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**BEFORE THE STATE WATER  
RESOURCES CONTROL BOARD**

In the Matter of the State Water Resources )  
Control Board (State Water Board) )  
Hearing to consider Monterey Peninsula )  
Water Management District's (MPWMD) )  
Petitions to Change Permits 7130B and )  
20808 (Applications 11674B and 27614) )

Hearing Date: September 24, 2007  
Carmel River in Monterey County

**EXHIBIT HS-8**

**MONTEREY PENINSULA WATER MANAGEMENT DISTRICT**

**Comment letter from National Marine Fisheries Service on Draft EIR  
And MPWMD responses to comments in Final EIR on ASR Project**

Letter 6



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Southwest Region  
777 Sonoma Ave., Room 325  
Santa Rosa, CA 95404-6528

May 22, 2006

In response refer to:  
151422SWR04SR20193:JEA

Henrietta Stern, Project Manager  
Monterey Peninsula Water Management District  
P.O. Box 85  
Monterey, California 93942-0085

Dear Ms. Stern:

Thank you for the opportunity to comment on the Environmental Impact Report /Environmental Assessment (EIR/EA) for the Monterey Peninsula Water Management District's (MPWMD) Aquifer Storage and Recovery (ASR) Project. The MPWMD is proposing an ASR project that will allow for changes in water supply operations that will benefit natural resources of the Carmel River and groundwater resources of the Seaside Basin. The Phase 1 ASR project would divert a maximum of 2,400 acre-feet per year (AFY), and an average of 963 AFY, from the Carmel River and yield an estimated average annual amount of 1,050 AF from the Seaside Basin. This stored water would be available for extraction and use through California American Water's (Cal Am) existing distribution system during the low flow season in lieu of pumping water from the Carmel River Basin.

6-1

South-Central California Coast Evolutionarily Significant Unit (ESU) steelhead are listed as threatened under the Endangered Species Act (ESA) of 1973 and are present in the Carmel River. Populations of steelhead within the South-Central California Coast ESU are at critically low levels. Any adverse impacts to them must be minimized to assure these species do not become extinct. Decreasing flows in the river can delay the migration of upstream adults and downstream juveniles within the system. Decreased flows can contribute to increased water temperatures and a decrease in water quality, both detrimental to salmonids.

MPWMD has incorporated NOAA's National Marine Fisheries Service's (NMFS) bypass flow requirements from NMFS' June 2002 report, "Instream Flow Needs for Steelhead in the Carmel River, bypass flow recommendations for water supply projects using Carmel River waters" (Flow Report) into the ASR Project. This mitigation will ensure adequate flows are available for spawning and migration of listed steelhead throughout the length of the river.

Our bypass flow requirements, written in 2002, were based, in part, on existing stream channel conditions. As you are aware, stream channel conditions vary over time. For most of the last 30

6-2



years, the stream channel below River Mile (RM) 5.5 has consisted mostly of sand, lacking in any significant amounts of gravel. However, in the last few years, sand has moved out of the system, leaving a gravel bed. Because of this morphological change, it will be necessary to monitor below RM 5.5 to determine if channel modifications are necessary to provide for passage and to examine the adequacy of bypass flows for spawning and nursery habitat below RM 5.5. We recommend the EIR/EA include this additional monitoring requirement as mitigation in addition to the requirements in our Flow Report.

6-2  
cont.

According to the EIR/EA, MPWMD's ASR Project will, on average, extract 963 AFY of water from the Carmel River during the high flows in the winter season. In keeping with State Water Resource Control Board's Order 95-10, this same amount should be reduced from Cal Am's unauthorized diversions, to provide flows for listed steelhead. Mitigation Measure GWH-4: *Operate Project in Compliance with NOAA Fisheries Recommendations and to Reduce Unlawful Diversions* states, "In addition, Cal Am should be required to utilize water that is available from the Seaside Basin to help reduce unlawful diversions from the Carmel River." Stating "Cal Am should be required (my italics) to utilize water..." is not a mitigation measure for impacts to streamflows. NMFS recommends MPWMD change this mitigation measure to state, "The maximum diversion of 11,285 AFY by Cal Am from the Carmel River shall be decreased to reflect the average 963 AFY being diverted for ASR."

