

CALIFORNIA OCEAN PROTECTION COUNCIL

Staff Recommendation

August 11, 2011

**Modernization of the California State Lands Commission's
Offshore Geophysical Permit Program**

File No.: 11-042-01

Project Manager: Sarah C. Flores

RECOMMENDED ACTION: Authorization to disburse up to \$222,000 to the California State Lands Commission to review the impacts of offshore survey technologies and update its offshore geophysical permit program.

LOCATION: Statewide.

STRATEGIC PLAN OBJECTIVE: Research and Monitoring.

EXHIBITS

Exhibit 1: Letters of Support

RESOLUTION AND FINDINGS:

Staff recommends that the Ocean Protection Council adopt the following resolution pursuant to California Ocean Protection Act, Section 35500 *et seq.* of the Public Resources Code:

“The Ocean Protection Council hereby authorizes the disbursement of an amount not to exceed \$222,000 to the California State Lands Commission to review and update its offshore geophysical permit program, including scientific review, and program review and analysis pursuant to the California Environmental Quality Act.”

Staff further recommends that the Council adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the Council hereby finds that:

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1. The proposed project is consistent with the purposes of Division 26.5 of the Public Resources Code, the Ocean Protection Act.
2. The proposed project is consistent with the Ocean Protection Council's grant program funding guidelines.”

PROJECT SUMMARY:

Staff recommends that the California Ocean Protection Council (OPC) approve disbursement of up to \$222,000 to the California State Lands Commission (CSLC) to review and update its offshore geophysical permit program. Recent studies have indicated that some methodologies used for offshore surveys may impact marine life in ways not previously understood. This project will allow CSLC to incorporate the most up-to-date science regarding the potential impacts of geophysical surveys on marine life and the coastal environment, and conduct an environmental analysis, with public review, of its permit program.

The State of California, acting by and through the CSLC, issues non-exclusive permits to qualified entities to perform geophysical surveys of the ocean bottom subject to specified terms and conditions. The CSLC does not carry-out the surveys themselves. Surveys permitted by the CSLC pursuant to this program, use low-energy (less than two kilojoules [kJ]) equipment such as side-scan sonar, on state sovereign lands, which extend from the shoreline out to three nautical miles offshore. Projects that propose to use air guns or other high-energy (greater than two kJ) geophysical survey equipment, are analyzed separately on a case-by-case basis. The surveys are conducted to obtain critical data on a variety of ocean resources and uses, including areas of essential fish habitat, underwater structures (notably oil and gas pipelines and fiber-optic cables), near-shore sand erosion and deposition, seafloor changes, seafloor topography, seafloor hazards and debris, and offshore cultural resources. Ultimately, this information contributes to a wide variety of efforts to protect and preserve California's offshore environment and resources.

The CSLC prepared an environmental document pursuant to the California Environmental Quality Act¹ (CEQA) in the mid-1980's in which it analyzed, among other things, energy levels emitted by geophysical survey equipment, and determined measures to mitigate significant impacts to wildlife and the environment from conducting geophysical surveys. The CSLC uses the resultant document, a Mitigated Negative Declaration, as the basis for many of the permit conditions and requirements under its current program.

Since then, many studies have been completed on ocean acoustics, and recent findings reveal a more complex picture of the hazards associated with ocean noise, based on frequency and sound pressure levels, rather than just energy levels. This authorization would provide funding for the CSLC to modernize its program by incorporating up-to-date scientific information, conducting

¹ Public Resources Code section 21000 *et seq.*

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underwater acoustic modeling, and analyzing its permit program pursuant to CEQA, which provides for public review and comment.

