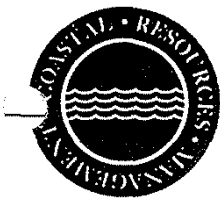


G. Sea Otter Data

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June 30, 1995

MARINE BIOLOGICAL & WETLAND ENVIRONMENTAL CONSULTING

Ms. Tiffany Welch
U.S. Army Corps of Engineers, Los Angeles District
Regulatory Branch-Ventura Field Office
2151 Alessandro Drive, Suite 255
Ventura, CA. 93001

Re: Brief Synopsis of Southern Sea Otter (*Enhydra lutris nereis*) Issues and Mitigation Measures, Cambria Desalination Facility Project

Dear Ms. Welch:

The Cambria Community Services District (CCSD) proposed desalination facility's intake and discharge structures will be located within the southern portion of the Southern sea otter's range offshore of San Simeon Creek. This region of coastline is considered to be a very productive and established habitat for the sea otter which is a federally-listed threatened species under the Endangered Species Act (1973) and a protected marine mammal under the Marine Mammal Protection Act (1972).

Concern has been expressed that dredging operations and construction of the offshore intake and discharge structures may adversely affect local populations of sea otters. The concerns expressed by wildlife agencies were addressed in the Desalination Facility Final EIR Response to Comments and in the Marine Biological Impact Reduction Plan (MBIRP) prepared by CRM (1994) and included as Appendix F-1 in that document. The following discussion is a brief review of the potential issues and a further explanation of the methods by which the CCSD will ensure that no incidental taking or harassment of southern sea otters will occur during the construction of the offshore intake and discharge structures.

Should you have any questions, please give me a call.

Sincerely,

COASTAL RESOURCES MANAGEMENT


Rick Ware

Principal/Marine Biologist

cc: Dave Andres, Cambria Community Services District

June 30, 1995

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**SYNOPSIS OF SOUTHERN SEA OTTER (*ENHYDRA LUTRIS NEREIS*) ISSUES
AND
MITIGATION MEASURES TO PREVENT
THE INCIDENTAL TAKING OF SEA OTTERS
CAMBRIA COMMUNITY SERVICES DISTRICT
DESALINATION FACILITY PROJECT**

SEA OTTER COUNTS IN THE REGION AND THE LOCAL PROJECT AREA

The annual National Biological Survey's spring sea otter population count between Gaviota and Point San Pedro tallied 2,377 animals in May 1995 (Harris pers. comm). This number represents an increase of 18 animals since the 1994 census.

In the local kelp beds between Cambria and San Simeon, the number of adults and pups counted between January 1993 and February 1995 varied from 44 during April 1994 to 142 during January 1993. The average number counted per month was 100 +/- 27 animals (Figure 1). These counts exclude sea otters that were observed farther offshore and outside the typical kelp bed during the surveys. Pups were present during each survey; their counts ranged from 1 to 17 individuals (California Department of Fish and Game unpublished data).

A total of 169 sea otters were counted between Cambria and San Simeon Pier on June 29, 1995. This count included 149 adults, 16 large pups, and 4 small pups (Harris pers. comm). The makeup of the population included resident males, subdominant males, females, and pups.

Incidental sightings of sea otters were recorded during biological and oceanographic surveys conducted in autumn 1994, winter 1995, and spring 1995 (Coastal Resources Management [CRM] 1994a; CRM unpublished data). These sightings occurred in kelp bed habitat and the sand channel (between 2,000 ft upcoast and 2,000 ft downcoast of the center of the sand channel) in the immediate vicinity of the proposed seawater infiltration gallery and the proposed brine discharge pipeline located offshore of San Simeon Creek. Sea otter sightings per day (7 total days) varied from 0 to 4 during October and November 1994. Between 0 and 14 sightings per day were observed from February to June 1995 (8 days). On March 16th, three of four sea otter sightings occurred in the sand channel and not in the nearby kelp beds; the highest counts occurred on May 9 when 14 otters were observed between the 30 to 100 ft isobaths.

**CONSTRUCTION METHODS AND TIMING FOR OFFSHORE CONSTRUCTION
ACTIVITIES**

Proposed construction methods are summarized in the ACOE Public Notice of Permit Application for the project (94-50819-TAW) and are not repeated here. Key elements that have a potential to affect southern sea otters will include dredging in the sand channel offshore of San Simeon Creek and the construction of an infiltration seawater intake gallery, and the laydown

of 200 ft of outfall pipeline. These activities will take place from a moored barge in the sand channel which is bracketed on the north and the south by kelp beds and reefs. The construction is proposed to occur within a 30-day window between March and July 1996.

