EXHIBIT E

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DVD TRANSMITTED VIA HAND DELIVERY

TRANSCRIPT OF DVD ENTITLED "HILTON CREEK 2003"

The following was prepared by Morrison & Foerster LLP, and is a true and correct transcript of the DVD entitled "Hilton Creek 2003" by Dr. Alice Rich, which DVD was provided to COMB on or about September 29, 2003 in connection with comments on the Draft FMP EIR/EIS.

Time	Text	
0:30	Hilton Creek is a small, intermittent tributary stream of the Santa Ynez River in Santa Barbara county, California. From its origin in the Los Padres National Forest, the Hilton Creek stream bed extends down through private property for approximately three miles before reaching a large culvert built under Highway 154. Downstream of the Highway 154 culvert the stream bed continues another 2/10ths of a mile on private property before entering the U.S. Bureau of Reclamation land for an additional 6/10ths of a mile. At two points in this short stretch of the creek the Bureau discharges water into the usually dry Hilton Creek by drawing water from nearby Lake Cachuma.	
1:10	Below the two discharge points, Hilton Creek joins the Santa Ynez River immediately below Bradbury Dam and Lake Cachuma. Steelhead have been observed migrating up the	

Time	Text	
	Santa Ynez River during flood years when the sand bar is breached at surf. Prior to the construction of Bradbury Dam, they migrated to spawning and rearing grounds above what is now Lake Cachuma. Occasionally Steelhead are still found in the Santa Ynez River below Bradbury Dam, and Rainbow trout are abundant both above and below the dam because of the California Fish and Game's trout planting program. However, Hilton Creek has never been considered a viable Steelhead creek because of both lack of water and the absence of suitable habitat to support them. Sightings of fish in Hilton Creek have been limited to some juvenile and adult fish in the lower section of the creek below the discharge points where the Bureau supplements the flows. Because of the genetic and biological similarities between endangered Steelhead and the more abundant Rainbow trout, it has not been confirmed whether or not the fish observed in this short portion of Hilton Creek were Steelhead or Rainbow trout.	
2:22	The Steelhead is the anadromous form of the Rainbow trout.	

Time	Text	
	An anadromous fish refers to a fish which is born in fresh water, and after rearing in its native stream or river, immigrates to the ocean, where it continues to grow. Steelhead in southern and central California typically rear in fresh water for one to two years before immigrating to the ocean during the spring. After a period of time in the ocean the adult Steelhead returns to its native habitat to spawn.	
2:53	The Rainbow trout is the resident form of the Steelhead. Visually it is not possible to differentiate a juvenile Steelhead from a juvenile Rainbow, as they look identical to one another. Although adult Steelhead are larger and more colorful than adult Rainbow trout during spawning season, it is, again, difficult to determine whether or not an adult is a Steelhead or a Rainbow trout. Thus, without any genetic verification studies it is best to refer to the species as a Rainbow/Steelhead.	
3:24	For many years Rainbow and Steelhead trout have been bred and raised in fish hatcheries such as the hatchery in Fillmore, California. During the last five decades, over two million	

Time	Text	
	hatchery-raised Rainbow trout have been planted in the Santa Ynez River, many of its tributaries, and Lake Cachuma. The only year of record that Steelhead were planted in the Santa Ynez River water shed was in 1954, when about 16,000 Steelhead were planted in the lagoon at the mouth of the Santa Ynez River. However, there are no records that demonstrate that either Rainbow or Steelhead trout have ever been planted in Hilton Creek. The absence of any record of planting of either Rainbow or Steelhead trout strongly suggests that Hilton Creek never had suitable habitat for these fish.	
4:12	There are numerous scientific studies which demonstrate that when hatchery-born trout interbreed with their wild counterparts in a river system generation after generation, the wild characteristics disappear and are replaced with those of the hatchery fish. In the case of the Santa Ynez River, the decades of planting of hatchery-born Rainbow trout may well have resulted in the replacement of most of the wild Steelhead which migrated. Thus, during wet years when water spills over	

