

CALIFORNIA COASTAL COMMISSION

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Energy and Ocean Resources
Staff: JJJ, SMH—SF
Staff Report: April 26, 2000
Hearing Date: May 11, 2000

STATUS REPORT ON SONGS MITIGATION PROGRAM

Following is a brief status report for the mitigation projects required in Southern California Edison Company's (SCE) coastal development permit for the San Onofre Nuclear Generating Station (SONGS) Units 2 and 3 (permit no. 6-81-330, formerly 183-73). The conditions originally were adopted by the Commission in 1991 to mitigate the adverse impacts of the power plant on the marine environment. The 1991 conditions also require SCE to provide the funds necessary for Commission staff technical oversight and independent monitoring of the mitigation projects, to be carried out by independent scientists under the direction of the Executive Director. In 1993, the Commission added a requirement for the permittee to partially fund construction of an experimental fish hatchery. The Commission has since approved amendments to the conditions in April 1997 and October 1998.

WETLAND RESTORATION MITIGATION**The Project**

Condition A of the permit requires the permittee to create or substantially restore a minimum of 150 acres of wetlands to mitigate for impacts to fishes caused by the operation of SONGS. In April 1997, the Commission reaffirmed its 1992 approval of the permittee's choice of the San Dieguito River Valley as the site for the wetland restoration project and allowed for up to 35 acres credit for enhancement at San Dieguito Lagoon on the condition of perpetual inlet maintenance.

Progress Report

Following the Commission's November 1997 approval of SCE's preliminary wetland restoration plan, the wetland restoration mitigation project has been undergoing a planning and environmental review process which incorporates the mitigation project into the overall San Dieguito River Valley Regional Open Space Park project and includes additional wetland restoration required under the permittee's settlement agreement with the Earth Island Institute. The lead agencies for the CEQA/NEPA environmental review are the San Dieguito River Valley Regional Open Space Park Joint Powers Authority (JPA) and the U.S. Fish and Wildlife Service.

The permit conditions require SCE to submit a final restoration plan that substantially conforms to the preliminary restoration plan unless the CEQA/NEPA review concludes that an alternative plan that meets the conditions for minimum standards and objectives is the environmentally superior alternative. The permit conditions, as amended by the Commission in October 1998, contain specific due dates for SCE's submittal of the final restoration plan and coastal development permit application based on a completion of the CEQA/NEPA environmental review process around August 1999. The EIR/S team has worked diligently and cooperatively to resolve the many significant issues raised during this process; however, the additional detailed analyses that have been undertaken to address these issues significantly delayed completion of the EIR/S. Notwithstanding the specific due dates, the permit requires SCE to submit the final restoration plan within 60 days following the JPA's certification of the EIR and the U.S. Fish and Wildlife Service's record of decision adopting the EIS. The staff will work with SCE to determine a more precise schedule for SCE's submittal of the final restoration plan and coastal development permit application following completion of the EIR/S.

The draft EIR/S was released on January 31, 2000. CEQA review notice was made at that time, and NEPA review notice appeared in the February 4, 2000 Federal Register. A public hearing was held on February 28, 2000, and the public review period continued through March 20, 2000. More than 500 comments were received by the lead agencies, distributed over 38 letters. The primary issues appear to be related to hydrology and coastal processes. The EIR/S team is in the process of considering the comments and determining if any further studies will be required to complete the Final EIR/S.

KELP REEF MITIGATION

The Project

Condition C of the permit requires construction of an artificial reef that will consist of an experimental reef and a larger mitigation reef. The experimental reef must be a minimum of 16.8 acres and the mitigation reef must be of sufficient size to sustain 150 acres of medium to high density kelp bed community. The purpose of the experimental reef is to determine what combination of substrate type and substrate coverage will best achieve the performance standards specified in the permit. The design of the mitigation reef will be contingent on the results of the experimental reef.

In April 1997, the Commission added the requirement for a payment of \$3.6 million to the State's Ocean Resource Enhancement and Hatchery Program (OREHP) to fund a mariculture/marine fish hatchery to provide compensation for resources not replaced by the artificial mitigation reef. SCE has fully satisfied this requirement.

Progress Report

Following completion of the environmental review and permitting processes for the reef mitigation, SCE began construction of the artificial reef on August 18, 1999, and completed the 56-module reef on September 29, 1999.

Shortly after construction, the physical dimensions of each module were monitored on the surface using differential GPS. In addition, the outline (also termed the "footprint") and the percent cover of reef material on each module was monitored with high-resolution side scanning sonar. As a final check, each module was inspected by divers to estimate vertical relief and the degree of overlapping or piling up. SCE presented the results of construction monitoring of the first 24 modules to the staff in September. The staff found that the footprints and percentage covers of the modules conformed very closely to the design specifications. Construction monitoring for the remaining modules has been completed, fulfilling the requirements of Special Condition 4 of the reef construction permit (Coastal Development Permit E-97-10).

In addition to constructing the artificial reef, the construction plan requires SCE to transplant kelp on 14 of the 56 modules. The staff worked with SCE and its consultants in developing a strategy to transplant kelp to the artificial reef. SCE submitted its work plan to transplant kelp to the artificial reef on March 30, 2000. The plan calls for kelp to be transplanted outside of the staff's permanent sampling area. While this placement reduces the risk that the transplants will be damaged by divers, it demands additional effort by the staff to monitor. This additional effort may require supplemental funding as it was not anticipated in the staff's work plan, which was prepared and approved by the Commission before SCE's plan for transplanting kelp was developed. Kelp will be transplanted in two stages to evaluate the effects of plant size on survival and the logistical ease of transplanting. Both stages of kelp transplantation are expected to be completed by mid-June 2000, with a follow up survey in July 2000.

