



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105-3901

8 January 2008

Mr. Roger Briggs

~~California Regional Water Quality Control Board~~

Central Coast Region

895 Aerovista Place, Suite 101

San Luis Obispo, CA 93401-7906

Re: Morro Bay/Cayucos Wastewater Ocean Discharge Permit

Dear Mr. Briggs:

This office has received concurrence from the U.S. Fish and Wildlife Service, Ventura Office ("FWS"), on U.S. Environmental Protection Agency, Region IX ("EPA"), determination that the continued ocean discharge from the Morro Bay/Cayucos Wastewater Treatment Facility is not likely to adversely effect the endangered brown pelican (*Pelecanus occidentalis*) and threatened southern sea otter (*Enhydra lutris nereis*). A copy of FWS's concurrence letter, dated December 21, 2007, is enclosed for your records.

FWS concurrence concludes the ESA consultation process for this action, and allows EPA and Regional Water Quality Control Board, Central Coast Region, to proceed with the process for re-issuance of the subject permit. Should you or your staff have questions concerning EPA's determination, and FWS concurrence, please contact Aaron Setran (415/972-3457) of EPA's Water Division. For matters related to the permit re-issuance process, please contact Gary Sheth (415/972-3516) of EPA's Clean Water Act Standards and Permits Office.

Sincerely yours,

*Alexis Strauss 8 Jan. 2008*  
Alexis Strauss, Director  
Water Division



FWS Concurrence  
Briggs: RWQCB, Central Coast

Copy w/ Enclosure:

Bruce Keogh, City of Morro Bay, Public Services, 955 Shasta  
St., Morro Bay, CA 93442

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Bonnie Connelly, Cayucos Sanitary District, PO Box 333,  
Cayucos, CA 93430

Lori Okun, Office of Chief Counsel, PO Box 100, Sacramento,  
CA 95812-0100

✓ David Beckman, NRDC, 1314 Second St., Los Angeles, CA 90401





# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Ventura Fish and Wildlife Office  
2493 Portola Road, Suite B  
Ventura, California 93003

IN REPLY REFER TO:  
2007-I-0253

December 21, 2007

Alexis Straus, Director

Region IX

U.S. Environmental Protection Agency  
75 Hawthorne Street  
San Francisco, California 94105

Subject: Continued Ocean Discharge from the Morro Bay/Cayucos Wastewater Treatment Plant

Dear Ms. Straus:

We have reviewed your letter dated September 6, 2007, and received in our office on September 7, 2007, requesting our concurrence with your determination that the subject project may affect, but is not likely to adversely affect, the endangered brown pelican (*Pelecanus occidentalis*) and threatened southern sea otter (*Enhydra lutris nereis*). We have based our response on conversations between our staffs and interested parties, documentation provided by the EPA, and information in our files. Your request and our response are made pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act).

The U.S. Environmental Protection Agency (EPA) proposes to reissue an ocean discharge permit to the Morro Bay/Cayucos Wastewater Treatment Plant (Morro Bay/Cayucos) that authorizes the continued ocean disposal of municipal wastewater that does not meet federal secondary treatment standards. The Morro Bay and the Cayucos Sanitary District ("the applicant") has requested re-issuance of a permit under section 301(h) of the Clean Water Act, 33 U.S.C. section 1311(h). Such a permit, or 301(h) waiver, allows for the ocean disposal of wastewater from a publicly owned sewage treatment plant that is not required to meet federal secondary treatment requirements, as contained in section 301(b)(1)(B) of the Clean Water Act, 33 U.S.C. section 1311(b)(1)(B). The 301(h) waiver is being sought for the Morro Bay-Cayucos Wastewater Treatment Plant, which is a publicly owned treatment works.

The applicant received its first 301(h) waiver from the EPA and Regional Water Quality Control Board (RWQCB) in March 1985 (Permit No. CA0047881). This original permit expired in March of 1990 and has been reissued by both EPA and the RWQCB twice since, in March 1993 and March 1999. The current permit expired on March 1, 2004, and has been administratively extended until a final decision regarding the applicant's request for re-issuance of the waiver has been made.

Recently, the applicant and RWQCB have agreed to a multi-year infrastructure development and implementation plan that will provide for full secondary or tertiary treatment of the facility's wastewater prior to ocean disposal and/or water reuse. The applicant has requested that EPA continue to evaluate and consider the ocean waiver reapplication, as it would be several years before the applicant could achieve advanced treatment. Until the applicant can provide advanced treatment for all the influent wastewater, it would need to operate under a 301(h) waiver.

