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item # Tu 14

Energy and Ocean Resources
Staff: JJL, SMH—SF
Staff Report: August 17, 2000
Hearing Date: September 12, 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 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. Following the public hearing in February 2000, the public review period continued through March 20, 2000. More than 500 comments were received by the lead agencies. Additional hydrologic modeling was completed for each of the project alternatives and additional review of public access, coastal processes, engineering and other issues was undertaken to enable the EIR/S team to respond to comments. The final EIR/S is now expected to be released in early September.

Biologists from the U.S. Fish and Wildlife Service, National Marine Fisheries Services, California Department of Fish and Game, and Coastal Commission met in June to discuss the biological values and potential for success of the proposed project and each of the alternatives being reviewed in the EIR/S. As a result of the consensus reached at that meeting, the USFWS, the Federal lead agency for the EIR/S, has declared its preference for the proposed project, the Mixed Habitat alternative (see attached letter from USFWS, dated August 4, 2000).

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

Construction of the 56-module experimental reef was completed in September 1999. Construction monitoring for the experimental reef modules also was completed; the staff found that the footprints and percentage covers of the modules conformed very closely to the design specifications.

SCE's construction plan requires SCE to transplant kelp on 14 of the 56 modules. SCE's March 2000 work 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 increases the area sampled during the staff's kelp counts by 33% and will require additional effort. Such additional effort will probably require supplemental funding 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.

SCE is transplanting kelp in two stages to evaluate the effects of plant size on survival and the logistical ease of transplanting. In June staff scientists assisted SCE in outplanting small laboratory-grown plants directly to the artificial reef. Small plants cultured in the laboratory by SCE consultants were moved into field nurseries in May 2000 where they were to be grown to a larger size prior to being outplanted to the artificial reef during the second phase. Observations made in the past few weeks indicated that the plants were heavily fouled and that survival was poor. As a result, the second phase of SCE's kelp transplanting will be postponed to next spring.

Reef Monitoring. In late May, staff scientists began surveys of kelp forest invertebrates, understory algae and young-of-the-year kelp on the artificial reef and in the reference kelp beds. This sampling was completed in early August 2000. Observations made to date show that substantial numbers of young-of-the-year giant kelp have recruited to many of the artificial reef modules. Recruitment of giant kelp appears to be greatest on the modules closest to San Mateo kelp bed. In contrast, substantial recruitment of the understory kelp *Laminaria farlowii* was observed on modules that are farthest from the San Mateo kelp bed. The colonial tunicate *Chelyosoma productum* is particularly abundant on the artificial reef, especially on shallowly sloped and horizontal surfaces. Flatter horizontal surfaces of the artificial reef modules are frequently covered with a 1-2 cm layer of silt and generally support much lower densities of sessile invertebrates and algae. The second semi-annual survey of giant kelp adults was begun during the second week in August and is expected to be completed by mid-September 2000.

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

The permittee initially installed mercury vapor lights in Units 2 and 3 in September 1992 and tested them for approximately one year. No clear conclusions could be reached concerning the effectiveness of the lights. In 1994, the staff instructed SCE to conduct a series of laboratory and in-plant experiments testing the behavioral response of fish to lights and sound.

Following the permittee's experiments on light and sound devices from 1995 to 1997, 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.

A three-phased experiment to evaluate the effectiveness of the fish guidance lights was conducted between February and December 1999. Initial data from the early phases seemed to indicate that rather than attracting fish to the fish return system the lights repelled the fish. A new experiment was initiated in the final phase to evaluate whether eliminating light could be used as an effective means of reducing impingement losses of fish. Results from these experiments showed no evidence that installing lights in the cooling water systems of Units 2 and 3 would reduce fish impingement losses.

Staff is nearing completion of its analysis of the results and will report to the Commission at the October meeting.

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 is working closely with SCE biologists to reduce mortality by recovering and returning marine mammals in a more timely fashion. The SCE biologists and Commission staff scientists are also working closely with the National Marine Fisheries Service to review the current status of marine mammal takes by coastal power plants (including SONGS Units 2 and 3) and to implement a policy consistent with that now in effect on the east coast.

The yearly long term average mortality for harbor seals and California sea lions for SONGS Units 2 and 3 combined is three and seven, respectively. The most current data show that sea lion mortality in 1999 was four (about one-half the long term average), whereas harbor seal mortality was six, twice the long term average. Through May 2000, three sea lions and four harbor seals have died in Units 2 and 3. This is close to the long term average for sea lions and between 2 to 3 times the long term average for harbor seals. There was no mortality of sea turtles in 1999 or 2000.

No harbor seals or sea lions have been entrained into SONGS since the end of May 2000. A single green sea turtle was entrained in June. It was healthy and was tagged and released.

