mouth of the Big Sur River, one of the few remaining watersheds supporting steelhead in this region.

Diversions of water such as the Project are one of the gravest threats to the existence of steelhead. In its decision reaffirming the threatened status of steelhead, the National Marine Fisheries Service (“NMFS”) expressly identified water withdrawal and modification of the natural flow regime as key factors contributing to the species’ extinction risk. (71 Fed. Reg. at 856.) Similarly, DFG has expressed serious concern

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(cont.)

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about the effects on steelhead of diversions from the Big Sur River, and therefore has initiated a study to establish minimum in-stream flow requirements in the watershed. (DFG, Study Plan: Habitat and In-Stream Flow Relationships for Steelhead in the Big Sur River, Monterey County (Sept. 2009), at 5.) DFG submitted numerous comments on this Project, indicating that it believes the Project will adversely affect steelhead. (See DFG letter at 12.) NMFS also has submitted comments on this Project indicating that it will result in adverse impacts to steelhead rearing conditions and juvenile fish passage. (NMFS, Letter to Paul Murphey from Dick Butler re: DEIR for the El Sur Ranch Water Right Application No. 30166, December 14, 2009 (“NMFS letter”), at 3-5.)

14-1
 (cont.)

Despite clear indications from NMFS and DFG that the Project will have significant impacts on steelhead, the DEIR assumes that the Ranch is entitled to divert water at its average historical level of illegal withdrawals—nearly 1,000 acre feet per year—without mitigating the associated impacts. As this letter explains, neither CEQA nor the case law interpreting the baseline requirement supports the DEIR’s approach.

B. The Ranch Has A Long History Of Illegal Diversions.

The Project proposes to provide the Ranch with a permit to divert water from the Big Sur River. As the DEIR explains, the Ranch has been illegally diverting water from the Big Sur River for more than sixty years. (DEIR at 2-12-15.) The Ranch began using a well to divert water in 1949, and constructed another well in 1975. (DEIR at 2-12.) In 1992, in response to a complaint filed by the State Department of Parks and Recreation (“DPR”), the Board determined that the Ranch’s wells tapped into the subterranean stream flow of the Big Sur River, and therefore that the Ranch needed a permit from the Board to continue diverting water in excess of the amount afforded by riparian right. (*Id.* at 2-13.) According to the DEIR, the Board recommended that the Ranch either cease diverting water to serve non-riparian land, or, alternatively, apply for an appropriative water right to serve that land. (*Id.* at 2-13-14.)

On July 10, 1992, the Ranch filed an application for an appropriative water right. (*Id.* at 2-14.) After DPR, DFG, and the California Sportfishing Protection Alliance filed protests, alleging adverse effects on the Big Sur River and sensitive species, the Ranch amended its application. (*Id.* at 2-15-17.) The Project, as amended, proposes to issue a water right allowing the Ranch an annual maximum diversion of 1,615 acre feet annually (“AFA”), a 20-year rolling average of 1,200 AFA, a maximum diversion rate of 5.34 cubic feet per second, and additional seasonal diversion limits for the dry months. (*Id.* at 2-17.) The Project’s proposed level of diversion is even greater than the Ranch’s

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historical average level of illegal diversions, which the DEIR determined to be 1,136 AFA annual maximum with a 20-year rolling average of 857 AFA. (See *id.* at 4.1-5.)

Since the filing of the application, the Ranch has continued to illegally divert water from the Big Sur River. Although the State Water Board has authority to stop the illegal diversion and to fine the Ranch for breaking the law, the Board has not taken such measures. (Water Code §§ 1052, 1055, 1831; see Water Code § 275.)

C. The DEIR For The Project Improperly Evaluates The Project's Impacts Against A Baseline That Includes The Ranch's Illegal Diversions.

The Board issued the DEIR for the Project in October 2009. The DEIR explains that, to evaluate whether the Project will have a significant effect on the environment, the DEIR established a hydrological baseline based upon the Ranch's historical average level of illegal diversions during the period 1985-2004. (*Id.* at 4.1-4-6.) Thus, with a stroke of the pen, the DEIR deemed the bulk of the Project's proposed future diversion to be part of the environmental setting rather than part of the project description.

Although the Project proposes to grant the Ranch a permit for the full amount of the Ranch's application, the DEIR analyzes the environmental impacts associated with only a small fraction of that amount, based upon its determination that fully two-thirds of the diversion is part of the baseline. (*Id.*; see also *id.* at Section 4.2 and 4.3 [analyzing impacts on hydrology and biological resources].) Unsurprisingly, because it measures the Project's impacts against this purported "baseline," the DEIR concludes that many impacts are less-than-significant, and that all others can be easily mitigated to a less-than-significant level. (See *id.* at 3-5-15 [summary of impacts and mitigation measures].)

Several state and federal agencies and non-profit organizations have provided comments on the DEIR, including, as noted above, DFG and NMFS. Many of these agencies and organizations conclude, as we have, that the hydrological baseline proposed by the Board violates CEQA by exempting the great majority of the Project's impacts from meaningful analysis or mitigation. (See, *e.g.*, DFG letter at 7-10; NMFS letter at 4-5.)

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 (cont.)

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II. There Is No Basis In Fact Or Law For The Board's Choice Of Baseline.

An EIR must include an accurate account of the physical environmental conditions under which a project will be carried out; these conditions “normally constitute the baseline” against which the significance of impacts is measured. (Cal. Admin. Code, tit. 14, §15125(a).) The baseline describes the environment *without* the project; its function is to allow the agency to determine what will happen to the environment if the Project is approved. As the California Supreme Court recently explained, “[t]o decide whether a given project’s environmental effects are likely to be significant, the agency must use some measure of the environment’s state *absent the project.*” (*Communities for a Better Environment*, 48 Cal.4th at 507 [emphasis added].)