The staff completed installing permanent transect lines on each module in mid-November 1999. Staff's monitoring of the abundance of giant kelp and sediment depth on the artificial reef modules began in February 2000 and is continuing. The staff also has been conducting field and analytical work to determine the locations of reference sites in nearby natural kelp forests. This work has resulted in a decision to use six to twelve reference sites in both the San Mateo and Barn kelp beds. Each site will consist of a single 40 m x 3 m area. The staff has obtained consensus from SCE's consulting biologists on the appropriateness of using San Mateo and Barn kelp beds as reference areas for the artificial reef experiment. Spatial data on the long-term abundance of giant kelp collected using down-looking sonar together with diver surveys are being used to identify the precise location of the reference sites in each of the two kelp beds. Once identified, the staff will forward the coordinates of all reference sites to SCE for comment.

FISH BEHAVIORAL MITIGATION

The Project

Condition B requires the permittee to install and maintain behavioral barrier devices at SONGS to reduce fish impingement losses.

Progress Report

Following the permittee's experiments on light and sound devices, the permittee considered fish guidance lights to be more effective in preventing fish from being trapped and killed. In October 1998, the Executive Director approved the permittee's installation plan for the lights and the lights were installed in December 1998.

Monitoring to evaluate the effectiveness of the fish guidance lights began in March 1999 and is continuing. Initial data seemed to indicate that rather than attracting fish to the fish return system the lights are repelling the fish. A new experiment was initiated to evaluate whether eliminating light could be used as an effective means of reducing impingement losses of fish. This experiment was recently completed and the staff are currently analyzing data from it.

MARINE MAMMALS AND SEA TURTLES

In December 1999, the staff updated information on the mortality of marine mammals (harbor seals and sea lions) at SONGS first presented to the Commission in May 1997 and presented new information on the entrainment of sea turtles at SONGS. The staff also reported on the next steps to be taken to minimize these deaths and entrainments.

The staff met with the Commission's Scientific Advisory Panel in January 2000 to determine and arrange for filling of data gaps. In cooperation with SCE and other involved agencies and interested parties, the staff will assemble a working group of scientific experts to more fully explore possible ways of minimizing the entrainment and deaths of harbor seals, sea lions and sea turtles, and hopes to report back to the Commission on the results of this working group in summer of 2000. In the interim, staff will continue to work with SCE and others to see if there are any other potential changes that can be made to reduce marine mammal mortality and will keep the Commission informed.

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Frank Melone, Project Manager
Southern California Edison Company
P.O. Box 800
2244 Walnut Grove Avenue
Rosemead, California 91770

Dear Frank,

Congratulations to you, your staff and consultants for carrying out such a successful construction project for the experimental reef. The construction was completed within the time limits required by the permit and fulfilled the design criteria well within the planned tolerances. We are all very happy with configuration of the experimental modules. Please thank everyone for their hard work. It is a auspicious beginning of what we hope will prove an extremely useful study. The work is well documented in the report entitled "Construction of Southern California Edison Experimental Artificial Kelp Reef, San Clemente, California" dated November 24, 1999. That report fulfills the requirements of Special Condition 4 of Coastal Development Permit E-96-10.

One element of the project remains to be completed. The experimental design calls for kelp to be planted on two of the modules of each replicate block. Thank you for providing us with your work plan for transplanting kelp to the San Clemente Artificial Reef. I appreciate your efforts to accommodate the suggestions of our scientific staff in preparing this plan. You are correct in assuming in your letter of March 30, 2000 that Coastal Commission staff will monitor the transplanted kelp. You should be aware, however, that the decision to place the transplanted kelp outside of the staff's permanent transects will demand additional effort to sample and this may require supplementary funding. This added effort was not anticipated in the staff's work plan, which was prepared before SCE's plan for transplanting kelp was developed.

This monitoring done by the Commission staff will consist of semiannual surveys of transplanted kelp (one in the winter and one in the summer) during each of the five years of the experiment. The purpose of this monitoring will be to evaluate (1) the performance of the transplanted kelp relative to naturally recruited kelp and (2) whether transplanting juveniles results in a significant increase in adult abundance. Data collected for each transplanted individual during the surveys will include presence/absence (to estimate survivorship), stipe number, holdfast diameter, dimensions of substrate to which plant is attached, and fecundity (estimated from sorus area). It is not our intention to evaluate different transplant methods as this would require more frequent sampling. Staff believe that obtaining the data needed to properly evaluate different transplant methods is crucial to developing a successful transplant method for the larger mitigation reef. However, since transplanting kelp in the mitigation phase will be Edison's responsibility, staff believe that it is more appropriate for Edison to do the monitoring needed to evaluate the transplanting methodology. Staff encourage Edison to do such monitoring. Our scientists are available to work with you in developing an appropriate sampling design and in coordinating your sampling activities to minimize any potential conflicts with the staff's sampling program.

Sincerely,

A handwritten signature in black ink, appearing to read "Susan Hansch".

Susan Hansch
Chief Deputy Director