The treatment plant currently provides full primary and partial secondary wastewater treatment for a service population of about 13,800. The plant was originally built in 1954 and expanded in 1964. A new outfall was constructed and came into operation in 1982. The current application is based on an average dry-weather flow of 2.06 million gallons per day (MGD). The treatment plant discharged an annual average of just over 1.0 million gallons per day for 2005 and 2006, respectively. Based on the definition in 40 CFR 125.58(c), the applicant is considered to be a small discharger. The current treatment system includes primary treatment of all influent by screening, grit removal and primary sedimentation. In addition, a major portion of the primary effluent receives secondary treatment on a daily basis in order for the final effluent (primary plus secondary) to meet California's minimum requirement of 75 percent solids removal. The secondary treatment process consists of parallel single-stage, high-rate trickling filters whose combined wastestream flows to a solid contact channel, and then to a secondary sedimentation tank. The effluent from the secondary treatment process is combined with that portion of primary effluent which does not receive secondary treatment before discharge to the ocean. The final, blended wastestream (i.e., primary plus secondary) is disinfected with chlorine prior to ocean discharge, which occurs by way of an outfall/diffuser system. The terminus of the outfall is located approximately 1.75 kilometers (1.25 miles) north of Morro Rock, and one kilometer (0.6 miles) from the Atascadero State Beach shoreline.

The average annual effluent concentration for Suspended Solids (SS) at the subject facility between 1998 and 2005 was 37.4 mg/L. Average removal efficiency for SS over the same time period was 88 percent; the California Ocean Plan requires at least 75 percent removal (as a 30-day average) as a minimum threshold for ocean dischargers, and 85 percent removal of SS (as a 30-day average) for purposes of meeting secondary treatment standards. The annual average Biological Oxygen Demand (BOD) concentration in the effluent between 1998 and 2005 was 53.5 mg/L. The removal efficiencies for BOD by the subject wastewater treatment plant during this same time period averaged 82 percent; the California Ocean Plan does not specify treatment-based effluent limits for BOD, but does require at least 85 percent removal of BOD (as a 30-day average) for secondary treatment standards. The facility has been achieving BOD removal efficiencies greater than 80 percent since 1992. Given the removal efficiencies for SS and BOD, the subject facility is discharging effluent that is extremely close to meeting California secondary treatment standards. In terms of mass loadings of suspended particulate matter from the subject facility to the marine environment (measured in tons), suspended solids have ranged from 42 to 74 metric tons per year (MT/yr) between 2001 and 2005. Given the small projected increases in population for the service community, loadings are not likely to increase substantially over the next decade. The annual mass emissions limit in the applicant's existing permit is for 199 MT/yr

and, as reported, the applicant's loadings to the receiving waters have consistently been well below this limit. The applicant states that "over the next five years, no downgrading of effluent quality is anticipated given the limited projected growth in population and industry in the service area." The applicant is not requesting or proposing to increase the amount of mass loadings of SS in its current application.

The southern sea otter (*Enhydra lutris neris*) and brown pelican (*Pelecanus occidentalis*) occur in the vicinity of the subject discharge. Both species are susceptible to domoic acid poisoning caused by toxic algal blooms (*Pseudo-nitzschia*), to which nutrient loadings from sewage outfalls can contribute. Hundreds of brown pelicans succumbed to domoic acid poisoning in Monterey Bay in 1991, and domoic acid poisoning was the cause of a major mortality event in sea otters in 2003. Additionally, *Toxoplasma gondii*, which has been identified as a cause of mortality in sea otters, is likely entering the marine ecosystem from terrestrial sources, as felids are to date the only known definitive hosts for the parasite. Research indicates that approximately 2.2 tons-of cat feces annually is disposed of to the municipal Morro Bay/Cayucos Wastewater Treatment Plant, and spatial analysis of pooled live and dead otter serological data revealed a large cluster of *T. gondii*-seropositive otters within a 20 km coastal region centered on the towns of Morro Bay and Cayucos. Sea otters sampled from this area were nearly twice as likely to be seropositive to *T.gondii* as expected.

EPA has proposed the following conservation measures to address the likelihood of any potential adverse effects from its proposed action to federally listed species:

1. Public outreach program to minimize the input of cat litter-box wastes into the municipal sewer systems;
2. Regular monitoring of nutrient loading from the facility's ocean outfall; and

These measures have been agreed to by both the applicant and RWQCB and will be incorporated as conditions of the joint discharge permit to be issued to the applicant by EPA and RWQCB. With regard to facility upgrade, both the Morro Bay/Cayucos Sanitary District (on May 24, 2007) and the Morro Bay City Council (on May 29, 2007) unanimously moved that the subject facility be upgraded to meet tertiary standards with the intention to move toward reclamation within the specified timeframe.