Given the particular facts surrounding a project, an agency must determine, “in the first instance, exactly how the existing physical conditions *without the project* can most realistically be measured.” (See *Communities for a Better Environment*, 48 Cal.4th at 517 [emphasis added].) Selecting the appropriate baseline is crucial to ensuring that a project’s impacts are fully disclosed and analyzed, as required by CEQA. (See *Woodward Park*, 150 Cal.App.4th at 707 [baseline requirement “protect[s] the fundamental essence of an EIR, its evaluation of a project’s environmental impacts”].) And selecting an improper baseline “can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts which would result.” (*Environmental Planning and Information Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 358 (“EPIC”).)

Here, the Project is the Ranch’s application to obtain an appropriative water right to divert a maximum of 1,615 acre feet annually from the Big Sur River, using existing wells. (DEIR at 2-18.) The Ranch currently has no right to divert water in excess of its riparian right and would be required to cease diverting water beyond that level if the Board denies its water right application. (DEIR at 6-2 [acknowledging that “[t]he denial of the water right application would require that pumping of the subterranean flow of the Big Sur River for non-riparian pasture cease”].)

The DEIR acknowledges that the Ranch’s level of illegal diversion has fluctuated over time, including long periods when the Ranch has not diverted any water. (DEIR at 2-15.) Further, there is no evidence in the record to suggest that impacts on stream functions or aquatic life would persist if the Ranch ceased its diversions beyond its riparian entitlement. Thus, in this case, the existing environment absent the Project is the level of in-stream flows *absent* the Ranch’s proposed level of non-riparian diversion.

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 (cont.)

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Yet, inexplicably, the DEIR for the Project incorporates the Ranch's illegal diversions—1,136 AFA maximum—into the environmental setting, and measures the Project's impacts on hydrology and biological resources against this purported "baseline." (DEIR at 4.1-4.) By designating more than two-thirds of the Ranch's proposed future diversion as the "baseline," the DEIR evades analysis and mitigation of the full scope of the Project's impacts on the Big Sur River and habitat for sensitive species, including steelhead.

In effect, the DEIR proposes to exempt or "grandfather" the full scope of the Ranch's illegal diversions, even though they have never been authorized or analyzed under CEQA. As explained in more detail below, this result runs contrary to legal precedent interpreting the baseline requirement, to the fundamental purposes of CEQA, and to the particular factual circumstances of this case.

A. The DEIR Lacks Support For Establishing A Baseline Based Upon Historical Illegal Levels Of Use.

The DEIR asserts that "the Ranch's historic water diversions . . . are part of the existing environment," and therefore establishes a baseline for evaluating impacts on hydrology and biological resources that includes not only the impacts of past illegal diversions, but also the impacts of future diversions. However, unlike the past diversions, those future diversions have not happened yet, and the impacts of those diversions will only be realized if the Project is approved. (DEIR at 4.1-4-5.) Contrary to the DEIR's assumption, the courts have consistently rejected attempts to include historic levels of use in the baseline where the effect would be to exempt, or "grandfather," a previously unauthorized or unanalyzed level of use from environmental review.

1. Under CEQA, An Agency May Not Incorporate Historic Levels Of Use Into The Baseline If The Effect Is To "Grandfather" An Unauthorized Or Unanalyzed Level Of Use.

The DEIR acknowledges that the Ranch's diversion of water has never been authorized or analyzed under CEQA. (DEIR at 2-13-14.) The DEIR further acknowledges that the effect of its baseline is to exempt the majority of the Project from analysis and mitigation. (Compare DEIR at 4.1-4 [noting that approval of the Project would "allow[] continuation of an existing, but unpermitted, water right activity"] with *id.* at 4.1-5 [limiting analysis to comparison with historical average of illegal diversion].) In analogous circumstances, courts have held that an applicant's proposed level of water use cannot be incorporated into the baseline, but must be analyzed as part of the project.

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(cont.)

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This is true even when the applicant demonstrates that it has historically engaged in the unauthorized level of use.

In *County of Inyo v. City of Los Angeles* (1973) 32 Cal.App.3d 795, 805-06 (“*County of Inyo I*”), for example, the City of Los Angeles proposed to increase the levels of groundwater extractions to be carried to Los Angeles via a previously constructed aqueduct. The city argued that the groundwater extractions were exempt from CEQA as an ongoing project because the aqueduct was constructed prior to the enactment of CEQA. (*Id.*) The Court of Appeal rejected the city’s argument, reasoning that the increased level of extractions had not been analyzed when the aqueduct was built. (*Id.*)

In a subsequent opinion, the appellate court rejected the city’s attempt to include in the baseline what the city viewed as its post-CEQA historical average pumping rate, noting that the city was attempting to improperly “narrow” its CEQA obligation. (See *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 195 (“*County of Inyo II*”) [“By an ex parte stroke of the pen, the project definition of the final EIR subtracts a long-term average pumping rate . . . from the CEQA-subject side of the line and places it on the exempt side of the line”].) The effect, reasoned the court, was to treat previously unanalyzed levels of extraction as part of the baseline and to radically understate the impacts of the project. (*Id.* at 196-97.) The court held that this flaw was fatal to the validity of the EIR. (*Id.*)

Similarly, in *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 967 (“*Amador County*”), the Court of Appeal rejected an argument that a proposal to operate a hydroelectric dam for consumptive use was exempt as an existing facility, precisely because it involved a level of water use that had not previously been permitted or analyzed. (See also *Lewis v. Seventeenth Dist. Agricultural Assn.* (1985) 165 Cal.App.3d 823, 826, 836-37 [Blease, J. concurring in the judgment] [explaining that if use was not analyzed when applicant obtained permit for the facility, the existing facilities exemption does not apply].)²

These cases demonstrate that, as a general rule, the courts will reject an attempt to incorporate historic levels of use into the baseline, if the effect is to exempt or

² *Bloom v. McGurk* (1994) 26 Cal.App.4th 1307, 1315-17, is not to the contrary. In that case, the court approved a baseline based upon *previously permitted* levels of use and held that the agency properly applied the categorical exemption for existing facilities. (*Id.*)

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 (cont.)