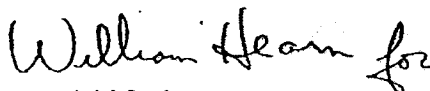
6-3

Analyses in the EIR/EA show streamflows will likely flow farther and persist longer during the low flow season from June through November with the proposed Project. NMFS supports the ASR Project because it will potentially improve habitat conditions for juvenile steelhead during the time of year when streamflow has been critically low or non-existent due to water withdrawals.

6-4

If you have any questions concerning the above comments, please contact Ms. Joyce Ambrosius at (707) 575-6064 or joyce.ambrosius@noaa.gov.

Sincerely,



Dick Butler  
Santa Rosa Area Office Supervisor  
Protected Resources Division

cc: R. Strach, NMFS, Sacramento  
R. Thomas, CRSA  
K. Urquhart, CDFG, Monterey

## Comment Letter 6— National Oceanic and Atmospheric Administration, May 22, 2006

### Response to Comment 6-1

The comment is introductory. No response is required.

### Response to Comment 6-2

The commenter correctly notes that the NOAA Fisheries bypass flow recommendations are, in part, based on stream channel conditions. The information used to develop bypass flow recommendations for upstream migration below River Mile (RM) 5.5 was based on analysis of water depths over a series of critical riffles in the lower Carmel River during 1982, 1992, and 1997 (Dettman and Kelley 1986, Dettman 1989, Dettman 1994, Fisheries Working Group 1994, Entrix 2000). While data from these years represent a wide range of streamflows, the streambed was dominated by sand and fine gravel below RM 5.5 during this historical period. Since that time and with few exceptions, the streambed in this reach has coarsened and the low-flow channel has narrowed in many places. Hypothetically, these changes are beneficial in the sense that the flows necessary for maintenance of adequate arrays of water depth and velocity should be lower than originally recommended. However, as the commenter notes, streambed conditions are variable depending on the supply and transport of sand to the channel. In response to the commenter's recommendation for monitoring and modifying channel conditions below RM 5.5, MPWMD believes this is appropriate as long as there is an opportunity and mechanism to lower the bypass flow recommendation, if streambed and channel conditions are maintained and persist in a favorable condition. For example, with the improved, existing streambed conditions, bypass flows of less than 60 cfs may provide adequate passage conditions.

To address these issues MPWMD proposes to adopt Mitigation Measure AR-1, which is presented in Chapter 2 of this final EIR/EA and added to page 5-21 of the draft EIR.

Regarding the commenter's recommendation that it will be necessary to examine the adequacy of the bypass flows for spawning and rearing habitats below RM 5.5, MPWMD notes that no specific study has been conducted relating spawning habitats or rearing habitats to streamflow in the lower section of the river. Considering this basic lack of information, MPWMD believes the best approach is to continue monitoring the number of steelhead nests in this reach and counts of the number of juvenile fish rescued in the reach below RM 5.5, as part of the existing Mitigation Program for the MPWMD Water Allocation Program. With sufficient time, this monitoring will yield additional information on the adequacy of

streamflow and channel conditions in providing suitable spawning and rearing habitats for early phases in the steelhead life history in this reach of the river.

## Response to Comment 6-3

NOAA Fisheries' concerns regarding assurance that the proposed Phase 1 ASR Project will operate as designed and will benefit the Carmel River and dependent resources as described in the DEIR/EA are shared by the CDFG. Specifically, these agencies want assurances that, not only will the Proposed Project comply with the bypass flow requirements recommended by NOAA Fisheries in their June 2002 report, but also that the "excess"<sup>3</sup> water diverted for injection into the Seaside Basin during high-flow periods will be used to benefit the Carmel River system and steelhead during low-flow season. More specifically, the agencies want a "guarantee" that, over time, the amount of water diverted from the Carmel River for injection into the Seaside Basin during the December – May period will be offset by the amount of additional water pumped by Cal-Am from the coastal area of the Seaside Basin during the June – November period. By having this additional water available for pumping from the Seaside Basin in the low-flow season and assuming the same customer demand, Cal-Am would be able to reduce its diversion from the Carmel River system during the low-flow season by a commensurate amount and provide improved flow conditions for steelhead.