Your request for our concurrence presents us with the question of whether reissuance of a discharge permit authorizing the continued ocean disposal of municipal wastewater that does not meet federal secondary treatment standards can be deemed "not likely to adversely affect" brown pelicans and southern sea otters.

You acknowledge, and we agree, that although there may be some contribution by the Morro Bay/Cayucos Wastewater Treatment Plant to the presence of domoic acid and *T. gondii* oocysts in the marine environment, a direct link to mortalities of brown pelicans and southern sea otters

is difficult or impossible to establish using analytical methods that are currently available. You cite the opinion of an expert on domoic acid (Dr. Caron of University of Southern California) that “the subject discharge has a potential role in DA occurrences along the central coast” but that “such a link (if real) would be very difficult to prove given the spatial, temporal, biological and physical complexities associated with *Pseudo-nitzschia* blooms and domoic acid.” Similarly, although you state that the Morro Bay/Cayucos Wastewater Treatment Plant is “at most, an insignificant contributor of *T. gondii* oocysts to the marine environment,” you acknowledge that there are currently no analytical methods to detect the presence of oocysts in wastewater.

Although we are unable to determine the level of significance of adverse effects resulting from continued release of wastewater that has been subject to only partial secondary treatment, it is clear that advanced treatment would lead to decreased inputs of nutrients into nearshore waters, likely reducing the occurrence of toxic algal blooms. It is also likely that advanced treatment would decrease the input of *T. gondii* oocysts into the marine environment. Reduced risk of exposure to domoic acid and *T. gondii* would benefit brown pelicans and southern sea otters.

The Morro Bay and Cayucos Sanitary District has requested that EPA continue to evaluate and consider the ocean waiver reapplication, as it would be several years before the applicant could achieve advanced treatment. EPA’s request for concurrence states that, “with regard to facility upgrade, both the Morro Bay/Cayucos Sanitary District (on May 24, 2007) and the Morro Bay City Council (on May 29, 2007) unanimously moved that the subject facility be upgraded to meet tertiary standards with the intention to move toward reclamation within the specified timeframe.” Our understanding, therefore, is that the project includes a full upgrade to tertiary treatment by 2014. Additional conservation measures proposed by EPA include a public outreach program to minimize the input of cat litter-box wastes into the municipal sewer systems and regular monitoring of nutrient loading from the facility’s ocean outfall.

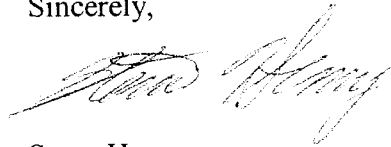
As noted in the Biological Evaluation, the Morro Bay/Cayucos Sanitary District and the Morro Bay City Council have voted to upgrade its wastewater treatment facilities to tertiary treatment. Our office believes this decision has significant potential to minimize the concerns regarding possible effects on the otter. Proceeding to tertiary treatment would result in reduced loadings of a wide range of pollutants to the environment. Moreover, this level of treatment would create the opportunity for greatly reducing the quantity of wastewater discharged as the applicants develop reclaimed water reuse opportunities. The applicants’ progress towards implementing their present commitment to tertiary treatment will also be a significant factor in any future Endangered Species Act analyses conducted by our office pertaining to this discharge.

We concur with your determination that the proposed project is not likely to adversely affect the brown pelican or southern sea otter. However, as we have noted in discussions with your office, we do have some concern that the Southern sea otter is located in areas in the vicinity of the subject wastewater discharge, in light of the fact that some scientific literature discusses the possibility that pollutant loading from sewage treatment plant discharges could have an effect on the otter. We acknowledge that a significant degree of scientific uncertainty exists as to the

mechanisms for potential impacts to the otter. Further, there are material gaps in available data, and in the scientific methodology for gathering such data, which, if developed, would assist in the assessment of whether and to what extent the applicant's discharge could have an effect on the otter. We recognize that the conservation measures proposed in the Biological Evaluation for this action will assist in gathering information useful in evaluating this issue, as will independent research being conducted by a number of interested parties. We intend to closely review any relevant new information in future Endangered Species Act analyses pertaining to this discharge. Consequently, further consultation, pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended, is not required at this time. If new information is developed or the proposed action changes in any manner that may affect a listed species (or critical habitat), you must contact us immediately to determine whether additional consultation is required.

If you have any questions, please contact me at (805) 644-1766 extension 307.

Sincerely,



Steve Henry  
Deputy Field Supervisor