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grandfather an unanalyzed level of use from CEQA review. Further, these cases suggest that the courts have paid particular attention to attempts to “grandfather” or exempt unanalyzed use of *water*. The courts have clarified that including historic levels of use in the baseline in such circumstances undermines the core purposes of CEQA. (See, e.g., *County of Inyo I*, 32 Cal.App.3d at 805-07 [rejecting exemption because it would subvert legislative intent to give highest priority to analysis of environmental considerations]; *Amador County*, 76 Cal.App.4th at 966 [observing that exemptions should be narrowly construed in order to “afford[] the fullest possible environmental protections within the reasonable scope of statutory language”].)

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(cont.)

Like the environmental analyses at issue in *County of Inyo I and II* and *Amador County*, here the DEIR in effect grants an exemption for the Ranch’s historic level of diversion from the Big Sur River. Yet the Ranch’s diversion has never been permitted or subject to environmental review. Thus, as in *County of Inyo I and II* and *Amador County*, such an “exemption” is wholly unjustified under CEQA.

2. A Baseline Based Upon Historic Levels Of Use Is Appropriate Only In Cases Involving Previous Environmental Analysis Or An Existing Permit.

Conversely, courts have approved incorporating actual historical levels of use into the baseline only in cases involving a legally permitted past use, or a historical use that has been previously evaluated under CEQA. For example, in *Fairview Neighbors v. County of Ventura* (1999) 70 Cal.App.4th 238, 242-43, the court held that the EIR properly considered the historic peak traffic levels generated by a mining operations, because those levels had been analyzed in a prior EIR and were legally permitted by the county. (See also *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal. App. 4th 645, 659 [approving incorporation of annual production averages in the baseline for a previously-permitted mining operation].)

Likewise, in *Fat v. County of Sacramento* (2002) 97 Cal. App. 4th 1270, 1281, the court held that the city did not abuse its discretion by incorporating into the baseline the noise levels and safety concerns associated with the airport’s ongoing illegal operations, because those levels of use had been analyzed in prior environmental review. The court further noted that there was no evidence that conditions had changed since that analysis. (See *id.*)

Unlike the uses in *Fairview Neighbors* and *Fat*, here the Ranch’s diversions have never been permitted or subject to environmental analysis. DFG notes that the

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easement agreement entered into between the Ranch and DPR in 1982 was determined to be categorically exempt under CEQA. (DFG letter at 9; see also DEIR at 2-12.) Accordingly, DPR did not conduct an environmental analysis of the Ranch's diversion. In any event, even if DPR had conducted environmental review, conditions have significantly changed since 1982. (Cf. *Fat*, 97 Cal.App.4th at 1281.) In particular, the steelhead was listed as a threatened species in 1997. (See Section I.A above.) Therefore, the current Project is in no way analogous to the circumstances in *Fat* or *Fairview Neighbors*.

In sum, because the Ranch's historical level of illegal diversions has not been previously analyzed or permitted, it is entirely inappropriate to characterize it as part of the baseline. The DEIR's cramped interpretation of the baseline requirement fails to protect the Big Sur River, steelhead, and other sensitive species by characterizing two-thirds of the Ranch's proposed level of diversion as existing conditions. To achieve the purposes of CEQA, the impacts of that level of use should be evaluated as part of the Project.

B. The *Riverwatch* Rule Does Not Apply To The Ranch's Ongoing Illegal Diversion.

In a 2005 memorandum, the Board's Office of Chief Legal Counsel relied heavily on *Riverwatch v. County of San Diego* (1999) 76 Cal. App. 4th 1428, 1452-53 and its progeny, to advise the Division of Water Rights to consider not only prior illegal construction, but also continued levels of prior illegal diversions as part of the baseline. (Memorandum from Craig M. Wilson, Chief Counsel, Office of Chief Counsel, to Victoria A. Whitney, Chief, Division of Water Rights, re: Baseline for Analysis of Water Rights Projects Under the California Environmental Quality Act (June 10, 2005) ("Baseline Memo"), at 1, 3-5.) The DEIR appears to have adopted the Baseline Memo's recommended approach for this Project.

However, as explained below, the *Riverwatch* rule does not apply to the circumstances of this case. *Riverwatch* and its progeny simply addressed how an agency should account for prior illegal activity that has permanently altered the existing physical environment. In the present case, the Ranch's illegal diversions can be halted at any moment, returning in-stream flows to their pre-Project levels with no permanent physical effects. Because the DEIR can meaningfully evaluate impacts using flow levels without the Ranch's illegal diversions as the baseline, the DEIR's apparent reliance on the Baseline Memo and *Riverwatch* is unfounded.

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 (cont.)

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1. *Riverwatch* Addresses How An Agency May Account For Illegal Activities That Have Permanently Altered The Environmental Setting.

In *Riverwatch*, an applicant seeking a permit for a rock quarry had previously engaged illegally in sand mining and disking activities, destroying habitat for sensitive species on the project site. (*Id.* at 1434, 1452-53.) The court rejected the petitioners' argument that the baseline for evaluating impacts on biological resources should have reflected the environmental conditions present before the applicant had illegally destroyed habitat. (*Id.* at 1452-53.) Faced with a permanently altered environment, the court held that the baseline must reflect the existing conditions on the ground, even though some of those conditions were caused by prior illegal activities. (*Id.* at 1453; see also *Eureka Citizens for Responsible Government v. City of Eureka* (2007) 147 Cal.App.4th 357, 370 [city properly considered an allegedly illegally constructed playground as part of the baseline for evaluating impacts on the surrounding neighborhood].)

Similarly, in *Fat v. County of Sacramento*, a prior illegal physical expansion of an airport had destroyed habitat for sensitive species. (97 Cal.App.4th at 1281.) Following *Riverwatch*, the court held that the county had properly included the expanded facilities in its baseline for evaluating environmental impacts. (*Id.*) Like the illegal sand mining in *Riverwatch*, the illegal airport expansion had permanently altered the physical environment. In addition, as noted above in Section II.A.2, the court held that the county properly included historic levels of airport use in the baseline. However, that aspect of the court's decision rested heavily on the prior environmental review of the levels of use proposed in the application. (See *Fat*, 97 Cal.App.4th at 1281.) Moreover, the court was careful to emphasize that its holding was limited to "the circumstances of this case." (*Id.* at 1280.) Thus, *Fat* should not be read to extend the *Riverwatch* rule to incorporate illegal levels of use into the baseline absent prior environmental review.