In meetings with NOAA Fisheries and CDFG in Spring/Summer 2006, it became clear that more explicit rules governing when and how the injected water in the Seaside Basin would be recovered were needed, and that these "recovery rules" should be incorporated into the new water right permit sought by MPWMD and Cal-Am for the Phase 1 ASR Project. These recovery rules would be analogous to the bypass flow requirements recommended by NOAA Fisheries for diversions for injection. The recovery rules were developed by MPWMD staff following discussions with NOAA Fisheries and CDFG staff in June 2006 and incorporated into MPWMD's operations model, CVSIM3. The rules and revised computer code were tested and a new simulation, Run #7, was generated on June 25, 2006. The recovery rules are summarized below.

### Phase 1 ASR Project Recovery Rules

The 6-month recovery period, June 1 through November 30, used in the original simulation (Run #4) was retained. During this period, the annual amount of water determined to be available for recovery at the end of May each year was uniformly distributed. For example, if it was determined that 1,200 AF were available for recovery during the upcoming recovery season, then 200 AF would be recovered each month between June and November. The daily amount that would be recovered from the Seaside Basin by MPWMD's Phase 1 ASR wells and provided to Cal-Am for customer service, instead of Cal-Am pumping its

<sup>3</sup> Excess water refers to groundwater in the alluvial aquifer underlying the Carmel River that can be diverted by Cal-Am without lowering the mean daily streamflow in the Carmel River below the daily bypass flows recommended by NOAA Fisheries in their June 3, 2002 report, *Instream Flow Needs for Steelhead in the Carmel River, Bypass Flow Recommendations for Water Supply Projects Using Carmel River Waters*.

wells in the Lower Carmel Valley, would vary between 6.5 and 6.7 acre-feet per day (AFD), depending on the number of days in the respective month.

The annual amount of water available for recovery will depend on (a) the amount of water injected into the basin during the preceding injection season, (b) the cumulative amount of water injected into the basin during previous injection seasons that has not been recovered and remains in storage, (c) the annual recovery target specified, and (d) the maximum carryover amount specified.

The amount of water injected into the basin during the preceding injection season will vary depending on streamflow conditions in the Carmel River mainstem and the reach of the Carmel River from which the diversions are made. For the simulation, mean daily streamflows based on historical mainstem and tributary flows in the Carmel River Basin between October 1, 1957, through September 30, 2002, were used. For the revised simulation, it was assumed that all diversions from the Carmel River by Cal-Am for the Phase 1 ASR Project would come from wells in the reach between San Clemente Dam and RM 5.5. As explained in Response to Comment 9-2, the bypass flow requirements in this reach are greater than the requirements in the reach between RM 5.5 and the lagoon. Accordingly, less water would be available for diversions from the Carmel River for injection into the Seaside Basin in the revised simulation. As originally simulated, the amount of water available annually for injection from the reach *below* RM 5.5 would average 963 AF and range from 0 to 2,374 AF. As revised, the amount of water available annually for injection from the reach *above* RM 5.5 would average 918 AF and range from 0 to 2,348 AF.

The cumulative amount of water injected into the basin during previous injection seasons that has not been recovered and remains in storage is tracked during the simulation and represents the amount of carryover storage in the Seaside Basin that is available at the end of each injection season due to the Phase 1 ASR Project. If available, this storage can be used to meet the specified recovery target. Similarly, this storage can be added to, if the amount injected during the previous injection season exceeds the specified recovery target.

For the revised simulation, the annual recovery target was specified at 1,500 AFY. This target was selected through an iterative process so that the average annual amount of water recovered from the Seaside Basin and provided to Cal-Am (i.e., 916 AFY) approximated the average annual amount of water diverted from the Carmel River by Cal-Am for injection (i.e., 918 AFY) over the 45-year simulation period. In the revised simulation, the amount of water recovered annually from the Seaside Basin would range from 31 to 1,475 AF.