POTENTIAL ADVERSE EFFECTS TO SEA OTTERS

Adverse effects that could potentially occur as a result of construction activity include displacement of individuals to adjacent habitat that may increase competition for food resources, preferred resting sites, and possibly aggressive behavior between territorial male sea otters; direct mortality; or changes in behavior (foraging, resting, interacting, grooming, or swimming) of individuals that may be nearby the offshore construction site.

Sea Otter Displacement

Sea otters are generally less abundant in the San Simeon to Cambria area during mid-winter and spring non-breeding periods than during the summer and fall breeding periods (Riedman and Estes 1990). The makeup of the population during the mid-winter and spring non-breeding period and the early summer breeding period (the periods coinciding with the offshore components of the desalination facility) will consist of females and pups, resident males, and increasing numbers of subdominant males, and adult males returning to breed.

The sea otter population is expected to be approaching its carrying capacity during proposed late-spring to early-summer construction period. Based on data collected between 1993 and 1995, the number of sea otters in kelp beds between Cambria and San Simeon might be between 50 and 90. A small percentage of these will be found in the local kelp beds offshore of San Simeon Creek and even fewer will rest or feed in the sand channel construction zone. These individuals will likely remain within the area between San Simeon and Cambria without incurring significant biological impacts.

The chances that project-related effects (i.e., increased stress levels from construction noise boat traffic and human activity) would displace sea otters from the local area and that these otters would impinge on the territories of other otters is also minimal since the population will not be at its peak summer to fall density (when population-related stresses would be maximum) and the construction activity is not expected to result in elevated stresses that might trigger a displacement of sea otters to other areas.

Reduction of Sea Otter Food Resources

A small area of sand bottom habitat will be excavated and covered by the infiltration gallery and by the brine discharge pipeline. This could result in a reduction of sea otter prey items such as clams, cancer crabs, and sea stars based upon historical analysis of sea otter prey in the area and sand bottom dive studies conducted in the project area during 1994 and 1995.

Ebert (1967 and 1994) and Hatfield et al. (in prep) conducted sea otter food and foraging studies in the local project area. Ebert indicated that red sea urchins and abalone had been seriously depleted from the project area as a result of sea otter foraging activity. Subtidal census in the project area during fall 1994 and spring 1995 (CRM 1994; CRM unpublished data) concurred with Ebert's observations that these resources were generally absent from the local reef habitats. Hatfield et al. collected extensive sea otter foraging behavior and prey analysis in the vicinity of San Simeon between 1978 and 1982. Sea otters foraged on 23 invertebrate taxa and a combined grouping of unidentified small prey items. Abalone, urchins, and octopus were infrequently foraged upon while sea stars, cancer crabs, kelp crabs, and clams were the most frequently occurring species in sea otter diets. Hatfield et al. also noted that none of the clams in the sea otter diets were pismo clams (*Tivela stultorum*).

CRM conducted subtidal diving surveys at the proposed sites of the infiltration gallery and the brine discharge outfall as well at control stations offshore of Pico Creek and Santa Rosa Creek in autumn 1994 (CRM 1994a) and in March 1995 (CRM unpublished data). The sand bottom epifauna at the project site was dominated by ornate tube worms (*Diopatra ornata*), hermit crabs (*Isocheles pilosus*), and sand dollars (*Dendraster excentricus*). Potential sea otter food resources were present in very low densities. These included cancer crabs (*Cancer* spp), moon snails (*Polinices alta*), and sea stars (*Pisaster brevispinus*). Clams were not found in the sand channel during the autumn 1994 and spring 1995 surveys but they likely occur in low densities.

Mitigation for the potential loss of these sea otter food resources is presented below.

Direct Mortality or Changes in Individual Sea Otter Behavior

Individual sea otters may occur within the nearby kelp beds or in the sand channel during the construction period. To prevent the incidental taking or harassment of individual otters, CCSD will initiate a sea otter mitigation monitoring program, as outlined below and in the Marine Biological Impact Reduction Plan (MBIRP) (CRM 1994b) of the Final EIR for the project.

SEA OTTER MITIGATION AND MONITORING PROGRAM

The purpose of the mitigation program will be to prevent the incidental taking and harassment of sea otters. The monitoring program will be administered by CRM for the CCSD. CRM will hire an wildlife and regulatory agency-approved sea otter biologist to conduct the field studies. The biologist will make daily observations of sea otter behaviors and movements during the construction period and will have the authority to temporarily halt construction operations if he determines that there is any risk to or potential harassment of any sea otters in the general area of construction. This person will have experience in conducting similar sea otter monitoring projects in the local region.