2. *Because The Ranch's Illegal Activity Has Not Resulted In Any Permanent Diversion Of Water, The Riverwatch Rule Does Not Apply.*

The *Riverwatch* line of cases, which all involved a prior illegal use that permanently altered the physical environment, should not determine how the Board accounts for the Ranch's historic illegal diversion of water from the Big Sur River. Unlike the environments at issue in *Riverwatch*, *Eureka Citizens*, and *Fat*, here, the

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 (cont.)

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Ranch's illegal activity has not resulted in any permanent diversion of water from the Big Sur River. The Board can halt the Ranch's illegal diversion at any moment, returning in-stream flows to their pre-Project levels with no permanent physical effects.³ In these circumstances, as explained above, the most relevant precedent addressing unpermitted levels of use indicates that the baseline should be the level of in-stream flows without the Project. (See, e.g., *County of Inyo*, 32 Cal.App.3d at 806.)

This is not to say that the *Riverwatch* rule is necessarily irrelevant to the environmental setting in this case. The existing physical conditions may well include certain characteristics that have been permanently altered by the Ranch's past illegal diversion (e.g., the existence of the second well). However, there is no basis for extending the *Riverwatch* rule to cover the Ranch's future diversion of water.

C. The Board Must Exercise Its Discretion To Measure The Baseline In A Manner That Achieves The Fundamental Purposes Of CEQA.

In *Communities for a Better Environment*, the California Supreme Court affirmed that while the baseline must reflect existing conditions on the ground, "[n]either CEQA nor the CEQA Guidelines mandates a uniform, inflexible rule for determination of the existing conditions baseline." (48 Cal.4th at 517.) Rather, an agency should take into account the particular facts and circumstances surrounding the project, in order to accurately evaluate the project's true environmental impacts. (See *id.* at 517.) Thus, an agency has flexibility in selecting a baseline, but its choice must be supported by substantial evidence. (*Id.*) And if the agency's choice of baseline is not supported by substantial evidence, the EIR "fail[s] as [an] informative document." (*EPIC*, 131 Cal.App.3d at 358.)

The courts have repeatedly recognized that establishing baseline levels of water use, in particular, requires a flexible approach depending upon the factual circumstances surrounding the project. For example, in *Save Our Peninsula*, the court acknowledged that the date for establishing a baseline cannot be rigid because water use

³ In its analysis of the No Project alternative, the DEIR acknowledges that without the Project, the Ranch cannot divert water in excess of its riparian right. (DEIR at 6-2-15.) The limited analysis provided in the DEIR's discussion of the no-project alternative does not cure the DEIR's fundamentally flawed baseline, however, because it neither accurately describes existing conditions nor requires mitigation for the full scope of the Project's impacts.

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fluctuates over time, and certain flow conditions “are more relevant to a determination whether the project’s impacts will be significant.” 87 Cal.App.4th at 125. Similarly, in *County of Amador*, the court made clear that not just monthly diversion levels, but also the timing and speed of water releases, were relevant to evaluating a project’s impacts on the river environment. 76 Cal.App.4th at 954-55.

At the same time, *Communities for a Better Environment* clarifies that an agency’s range of choices is not without limits. Indeed, *Communities for a Better Environment* confirms that an agency’s choice of baseline must be consistent with the major purposes underlying CEQA: the public disclosure and mitigation of a project’s environmental impacts. (48 Cal.4th at 512-13; see *Woodward Park Homeowners Association v. City of Fresno* (2007) 150 Cal.App.4th 683, 707 [the two major purposes of CEQA are “to adopt feasible mitigation measures to lessen [] environmental impacts” and “to inform the public and decision makers of the consequences of environmental decisions before those decisions are made”].) To that end, an agency cannot select a baseline that provides “an illusory basis for a finding of no significant adverse effect.” (*Communities for a Better Environment*, 48 Cal.4th at 512-13.)

Accordingly, an agency’s choice of baseline must allow it to realistically describe *both* the existing environmental conditions and the impacts of the project. As the court explained in *Woodward Park*:

For instance, if a hypothetical project half the size of the proposed project is used as a baseline, the EIR will report only half the project’s impact. The EIR would fail to inform the public of the other half. It would also necessarily lack consideration of mitigation measures for the omitted portion of the project’s impact.

150 Cal.App.4th at 707. Thus, an agency’s choice of baseline must aim to achieve two objectives: first, it must accurately characterize the existing environment; and second, it must allow the agency to analyze and mitigate the full scope of a project’s impacts.

Here, the DEIR’s choice of baseline neither informs the public of the full scope of the Project’s impacts nor considers and mitigates those impacts. Instead, the DEIR includes nearly two-thirds of the Ranch’s proposed future diversion in the baseline, resulting in an illusory analysis and no mitigation of the great majority of the actual impacts on the Big Sur River environment of the Board’s decision to issue the permit. This result runs counter to the courts’ oft-repeated insistence that CEQA be interpreted

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“to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.” (*Mountain Lion Foundation v. Fish and Game Com.* (1997) 16 Cal.4th 105, 147 [internal quotation omitted].)

D. The DEIR’s Approach Provides Perverse Incentives To Water Right Applicants.

Strong policy reasons counsel in favor of establishing a general rule that, in after-the-fact water right applications, the baseline does *not* include the applicant’s past illegal diversions. Most important, including illegal diversions as part of the baseline effectively grants the applicant an exemption from CEQA and prevents the Board from requiring mitigation for the full scope of environmental impacts associated with diverting water. (See Sections II.A-C, above.)

In addition, the DEIR’s approach provides applicants with an incentive to maintain or increase illegal diversions prior to applying for a water right and while the application is pending, in order to secure a higher baseline. This perverse result was addressed in *Save Our Peninsula Committee*, where the court held that the agency abused its discretion by selecting a baseline that included artificially high levels of pumping after the application was filed. (87 Cal.App.4th at 125-26.) The court reasoned that the production of water was controlled by the applicant during that time period, and the applicant had an incentive to elevate production figures to establish a high baseline. Similarly, in *Communities for a Better Environment*, the Supreme Court cautioned that “over-reliance on short-term activity averages might encourage companies to temporarily increase operations artificially, simply in order to establish a higher baseline.” (48 Cal.4th at 517.)