The staff will continue to update the Commission on a quarterly basis, or more frequently if there are unforeseen catastrophic mortalities. In cooperation with SCE and other involved agencies and interested parties, the staff also 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. The staff hopes to report back to the Commission on the results of this working group later this year.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2730 Loker Avenue West
Carlsbad, California 92008

August 4, 2000

Mr. Richard Bobertz, Executive Director
San Dieguito River Valley Joint Powers Authority
18372 Sycamore Creek Road
Escondido, California 92025

Re: San Dieguito Wetland Restoration Project Preferred Alternative

Dear Mr. Bobertz:

The U.S. Fish and Wildlife Service, as Federal lead agency for the San Dieguito Wetland Restoration Project Environmental Impact Report/Statement (EIR/S), takes our completion of the Final EIR/S as the opportunity to declare our preference for the Mixed Habitat alternative. The evaluation criteria and explanation of this process are also to be included in the Final EIR/S. This and our stated preferred alternative should aid the reviewing public and other agencies in arriving at a well founded consensus conclusion about the best wetland restoration project for San Dieguito Lagoon. Of course, the actual decision regarding which project alternative will be implemented awaits completion of the FEIR/S, your agency's adoption of findings, the Federal Record of Decision, and Coastal Commission regulatory action.

The identification of the Mixed Habitat alternative as our Preferred Alternative, pursuant to the National Environmental Policy Act, follows our consideration of public and agency comments on the full array of alternatives described in the draft EIR/S, and consultation with professional biologists of the National Marine Fisheries Service, California Department of Fish and Game, and the California Coastal Commission. This alternative best optimizes a balancing of biological benefits with improved tidal flow. That is, increased seawater volume circulated nearer the lagoon mouth improves the self-maintaining nature of the mouth and will develop very high aquatic habitat values. Three alternatives have these qualities: Maximum Tidal Basin, Hybrid, and Mixed Habitat. Farther from the Lagoon mouth and east of the I-5 freeway, the hydraulic and biological benefits of seawater volume are less. Alternatives that have this larger volume but lower biological value water area east of the I-5 include the Maximum Tidal Basin, Hybrid, and Maximum Intertidal alternatives. Except for the Reduced Berm alternative, the Mixed Habitat alternative has the lowest amount of seawater volume east of the I-5 opening and a higher proportion of intertidal habitats. The Mixed Habitat alternative has the highest likelihood of biological success, broadest spectrum of fish and wildlife benefits, for the least amount of dredging. Module 16, also known as the "Villages" property is considered an essential part of

this alternative, while Module 6b may or may not be implemented if mitigation requirements warrant. As you know, the Mixed Habitat alternative also was and remains the Proposed Project, pursuant to the California Environmental Quality Act.

Full completion of all the nesting areas, including surfacing all of them with clean sand, for Threatened or Endangered birds (Modules 11-15) is an important part of the preferred alternative. They constitute the optimal array (size and location) for providing this essential habitat improvement measure and for fulfilling a long-standing nesting area mitigation requirement.

Upland disposal sites out of the flood plain or sensitive habitats are preferred locations for disposal of dredge material (DS32-36). Potential disposal site DS-38, just west of the I-5 is both within the flood plain and partly in wetlands and is definitely not among the preferred disposal sites. Disposal site DS-44 would involve "over-dredging" of fine sand believed to lie beneath the proposed tidal basin west of I-5 and placing that unknown volume of sand on the beach and disposing of siltier material from wetland restoration dredging back in the depression created by excavating sand. This disposal alternative, while predicted to be relatively environmentally benign, also would provide little or no benefit to wetland restoration objectives. Following demonstrated public support for placing sand on eroded beaches, this disposal option might later be considered preferable to the currently preferred options provided by the upland disposal sites.

The considerable efforts of the Joint Powers Authority staff is greatly appreciated. We are all rightly proud of the consensus we have forged, to date, and enthusiastically look forward to continuing implementation of the best possible project for the restoration of the wetland ecosystem at San Dieguito Lagoon.

Sincerely,

Jack M. Fancher
Coastal Program Chief

cc: CCC, San Francisco
CDFG, San Diego
NMFS, Long Beach
SCE, Rosemead

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August 14, 2000

Mr. Richard Bobertz, Executive Director
San Dieguito River Valley Park JPA
18372 Sycamore Creek Road
Escondido, CA 92025

Subject: San Dieguito Lagoon Restoration – Selection of Preferred Project Alternative

Dear Mr. Bobertz,

The environmental review process under the California Environmental Quality Act (CEQA) for the San Dieguito Lagoon restoration project is nearing a point where the JPA Board as the lead CEQA agency must certify the final Environmental Impact Report and approve the wetland restoration project. To facilitate this process and subsequent permitting efforts, we are sending this letter to advise you and the JPA Board that Southern California Edison (SCE), the project proponent, has selected as its preferred project the Maximum Intertidal Habitat Alternative (MIHA). We encourage you to recommend to the JPA Board that they approve the MIHA as the preferred project for restoration of San Dieguito Lagoon.

As you know, the Mixed Habitat Alternative (MHA) was the project originally proposed by SCE to initiate the environmental review process. However, now that SCE has reviewed the draft EIR/S, and has had the opportunity to re-evaluate the merits of the various project alternatives, consider the public comments on the document, and assist in addressing the many issues and concerns raised throughout this review process, we believe that the MIHA would be the best project for San Dieguito Lagoon. In addition, we believe it is the project alternative that would enable SCE to best meet the terms of the SONGS Coastal Permit which, as you know, is the reason for SCE's involvement. The reasoning behind this conclusion and our recommendation to you is explained below.