Time	Text	
	Bradbury Dam, Rainbow Steelhead, which have been sighted below the dam near the confluence of Hilton Creek and the Santa Ynez River, were most likely the resident Rainbow trout rather than the migratory Steelhead.	
4:54	To further determine whether or not Hilton Creek is suitable as a viable Steelhead stream, we need to understand the requirements of the fish and the conditions that can limit the ability of a Steelhead to survive. If Hilton Creek does not satisfy these basic requirements it cannot be considered a viable Steelhead habitat.	
5:14	From scientific studies we know that in order to survive and reproduce in fresh water, both the Steelhead and Rainbow trout require adequate water, access to spawning and rearing areas, appropriate physical habitat, water temperatures that are neither too cold nor too hot, enough oxygen to support life, and abundant food sources. On-site studies are critical to determine whether or not a given stream provides the requirements necessary to support a fish population. However, until A.A.	

Time	Text	
	Rich and Associates started studying the upper reaches of Hilton Creek in 2002, no fishery resource studies had ever been conducted on Hilton Creek above the Bureau's property.	
5:58	If life requirements for Steelhead are not met or are less than optimal, their survival and reproductive success is in jeopardy. Some of the conditions that can threaten survival, such as not enough woody debris for habitat, may be influenced by human intervention. However, other life threatening conditions, such as the lack of water throughout the year, often cannot be altered.	
6:23	For the purposes of this video, we will concentrate on the availability of suitable physical habitat, that is, adequate stream flows, accessibility to spawning and rearing habitat, and the suitability of the habitat to support the life stages of an anadromous fish.	
6:44	Adequate stream flows are absolutely critical to the survival of Steelhead in the wild. In March of 1997, as part of the mitigation effort for fish, the National Marine Fishery Service and the U.S. Bureau of Reclamation agreed to begin supplying	

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	water via this water line from Lake Cachuma to the lower 6/10ths of a mile of Hilton Creek on the Bureau's property. This artificial water flow is necessary because Hilton Creek is typically dry most of the year. The Bureau's first discharge point of the Hilton Creek water supply line is located about 3/10th's of a mile upstream of the confluence of Hilton Creek with the Santa Ynez River. The second discharge point is located several hundred feet upstream of that first discharge point. When these two discharge points are providing water there is sufficient water to support the fish in this short portion of Hilton Creek. However, as you can see, immediately above the second discharge point the creek dries up, and even in wet years is only intermittent at best. "Intermittent" means that the creek flows only certain times of the year, when there is water from springs or runoff. During dry years, intermittent creeks such as Hilton Creek may cease to flow entirely.	
8:05	A visit to Hilton Creek in the middle of winter, in early January 2003, showed no water flowing upstream of the Bureau's	

Time	Text	
	property, even with several inches of rain in December 2002. By May 2003, after rain throughout the winter and spring, the creek was dry throughout numerous stretches upstream of the Bureau's property.	
8:29	The Bureau has identified a Steelhead passage barrier to fish migration in Hilton Creek on their property and has suggested modifications to this area to promote greater accessibility to habitat for Steelhead. The lower Santa Ynez River fish management plan describes this fish migration impediment as "a near-vertical six-foot cascade, and an approximately 140-foot long confined bedrock chute situated immediately upstream of the cascade." At the upstream end of this barrier is a waterfall, which A.A. Rich and Associates measured as approximately ten feet high. Without resting areas the fish cannot reach this barrier easily if at all. The 140-foot long inside chute increases the velocity of the flowing water, thus making it difficult for fish to migrate upstream. Similar to the cascade, the chute is without resting areas. Because the chute and cascade are	