Here, as in *Save Our Peninsula*, the Ranch had an incentive to maintain high levels of illegal diversions while its application was pending to establish a high baseline. (See DEIR at 2-14; 4.1-4-6 [Ranch filed application in 1992; baseline includes average water use from 1985-2004].) Given that *all* of the Ranch’s diversions have been illegal beyond its riparian right, the DEIR’s approach is particularly unjustified: it provides a perverse incentive to water rights applicants to increase and maintain high levels of illegal diversions during the water rights application process—even where, as here, there has been mounting pressure to reduce consumption in a water-constrained community. (See *Save Our Peninsula Committee*, 87 Cal.App.4th at 126 [noting that increased pressure on local water supply provided additional incentive to inflate the baseline].)

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Worse yet, use of an incorrect baseline actively encourages people to initiate diversions illegally, before filing a water right application. Given the Board's long-running problems dealing with thousands of illegal diversions in coastal areas, this is precisely the wrong signal to send.

1. The Policy Concerns Underlying *Communities for a Better Environment* Support Excluding Historic Illegal Diversions From The Baseline For After-The-Fact Water Right Applications.

In *Communities for a Better Environment*, an oil refinery sought a permit allowing it to use its existing boilers for a new manufacturing process. (48 Cal.4th at 512-13.) The agency used the maximum levels of pollution authorized by the refinery's existing permits as the baseline for evaluating air quality impacts, even though there was no evidence that the refinery had ever attained those levels of emissions. (*Id.*) The Court held that the agency could not use previously permitted levels of emissions as the baseline, because those levels did not reflect the existing environmental setting. (*Id.*)

The policy considerations underlying the Court's decision in *Communities for a Better Environment* support excluding the Ranch's historical level of illegal diversion from the baseline and analyzing the full scope of the Project's impacts. The Court was particularly concerned that the use of previously permitted levels of emissions as the baseline "provid[ed] an illusory basis for a finding of no significant adverse effect. . . ." (*Id.* at 513.) As explained above, the DEIR's incorporation of the Ranch's historic levels of diversion has the same effect here.⁴

Further, in *Communities for a Better Environment*, the Court rejected the refinery's argument that requiring CEQA analysis of any previously permitted levels would impinge on its purported vested rights under the permits. (*Id.* at 513-14.) Here,

⁴ In *Communities for a Better Environment*, the Court addressed only whether an agency could incorporate allowable levels of emissions that had not actually been achieved into the baseline. Although the Court cited *Riverwatch* and its progeny with approval, it had no occasion to consider whether it is the correct rule for the circumstances presented here. (See *id.* at 512 and n.7.) The Court did not address the factual situation presented in *Riverwatch*, where prior illegal activities had permanently altered the environment, let alone a situation, as presented here, involving previously unanalyzed and unpermitted levels of use.

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the Ranch has *no* right to divert water at any level beyond its riparian use. Thus, concern for maintaining the Ranch's historical operations cannot justify the DEIR's choice of baseline.

2. The Policy Concerns In *Riverwatch* Do Not Support Extending That Rule To After-The-Fact Water Right Applications.

In *Riverwatch*, the court reasoned that in many cases, it would be difficult for a lead agency to determine the nature and scope of the prior illegal activity, and therefore that the enforcement agency should be primarily responsible for addressing an applicant's prior illegal conduct. (76 Cal.App.4th at 1452-53.) The concerns identified by the *Riverwatch* court in support of its rule are not present here. In this case, the Board is both the lead permitting agency and the agency that has enforcement authority over the Ranch's continuing illegal activity. Accordingly, establishing a baseline that excludes the Ranch's historic illegal diversion would in no way conflict with any enforcement action by the Board. In fact, as DFG observed in its letter, "by adopting a baseline which includes the unpermitted and illegal diversion of water, the [Board] itself is undermining its own ability to require modification to the project to avoid adverse effects on the water resources." (DFG letter at 9.)

Further, in this case, there is no question about the nature of the Ranch's illegal conduct. The EIR itself contains a complete description of the Ranch's history of illegal diversions, and acknowledges that the sole reason the Ranch applied for a water right is to avoid the Board's enforcement authority. (DEIR at 2-12-15.) Thus, the reasoning in *Riverwatch* does not support extending its rule to grandfathering in a historic illegal diversion of water that persists only because the Board allows it to.

In sum, it is well within the Board's discretion to avoid the perverse incentives created by using a baseline that includes historic illegal levels of diversion. Indeed, as explained above, case law interpreting CEQA *compels* the Board to select a baseline that both reflects existing conditions and analyzes the full scope of the Project's environmental impacts. Here, that means selecting a baseline that does not reward the Ranch's illegal use of water.

III. The DEIR Must Be Revised And Recirculated For Public Comment.

The DEIR cannot form a legally adequate basis for a final EIR. Because the DEIR selected an improper baseline and analyzed only a small fraction of the Project's environmental impacts, it is "fundamentally and basically inadequate," and

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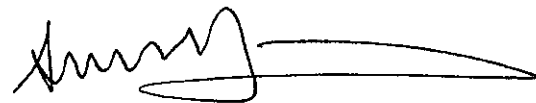
“meaningful public review and comment were precluded.” (Guidelines § 15088.5.) Further, in order to cure the fundamental flaws in the DEIR identified in this letter, the Board must obtain substantial new information to adequately assess the proposed Project’s environmental impacts, and to identify effective mitigation and alternatives capable of alleviating the Project’s significant impacts.