MIHA is the "Environmentally Superior Alternative"

The intent of CEQA is to review the proposed project, assess the adverse environmental impacts, and develop a reasonable range of alternatives that would identify a means of avoiding or mitigating the adverse impacts of the project. The draft EIR/S meets this intent and concludes that the Maximum Intertidal Habitat Project Alternative is the environmentally superior alternative because it would cause the least overall adverse impact and would restore San Dieguito Lagoon as effectively as the other project alternatives considered. SCE agrees with the conclusion which was set forth in the draft EIR/S. Moreover, additional analysis undertaken in response to public comment on the draft document has not produced any compelling reason to change this conclusion.

P. O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770

MIHA Best Addresses Local Concerns Regarding Public Safety and Beach Use

A broad range of interests and concerns were expressed by local residents, both during the early planning stages by members of the San Dieguito Lagoon Restoration Public Working Group (Working Group), and by others who provided comment on the Draft EIR/S. The majority of comments seemed to focus on the effect of Lagoon restoration on the beach at the mouth of the San Dieguito River, including the loss of lateral access and usable beach, and any increased public safety risk due to uninterrupted tidal flows, including increased water depth and current velocities.

Recent analyses conducted to address these concerns show that of all project alternatives evaluated, implementation of the MIHA would result in the least amount of change to existing conditions; i.e., smallest inlet opening due to tidal exchange, the lowest current velocities where the public crosses the beach and least amount of time lateral beach access would be restricted. Therefore from the perspective of minimizing adverse effects to existing beach uses, the MIHA is clearly the preferred project alternative.

MIHA Provides Greatest Biological Benefit To San Dieguito and the Region

In response to a request made by you and the U.S. Fish and Wildlife Service, SCE collaborated with Coastal Commission Staff Scientists to carefully evaluate the project alternatives. This group concluded that the MIHA would provide the greatest overall benefit to San Dieguito Lagoon and would best meet San Dieguito Lagoon Public Working Group project goals (See my March 20, 2000, letter to you). Although some may believe that the biological benefits resulting from construction of the MIHA may appear marginally less than other project alternatives, the fact is, there is very little difference between the three most preferable project alternatives in terms of the biological benefit they would provide. SCE believes, as do independent scientists who commented on the DEIR/S, that based on the scientific data collected on wetland restoration of southern California coastal lagoons, the MIHA offers the best opportunity for significantly improving San Dieguito Lagoon over the long-term.

In terms of what is best for the region, the MIHA provides the greatest amount of marsh habitat. Studies indicate this is the type of habitat most lacking in the region because of destruction resulting from urban development.

Finally, the MIHA more closely reflects historical conditions at San Dieguito. Technical studies available in the current literature suggest that the project which most closely resembles historical conditions optimizes the chances of long-term success, even though some periodic intervention and/or maintenance may be required. The wisdom of this thinking is reflected in the comments received on the draft EIR/S where 7 of the 8 comments indicating a project preference advocated the MIHA as the preferred project. Supporters include Dr. Sharook Madon, current Associate Director of the Pacific Estuarine Research Laboratory (PERL) at San Diego State University, and Dr. John Callaway, former Associate Director of PERL and current professor at San Francisco State University.

MIHA Best Meets The Terms Of The SONGS Coastal Permit

As stated in my March 20, 2000, letter to you, SCE and the Coastal Commission Staff scientists developed evaluation criteria, carefully compared the project alternatives using these criteria, and concluded that the MIHA would best enable SCE to meet the minimum standards and objectives of the wetlands restoration requirement set forth in the SONGS Coastal Permit. Compliance with these performance standards will ensure that ecosystem benefits will be maximized and that long-term success of the project will be achieved. In addition, it was concluded that the MIHA would meet the project objectives established early in the planning process by the San Dieguito Public Working Group.

Conclusions

SCE urges the JPA to approve the Maximum Intertidal Habitat Alternative as the preferred project for restoration of the San Dieguito wetlands. The environmental review process has shown this alternative to be the environmentally superior alternative by virtue of minimizing adverse environmental impacts, as noted above and in the DEIR/S. This alternative most effectively addresses issues and concerns raised by the public regarding public safety and beach use, and provides the diversity of habitat that is best for San Dieguito and the Southern California region. It reflects most closely what historic conditions supported at San Dieguito before man's degradation of the Lagoon. The MIHA will meet the restoration objectives of the San Dieguito Public Working Group who assisted in the early planning stages of the project, and equally important, it will best enable SCE to meet its long-term success obligations established by the SONGS Coastal Permit.

Please feel to call me if you have any questions or information needs as you formulate your recommendation to the JPA Board.

Sincerely,

Frank L. Melone

Frank L. Melone

CC: JPA Board Members
Jack Fancher, USFWS
CDFG, San Diego
NMFS, Long Beach
CCC, San Francisco