CRM proposes to hire Mr. Michael Harris of Morro Bay, California for this purpose. Mr. Harris has been determined to possess the necessary qualifications by the California Department

of Fish and Game and the U.S. Fish and Wildlife Service to conduct sea otter monitoring surveys. He recently completed a similar monitoring program for Science Applications International Corporation (SAIC) in the vicinity of the AT&T TPC-5 Cable Landing Project at Montana de Oro State Park, San Luis Obispo County, CA. The results of that survey indicated that the project had no negative or adverse impacts on individual sea otters. At no time during construction were otters physically endangered, nor were ecologically significant changes in behavior noted. It was not necessary at any time to halt construction (SAIC 1995).

The following elements will be included in the sea otter mitigation monitoring plan:

- Submit a final sea otter mitigation monitoring program scope of work to the Army Corps of Engineers (ACOE) and the Fish and Wildlife Service (FWS);
- convene a pre-construction meeting with the ACOE, FWS, the California Department of Fish and Game (CDF&G), and the CCSD to review the mitigation program;
- conduct a pre-construction sea otter reconnaissance survey the week prior to the arrival of the construction barge to document normal behaviors and movements of sea otters in the general vicinity of the project;
- make daily observations of sea otter behavior and movements relative to construction activity for the intake and discharge structures offshore of San Simeon Creek. The construction period is anticipated to be 30 days;
- submit daily progress reports to the CCSD and the ACOE; and
- submit a final project report to the ACOE within 1 month following the completion of offshore construction activities.

In addition to this field monitoring program CRM will initiate a subtidal survey of potential sea otter food sources (crabs, clams, and sea stars) in the vicinity of the proposed infiltration gallery. This will be initiated immediately prior to construction. All crabs, clams, and sea stars found within the proposed footprint of the structures will be relocated to another area of the sand channel to prevent the loss of potential sea otter food resources.

LITERATURE CITED

California Department of Fish and Game (no date). *Sea otter ground based surveys. Summary of counts in the Cambria-San Simeon Area, Pico Creek to Santa Rosa Creek.* Unpublished data.

- Coastal Resources Management. 1994a. *Cambria Community Services District Proposed Desalination Facility. Preconstruction Marine Biological Surveys. Appendix F-4. In: Final Environmental Impact Report: Cambria Desalination Facility. Prepared by Coastal Resources Management, Corona del Mar, CA. for the Cambria Community Services District. 23 pp. plus appendices.*
- Coastal Resources Management 1994b. *Cambria Community Services District Proposed Desalination Facility. Marine Biological Impact Reduction Plan. Appendix F-1. In: Final Environmental Impact Report: Cambria Desalination Facility. Prepared by Coastal Resources Management, Corona del Mar, Ca. for the Cambria Community Services District. 30 pp.*
- Coastal Resources Management. Unpublished data. *Field notes of oceanographic and biological surveys conducted for the Cambria Community Services District, February to June 1995.*
- Ebert, E. E. 1967. *Foraging activity of sea otters in the San Simeon-Cambria Region. November 13 through 16th, 1967. Marine Resources Operations Laboratory. MRO Reference Number 67-31. 10 pp.*
- Harris, M. Telephone conversation with R. Ware, Coastal Resources Management. June 29, 1995.
- Hatfield, B. B., R. A. Hardy, F. E. Wendell, and J. A. Ames. (in preparation). *A comparison of sea otter food habits in both an established and a newly colonized area in California. Draft. 24 pp. plus tables.*
- Jameson, R. 1994 *Results of spring 1994 survey of the mainland California sea otter population. United States Department of the Interior. National Biological Survey. 3 pp. June 1, 1994. Unpublished letter report to survey team members.*
- Riedman, M. L. and J. A. Estes. 1990. *The sea otter (Enhydra lutris): Behavior, ecology, and natural history. Biological Report 90 (14). U.S. Department of the Interior, Fish and Wildlife Service. Washington D.C. September 1990. 126 pp.*
- Science Applications International Corporation (SAIC). 1995. *Report on the Southern sea otter (Enhydra lutris nereis) in the vicinity of the AT&T TPC-5 Cable Landing Project at Montana de Oro State Park, San Luis Obispo County, California. (Draft). Submitted to Mr. Craig Fannes, Field Supervisor. U.S. Fish and Wildlife Service, Ventura Field Office. March 1995. 9 pp.*
- Wendell, F. 1994. *Relationship between sea otter range expansion and red abalone abundance and size distribution in Central California. Calif. Fish and Game (80)2:45-46.]*