CEQA requires preparation and recirculation of a revised draft EIR “[w]hen significant new information is added to an environmental impact report” after public review and comment on the earlier draft EIR. (Pub. Resources Code § 21092.1; see also Guidelines § 15088.5.) The opportunity for meaningful public review of significant new information is essential “to test, assess, and evaluate the data and make an informed judgment as to the validity of the conclusions to be drawn therefrom.” *Sutter Sensible Planning, Inc. v. Sutter County Board of Supervisors* (1981) 122 Cal.App.3d 813, 822; *City of San Jose v. Great Oaks Water Co.* (1987) 192 Cal.App.3d 1005, 1017. Accordingly, CEQA requires that the public have an opportunity to review and comment upon any significant new information in the form of a recirculated draft EIR. (See, e.g., *Save Our Peninsula Committee*, 87 Cal.App.4th at 134 [requiring recirculation based upon new information regarding use of purported riparian right for project’s water supply].)

Thank you for the opportunity to comment on the DEIR. Trout Unlimited respectfully requests that the Board postpone consideration of the Project until such time as a legally adequate draft EIR is prepared and recirculated.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP



Amanda R. Garcia

ARG:ARG

cc: Brian J. Johnson, Trout Unlimited

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4. MITIGATION MONITORING AND REPORTING PLAN

4.0 MITIGATION MONITORING AND REPORTING PLAN

INTRODUCTION

The California Environmental Quality Act (CEQA) requires review of any project that could have significant adverse effects on the environment. In 1988, CEQA was amended to require reporting on and monitoring of mitigation measures adopted as part of the environmental review process. This Mitigation Monitoring and Reporting Plan (MMRP) is designed to aid the State Water Resources Control Board (SWRCB) in its implementation and monitoring of measures adopted from the El Sur Ranch Water Right Application 30166 Environmental Impact Report (EIR).

MITIGATION MEASURES

The mitigation measures are taken from the Chapter 2 of the Final EIR. They include the measures presented in the Draft EIR with minor modifications that were made in response to comments on the DEIR. These modifications are identified in Chapter 2 of this Final EIR.

MMRP COMPONENTS

The MMRP describes the actions that must take place to implement each mitigation measure, the timing of those actions, and the entities responsible for implementing and monitoring the actions. The components of each monitoring form are described below.

Mitigation Measure: All mitigation measures that are identified in this Final EIR are presented in the MMRP. Each measure is numbered in accordance with the number presented in the DEIR.

Action: For every mitigation measure, one or more actions are described. These actions describe the means by which EIR mitigation measures would be implemented, and, in some instances, the criteria for determining whether a measure has been successfully implemented. Where mitigation measures are particularly detailed, the action may refer back to the mitigation measure itself.

Implementing Party: This item identifies the entity that will undertake the required action.

Timing: Each action must take place prior to the time at which a threshold could be exceeded. Implementation of the action must occur prior to or during some part of approval, project design or construction or on an ongoing basis. The timing for each measure is identified.

Monitoring Party: The SWRCB is responsible for monitoring the implementation of any adopted mitigation measures and the effectiveness of those measures relative to criteria presented in the EIR.

**TABLE 4-1
MITIGATION MONITORING AND REPORTING PLAN
EI Sur Ranch Water Right Application No. 30166**

Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
DEIR Section 4.2: Hydrology, Geohydrology, and Water Quality				
<p>4.2-2 Extreme Critical Dry and Critical Dry Flow Rate Limitations on Project Diversions. Extreme Critical Dry and Critical Dry flows could result in significant aquatic habitat and water quality constraints. The Applicant shall immediately develop and implement an Irrigation Water Management Plan (IWMP) incorporating protocols and operator training to ensure that Project diversions do not cause or contribute to Extreme Critical Dry flows (less than the 10th percentile flow rate) or Critical Dry flows (less than the 20th percentile flow rate) greater than under Baseline rates as follows:</p> <ul style="list-style-type: none"> • For July through October, May, and December, when mean daily flow at the USGS gage [#11143000] is below the 20th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 20th percentile mean daily flow rate [see also Mitigation Measure (MM) 4.3-1 and MM 4.3-2]. • For January through April, when mean daily flow at the USGS gage is below the 10th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 10th percentile mean daily flow rate (see also MM 4.3-1). • For June and November, when flow at the USGS gage is below the 10th percentile mean daily flow rate, Project diversions shall be limited to Baseline rates until streamflows exceed the 10th percentile mean daily flow rate. • Table A [presented at the end of this MMRP] lists the USGS Limiting Flow Rates (10th percentile or 20th percentile, as required, above), for each month. If flow at the USGS gage is less than the USGS Limiting Flow Rate, the Project diversions cannot exceed Baseline (Allowable) Diversion Rates until flow at the USGS gage is equal to or above the USGS Limiting Flow Rate. <p>The Applicant shall submit the IWMP to the SWRCB for review and approval and incorporate any additional requirements identified by the SWRCB into the IWMP. Any modification to the</p>	<p>Mitigation Measure (MM) 4.2-2 lists specific actions required for implementation. Refer to MM 4.2-2.</p>	<p>Project Applicant.</p>	<p>In the event WR Application 30166 is approved, the Project Applicant will prepare the IWMP within 90 days of application approval and submit the IWMP to the SWRCB for review and approval. Implementation of the IWMP shall be ongoing for the life of the project.</p>	<p>SWRCB</p>