For the revised simulation, the maximum carryover amount specified was 5,000 AF. This maximum acts as an upper bound on the amount of injected water that is allowed to accumulate in the Seaside Basin. In the simulation, the 5,000 AF maximum was selected to provide 1,000 AFY for the 5-year drought of record in the Monterey Peninsula area (i.e., Water Years 1987 through 1991). If a series of wet years occur, diversions for injection would be sufficient to meet the 1,500 AF annual recovery target, and carryover storage would accumulate over time, eventually exceeding 5,000 AF at the end of the injection season. In this

situation, the injected water in storage in the Seaside Basin in excess of the 5,000 AF will be added to the annual recovery target amount for the upcoming recovery season and distributed uniformly over the 6-month recovery period. For example, if carryover storage was 5,800 AF at the end of the preceding injection season, then the recovery target for the upcoming recovery season would be 2,300 AF (1,500 AF target goal + 800 AF excess storage), with approximately 380 AF recovered each month for 6 months.

The determination of the amount of water available for recovery is made at the end of May each year. In the simulation, the determination is made on June 1 each year. In real-time, it is expected that the determination will be made in May by the MOA group (Cal-Am, CDFG, NOAA Fisheries, and MPWMD) as part of the MOA process. In the simulation, once the determination is made, the daily amount of injected water that is targeted for recovery is taken *before* Cal-Am operates its Carmel Valley wells to meet customer demand. This logic ensures that Cal-Am will reduce its diversions from the Carmel River during the low-flow season when injected water is being recovered for Cal-Am customer use. In real-time, it is expected that the targeted recovery amounts that have been determined will be incorporated into the *Quarterly Water Supply Strategy and Budgets* for Cal-Am that the MOA develops each year in September, December, March, and June.

The revised logic, by "tying" the amount of water that can be recovered in a year to the amount of water that was injected during that year plus injected water in storage, provides an explicit accounting procedure to track water injected, stored, and recovered over time. This procedure can be used to ensure that water diverted from the Carmel River for injection during the high-flow winter months is used to reduce Cal-Am's diversions from the Carmel River during the low-flow summer months.

Based on the revised simulation for the Phase 1 ASR Project, annual injections would average 918 AFY and annual recoveries would average 916 AFY. With the Phase 1 ASR Project, Cal-Am's diversions from the Carmel River for customer service would average 9,885 AFY. Without the Phase 1 ASR Project (i.e., No-Project), Cal-Am's diversions from the Carmel River for customer service would average 10,521 AFY. This reduction in Cal-Am's diversions from the Carmel River for customer service would occur during the June through November period and range from a 98 to 121 AF reduction per month, thus providing a benefit during the most critical months of the year. It should be noted that with the Phase 1 ASR Project, Cal-Am would also divert an average of 918 AFY of excess water from the Carmel River during the high season for injection. This diversion would be made under a new water right held jointly by Cal-Am and MPWMD. Diversions by Cal-Am for injection during the high-flow season would not count against the 11,285 AFY diversion limit specified in SWRCB Order 95-10 for Cal-Am's diversions from the Carmel River for customer service.

MPWMD is confident that the recovery rules developed in cooperation with CDFG and NOAA Fisheries will provide adequate assurance to the agencies that the proposed Phase 1 ASR Project will be operated as designed and will provide

the benefits described in the DEIR/EA to the Carmel River and dependent resources, including the listed Carmel River steelhead population. The recovery rules will be included as a condition of the new water right that will be issued by the SWRCB and held jointly by Cal-Am and MPWMD.

The revised operations described above would not change any of the environmental conclusions described in the draft EIR. The final EIR will include revised text for Chapter 8, "Modeling Assumptions," to describe the revised operating procedures.

### **Response to Comment 6-4**

The comment expresses support of the Proposed Project and does not address the adequacy of the draft EIR/EA. No response is required.