An update to the CSLC's geophysical permit program provides a clear opportunity for the OPC to advance the use of science in decision-making (noted as one of OPC's core strengths), by funding the scientific review and studies necessary to enable the CSLC to base its permitting decisions on up-to-date scientific information. The proposed project is also consistent with the OPC's existing strategic plan, which calls for improved scientific understanding of our ocean and coastal ecosystems. In addition, OPC action is timely for two reasons. First, it will enable the CSLC to address as soon as possible, potential risks to marine life from human-derived noise, such as impediments to marine organism hearing and communication associated with offshore geophysical surveys statewide. Second, it will complement a parallel effort by the CSLC in 2011-2012 to analyze the potential impacts associated with a proposed site-specific, high energy survey and a project specific geophysical survey (characterizing an offshore fault system related to the Diablo Canyon Power Plant in San Luis Obispo County), thereby promoting greater government efficiency.

PROJECT DESCRIPTION:

The proposed project will provide much needed update and review of the CSLC's offshore geophysical permit program.

Need for scientific review: The CSLC's current program was informed after an environmental review conducted in the mid-1980s. More recent evidence suggests that some survey operations may adversely affect marine mammals, reptiles, and fish. In particular, recent studies demonstrate that factors such as frequency, sound pressure levels, and the type of exposure are more significant factors for assessing impacts to marine wildlife behavior and physiology than energy input. For example, the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) found that a single exposure to acoustic waves between 100 and 2,000 Hertz (measure of frequency), and above 208 decibels (measure of intensity) may damage fishes' hearing or air bladders. Given recent findings, it is critical that the CSLC update its geophysical permit program by incorporating the latest science on ocean acoustics and the associated hazards to marine life. To ensure the best possible end-result, the OPC's Science Advisor will coordinate use of the OPC's Science Advisory Team in peer-reviewing products when appropriate, and the contractors will be required to adequately address reviewers' comments.

Need for coordination with federal programs: NOAA Fisheries and the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) use standards that take into account factors such as frequency and intensity, and NOAA Fisheries is internally reviewing national acoustic guidelines for marine mammals in an effort to update its regulations. The CSLC will be

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able to use the results and recommendations of the studies used by NOAA and BOEMRE, and can coordinate its program with those of federal entities to the degree appropriate.

Need for program clarity: A program update will clarify the CSLC's purview and requirements, which some geophysical surveyors have indicated is a source of confusion. In addition, the CSLC may revise the information it requires from applicants if necessary to allow sufficient evaluation of the impacts of a permitted geophysical survey. Factors such as signal duration, type of sound source, and the beam width, may affect the surveys' impacts on marine life, yet the current permit program does not request this information.

Project Details and Scope of Work:

Scientific and Program Review

The CSLC will incorporate into its program the most up-to-date science regarding the potential impacts of geophysical surveys on wildlife and the coastal environment by undertaking the following actions:

- **Information Review:** Conduct research, review, and compile current information relevant to geophysical surveys, such as scientific literature and reports, and findings from governmental agencies, industry, and academic institutions involved with acoustic surveys and marine wildlife; communicate with applicable State and Federal agencies, industry, and other entities.
- **Modeling Studies:** Perform underwater acoustics and air-quality modeling studies if needed, to complete the CEQA document and to inform any new permit requirements to mitigate geophysical surveys' effects on particular types of underwater sound.

Concurrent with the scientific review, the CSLC will systematically examine its permit program and will identify the parts of the process that are efficient and relevant to the conservation of sensitive offshore resources and protection of public health and safety in marine waters, and those elements that are lacking or may be impractical, inefficient, or unnecessary. The CSLC anticipates completing the scientific literature and program reviews by December 2011.

CEQA Analysis

The final phase of this project will be a review of the revised permit program and its environmental effects pursuant to CEQA. The CSLC will be the lead agency under CEQA, and will develop the appropriate document, such as a Mitigated Negative Declaration or Environmental Impact Report. The CSLC staff anticipates releasing the draft document for public review in Spring 2012, and presenting the final document to the CSLC for adoption or certification in Summer 2012.

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PROJECT GRANTEE:

The CSLC is a state agency that serves the people of California by providing stewardship of the lands, waterways, and resources entrusted to its care through economic development, protection, preservation, and restoration. The State of California, acting by and through the CSLC, issues non-exclusive permits to qualified entities to perform geophysical surveys of the ocean bottom subject to specified terms and conditions. Since 1984, the Commission has approved 131 permits for geophysical surveys in California State waters.