**TABLE 4-1
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Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
<p>IWMP by the Applicant shall require the Applicant to incorporate and implement a monitoring program in the IWMP to field verify that Project diversion protocols and operations do not reduce flows within Zone 4 through Zone 2 such that the Extreme Critical Dry or Critical Dry flow rate conditions, as appropriate, critical passage conditions, and critical dissolved oxygen (DO) conditions are not violated. Diversions for the purpose of making flow rate measurements, pursuant to this mitigation measure or subsequent mitigation measures, are exempt from the diversion limitations imposed by this mitigation measure if notification of testing is provided to the SWRCB prior to the beginning of testing. Modifications to the IWMP shall be submitted to the SWRCB for review and approval prior to implementation of the modified IWMP.</p>				
<p>4.2-4 The Applicant shall prepare an Erosion Control and Operations Management Plan (ECOMP) and submit it to the SWRCB for review and approval. This ECOMP shall incorporate the IWMP and operations and management protocols to minimize surface runoff and erosion potential arising from the Project.</p> <p>The Applicant shall incorporate protocols for excess irrigation applications and to prevent on- and off-site erosion because of increased application rates or volumes, intensification of grazing, or other conditions attributable to the proposed project. The IWMP shall include management practices to avoid bare soil conditions and to limit grazing intensification over pre-project levels on land with less than 50-percent ground cover. Areas disturbed by grazing or other operational activities attributable to the proposed project shall be re-vegetated. Vegetation shall be maintained on areas adjacent to drainage ways. Erosion and sediment transport BMPs shall be implemented as necessary.</p> <p>The ECOMP shall also include a site inspection and maintenance program. Site inspection shall occur at the beginning of each irrigation season to evaluate erosion and runoff control devices (e.g., embankments, flow control structures, vegetated ground cover, and others). Project-related erosion or erosion hazards conditions shall be repaired prior to the beginning of the irrigation season. Monthly inspections shall be performed during the</p>	<p>MM 4.2-4 lists specific actions required for implementation. Refer to MM 4.2-4.</p>	<p>Project Applicant</p>	<p>In the event WR Application 30166 is approved, the Project Applicant will prepare the ECOMP within 90 days of application approval and submit the ECOMP to the SWRCB for review and approval. Implementation of the ECOMP shall be ongoing for the life of the project.</p>	<p>SWRCB</p>

**TABLE 4-1
MITIGATION MONITORING AND REPORTING PLAN
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Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
<p>irrigation season and repair and maintenance of any runoff or erosion control structures shall be performed as necessary. A final inspection and maintenance of structures shall occur at the end of the irrigation season or by no later than October 15.</p> <p>Inspection and maintenance reports shall be kept on file by the Applicant or their operations manager and be made available to the SWRCB upon request. The ECOMP shall designate the responsible party(s) for completing inspections, maintenance, and training.</p> <p>Operations and management protocols shall be incorporated into the IWMP to minimize the potential for excessive project irrigation and irrigation runoff. Operator training on effective irrigation and irrigation management shall also be incorporated into the associated IWMP. The IWMP shall designate the responsible party(s) for ensuring compliance with the IWMP.</p>				
4.2-6 Implement Mitigation Measure 4.2-4.	Refer to MM 4.2-4	Project Applicant	Refer to MM 4.2-4	SWRCB
4.2-8 Implement Mitigation Measure 4.3-4.	Refer to MM 4.3-4.	Project Applicant	Refer to MM 4.3-4.	SWRCB
DEIR Section 4.3: Biological Resources				
<p>4.3-1 a) In extreme critical dry conditions, when the mean daily flow at the USGS gage is below the 10th-percentile value between December 1 and May 21, pumping shall be reduced to Baseline rates until stream flows exceed the 10th-percentile values for the months of January through April, and the 20th-percentile values for the months of December and May. This measure shall remain in effect until replaced by the flow monitoring and operations plan discussed below (Mitigation Measure 4.3-1(b)).</p> <p>Table A (presented in the Final EIR and reproduced at the end of this MMRP) lists the Baseline (Allowable) Diversion Rate pumping rates to be used for Extreme Critical Dry and Critical Dry conditions when mean daily flow at the USGS gage is less than the 10th- and 20th-percentile flow, as described above.</p> <p>b) The Applicant shall prepare a detailed flow monitoring and</p>	MM 4.3-1 lists specific actions required for implementation. Refer to MM 4.3-1. Table A from the Final EIR and referred to in MM 4.3-1 is reproduced at the end of this MMRP.	Project Applicant	Implementation of MM 4.3-1 shall be ongoing during the life of the project.	SWRCB

**TABLE 4-1
MITIGATION MONITORING AND REPORTING PLAN
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Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
<p>operations plan, for review and approval by the SWRCB, that provides a structured feedback process whereby streamflows during the adult migration period (between November 1 and May 31) are monitored, passage restrictions evaluated, and changes in Project pumping are made to reduce the effect of Project irrigation on adult steelhead movement. The plan shall be prepared in consultation with NMFS and CDFG. Elements to include within this plan are: real-time monitoring protocols (including protocols established pursuant to Mitigation Measure 4.2-2), the flow thresholds established in the FEIR, pump change requirements, recordkeeping, reporting, and an adaptive management feedback system. Following approval by the SWRCB, this plan shall be incorporated into the IWMP and put into effect.</p>				
<p>4.3-2 a) In critical dry conditions, when the mean daily flow at the USGS gage is below the 20th percentile value between July 1 and October 31, project pumping shall be reduced to Baseline (Allowable) Diversion Rates, as specified in Table A [see Mitigation Measure 4.2-2], until streamflows exceed the 20th percentile values for the months of July through October. This measure shall remain in effect until replaced by the flow monitoring plan discussed below (Mitigation Measure 4.3-2(b)). This measure does not limit diversions required to make measurements specified in Mitigation Measure 4.3-2(b), if notification of testing is provided to the SWRCB prior to the test period.</p> <p>b) The Applicant shall prepare a detailed flow monitoring and operations plan in consultation with NMFS and CDFG, for review and approval by the SWRCB, that provides a structured feedback process whereby streamflows during the months of June and October are monitored, passage restrictions evaluated, and changes in project pumping are made to reduce the effect of project irrigation on juvenile steelhead movement. Elements to include within this plan are: real-time monitoring protocols (including protocols established pursuant to Mitigation Measure 4.2-2), the flow thresholds established in the FEIR, pump change requirements, recordkeeping, reporting, and an adaptive</p>	<p>MM 4.3-2 lists specific actions required for implementation. Refer to MM 4.3-2. Table A from the Final EIR and referred to in MM 4.3-1, is reproduced at the end of this MMRP.</p>	<p>Project Applicant</p>	<p>Implementation of MM 4.3-2 shall be ongoing during the life of the project.</p>	<p>SWRCB</p>