Time	Text	
	located together, their impact on fish migration is cumulative. The combination of the cascade, the chute, and the waterfall is likely to exhaust any fish to the point of death.	
9:40	Upstream of the Bureau's property are more barriers. This photo shows the Highway 154 culvert, an impassable fish barrier which Caltrans is proposing to modify. However, the stream bed habitat above the Bureau's property is characterized by numerous steep elevation gains of six to twelve feet due to large boulders, making upstream migration difficult if not impossible. Therefore, modifying the 154 culvert and changing the chute and cascade on the Bureau's property will not result in additional habitat, nor will the alterations guarantee accessibility. Habitat requires water, and more than just a couple of stranded pools that dry up early in the year, and accessibility is based on the ability of the fish to be able to move upstream and downstream throughout the year.	
10:31	In mid-April 2002 A.A. Rich and Associates conducted a comprehensive habitat survey of Hilton Creek beginning at the	

Time	Text	
	Bureau's upper property boundary line and proceeding upstream to just below the Los Padres National Forest line. In 2002, upper Hilton Creek was a dry creek bed. In July of 2002 and January 2003, with the Bureau's permission Dr. Alice Rich made site visits to Hilton Creek from the confluence with the Santa Ynez River upstream to the Bureau's property boundary. Because both supplemental discharge points were active in January 2003, there was abundant water on the Bureau's property while the upper part of Hilton Creek was dry.	
11:14	In April 2002 thermographs were placed in representative pools throughout the upper reaches of Hilton Creek to record water temperature changes. In addition, monthly dissolved oxygen measurements were reported in a few remaining stranded pools, that is, no flow in or out. The shallow stranded pools that did exist were covered with algae, which severely reduces the levels of dissolved oxygen, thus rendering them unsuitable as Rainbow Steelhead habitat.	
11:45	By mid-June 2002 all of the pools A.A. Rich and Associates	

Time	Text	
	had observed in April had disappeared. Although 2002 was a lower-than-normal rainfall year, the lack of water in Hilton Creek is a normal phenomenon that has been documented for over seventy years. This means that substantial segments of the creek will completely dry nearly every year. Thus, even in a good year, Hilton Creek dries up during the times when young Steelhead need water for rearing.	
12:12	Appropriate spawning gravel is also a crucial element of suitable Rainbow/Steelhead habitat. Typically Steelhead do not use creeks for spawning when the rocks are too large. In addition, while Steelhead may create a nest of eggs called a "red," in areas of small amounts of gravel and higher silt content the viability of the eggs and emerging larvae is compromised due to the silt smothering both eggs and larvae, unlike the suitable spawning gravel which characterizes portions of Santa Ynez River, and particularly those portions upstream of Lake Cachuma. The only suitable spawning gravel in Hilton Creek occurs at its confluence with the Santa Ynez	

Time	Text	
	River.	
12:53	To determine the suitability of spawning habitat, A.A. Rich and Associates collected three dozen substrate samples in representative reaches of Hilton Creek upstream of the Bureau's property. None of the samples contained good spawning gravels. The substrate in Hilton Creek upstream of the Bureau's property consisted of a high degree of fine materials such as clay, silt, and sand, interspersed with large rocks besides boulder, rubble and cobble, none of which are suitable for spawning. As shown in this figure, the average amount of fine material in the three dozen substrate samples was about forty percent. This is over two and a half times what is considered suitable for successful spawning. During times when there is water flowing down Hilton Creek, the fine substrate would smother any eggs or larvae. This would result in no survival.	
13:45	In summary, there are a number of factors that limit Steelhead survival in Hilton Creek. These include lack of water and no flowing water, impassable migration barriers, no spawning	

Time	Text	
	gravel, and a lack of rearing areas due to the poor quality of the pools that do exist. In southern and central California, Steelhead require one to two years of rearing in fresh water before emigrating to the sea. If young Steelhead are prevented from emigrating out of a fresh water system due to the lack of water flow, they can die from stress. As shown in this video, Hilton Creek upstream of the Bureau's property does not offer adequate water during most of the year, nor does it have suitable spawning or spring and summer rearing habitat. Encouraging adult fish to move upstream if water is temporarily available will certainly result in high fish mortality. Due to the lack of habitat available for spawning and rearing, as well as the lack of water during most years, Hilton Creek is not acceptable as a candidate for creating a viable Steelhead population.	