**TABLE 4-1
MITIGATION MONITORING AND REPORTING PLAN
EI Sur Ranch Water Right Application No. 30166**

Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
management feedback system. Following approval by the SWRCB, this plan shall be incorporated into the IWMP and put into effect.				
<p>4.3-4 a) Reductions in dissolved oxygen (DO) are most problematic during periods of extremely low flow when pumping causes or contributes to stagnant water conditions in the lower river. When mean daily flow at the USGS gage in the Big Sur River is below 10 cfs and mean daily water temperature is above 18°C, the Applicant shall reduce project pumping to Baseline (Allowable) Diversion Rates (see Table A, Mitigation Measure 4.2-2), except as provided in Mitigation Measure 4.3-4(b). Project pumping shall not resume until the mean daily flow is above 10 cfs, regardless of water temperature changes, or until the Applicant can demonstrate to the satisfaction of the SWRCB that DO levels are consistently above those considered stressful to steelhead (6 mg/L). This Mitigation Measure shall remain in force unless the Applicant implements Mitigation Measure 4.3-4(b) in its entirety. This measure does not limit diversions required for making measurements, as specified in Mitigation Measure 4.2-2.</p> <p>b) If the Applicant elects to make project diversions when flow at the UGSG gage is below 10 cfs and mean daily water temperature is above 18°C, then the Applicant must install a seasonal aeration system in the lower river. The goal of such a system would be to provide DO to aquatic species when project pumping may cause or contribute to stagnant conditions. The system shall consist of an electric compressor located near the New Well, temporary piping laid on the surface of the ground to the river bank, and a distribution system of perforated pipe laid on the bottom of the Big Sur River. The in-stream portion of the distribution system shall, at a minimum, result in average river DO level of six (6) mg/l at each passage transect from transect 2 through and including transect 8. The network on the stream bottom shall be painted black or brown to minimize visual disruption for park users. All equipment shall be removed from the active channel by November 1.</p>	MM 4.3-4 lists specific actions required for implementation. Refer to MM 4.3-4.	Project Applicant	Implementation of MM 4.3-4 shall be ongoing during the life of the project.	SWRCB

**TABLE 4-1
MITIGATION MONITORING AND REPORTING PLAN
EI Sur Ranch Water Right Application No. 30166**

Mitigation Measure	Action	Implementing Party	Timing	Monitoring Party
<p>The overall feasibility of such a system is unclear. Aeration systems have been installed on ponds and lakes, but in-stream systems are extremely rare. A feasibility study shall be prepared and all required permits obtained before this measure is implemented in lieu of Mitigation Measure 4.3-4(a). This feasibility study shall include an evaluation of potential impacts associated with implementation of the Mitigation Measure including potential impacts on noise and visual quality, construction impacts associated with installation of the compressor and utility lines, equipment maintenance and operations, and other considerations, as required by the SWRCB. It is expected that the required permits would include specific requirements to minimize potential impacts to aquatic habitat, such as erosion and siltation, from implementation of this Mitigation Measure.</p>				
Cumulative Impacts				
4.2-10 Implement Mitigation Measure 4.2-2	Refer to MM 4.2-2	Project Applicant	Refer to MM 4.2-2	SWRCB
4.2-11 Implement Mitigation Measure 4.2-4.	Refer to MM 4.2-4	Project Applicant	Refer to MM 4.2-4	SWRCB
4.3-9 Implement Mitigation Measures 4.3-1(a) and 4.3-1(b).	Refer to MM 4.3-1(a) and MM 4.3-1(b).	Project Applicant	Refer to MM 4.3-1(a) and MM 4.3-1(b).	SWRCB
4.3-10 Implement Mitigation Measures 4.3-2(a) and 4.3-2(b).	Refer to MM 4.3-2(a) and MM 4.3-2(b)	Project Applicant	Refer to MM 4.3-2(a) and MM 4.3-2(b)	SWRCB
4.3-12 Implement Mitigation Measures 4.3-4(a) and 4.3-4(b).	Refer to MM 4.3-4(a) and MM 4.3-4(b).	Project Applicant	Refer to MM 4.3-4(a) and MM 4.3-4(b).	SWRCB
5-4 Implement Mitigation Measures 4.3-1, 4.3-2, and 4.3-4.	Refer to MMs 4.3-1, 4.3-2, and 4.3-4.	Project Applicant	Refer to MMs 4.3-1, 4.3-2, and 4.3-4.	SWRCB

Table A is presented on page 3-66 of the El Sur Ranch Water Right Application No. 30166 Final EIR and reproduced here for use with the MMRP.

<i>TABLE A</i>		
<i>EXTREME CRITICAL DRY AND CRITICAL DRY FLOW RATE LIMITATIONS ON PROJECT DIVERSIONS</i>		
<i>Month</i>	<i>USGS Limiting Flow Rate^a cfs (flow rate percentile)^c</i>	<i>Baseline (Allowable) Diversion Rate^b cfs</i>
<i>January</i>	<i>18 (10th)</i>	<i>0.01</i>
<i>February</i>	<i>23 (10th)</i>	<i>0.00</i>
<i>March</i>	<i>31 (10th)</i>	<i>0.00</i>
<i>April</i>	<i>26 (10th)</i>	<i>0.42</i>
<i>May</i>	<i>22 (20th)</i>	<i>1.69</i>
<i>June</i>	<i>11 (10th)</i>	<i>2.89</i>
<i>July</i>	<i>10 (20th)</i>	<i>2.48</i>
<i>August</i>	<i>8.4 (20th)</i>	<i>2.32</i>
<i>September</i>	<i>7.7 (20th)</i>	<i>2.60</i>
<i>October</i>	<i>7.9 (20th)</i>	<i>1.47</i>
<i>November</i>	<i>9.8 (10th)</i>	<i>0.20</i>
<i>December</i>	<i>17 (20th)</i>	<i>0.05</i>

Notes:
a. When flow rates at the USGS gage drop below this value, Project diversions shall not exceed Baseline (Allowable) Diversion Rate
b. The 20-year historic Baseline average diversion rate is the allowable diversion rate when flow at the USGS gage drops below the USGS Limiting Flow Rate
c. These numbers represent the USGS daily flow rate at the with the corresponding 20-year historic flow rate percentile in parenthesis. For example, in January, 18 cfs at the USGS gage station corresponds to the 10th percentile flow rate.
Source: PBS&J 2009.

5.0 REPORT PREPARERS

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