The CSLC plans to use CSA International, Inc. (CSA) as the prime contractor for the project. CSA was selected for this project through a competitive bid; they have extensive experience 1) with the current state of marine noise-related research and the application of that research in the context of environmental assessment; 2) coordinating with relevant stakeholders such as researchers and staff of the Navy, the NOAA Fisheries Office of Protected Resources, the USCG-U.S. Maritime Administration (MARAD), and BOEMRE, among others; and 3) conducting environmental review.

PROJECT HISTORY:

This proposal was submitted to the OPC in December 2010 as an “unsolicited grant,” underwent peer review under the direction of the California Ocean Science Trust, and was resubmitted with revisions based on that review in May 2011. The proposal was strengthened by and revised per the peer review, which was overall quite favorable and supportive of the project.

PROJECT FINANCING:

Ocean Protection Council	<u>\$222,000</u>
Total Project Cost	\$222,000

The anticipated source of funds will be from the fiscal year 09/10 appropriation of the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, Public Resources Code section 75001 *et seq.* (Proposition 84). Proposition 84 authorizes the use of these funds for purposes consistent with Section 35650 of the Public Resources Code, establishing the California Ocean Protection Trust Fund (Public Resources Code § 75060(g)). Under Section 35650(b)(2)(G), Ocean Protection Trust Fund monies may be expended for projects authorized by the OPC that provide scientific data to improve state efforts (in this case, those of the CSLC) to protect and conserve ocean resources (in this case, from potential impacts resulting from underwater noise caused by humans conducting geophysical surveys).

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The proposed project is also appropriate for prioritization under Proposition 84 selection criteria set forth in Section 75060(g), which provides that the OPC will give priority to projects which exercise adaptive management of ocean activities, and utilize scientific information so that a State agency can better protect marine wildlife. Specifically, the proposed project will enable the CSLC, a state agency, to utilize up-to-date information on ocean acoustics in updating its offshore geophysical permit program to better protect marine wildlife.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:

The proposed project is consistent with the California Ocean Protection Act (COPA), Division 26.5 of the Public Resources Code, sections 35500 *et seq.*, in the following respects:

Section 35510(b)(4) states that it is the state's policy to "improve monitoring and data gathering, and advance scientific understanding, to continually improve efforts to protect, conserve, restore, and manage coastal waters and ocean ecosystems." Consistent with this section, the proposed project will advance scientific understanding of ocean acoustics, and will enable the CSLC to improve its effort to protect marine wildlife through a geophysical permit program based on up-to-date scientific information.

In addition, the COPA authorizes the OPC to undertake projects, as described in Section 35650(b)(2), that:

- (A) Eliminate or reduce threats to coastal and ocean ecosystems;
- (F) Improve management, conservation, and protection of coastal waters and ocean ecosystems;
- (G) Provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources.

The proposed project is consistent with these subsections because it will: per subsection (A), reduce threats to marine wildlife by incorporating into the new permitting system scientific information on the impacts of geophysical surveys on coastal and ocean species; per subsection (F), improve management of marine surveys that have a geophysical component with the goal of protecting marine wildlife from associated hazards; and per subsection (G), if the underwater acoustic and air-quality modeling is pursued, the data will fill a niche in ocean acoustics research and aid in future research on anthropogenic noise and its effects on marine life.

CONSISTENCY WITH OPC'S STRATEGIC PLAN:

Goal B (Research and Monitoring), Objective 1 (Research): Improve scientific understanding of our ocean and coastal ecosystems. The primary objective of the proposed project is to complete a literature review of the impacts to marine life resulting from geophysical

activity in the ocean. The proposed literature review along with the potential acoustic modeling will vastly improve our understanding of the hazards to marine organisms and communities.

Goal A (Governance), Objective 3 (Enforcement): Improve the enforcement efforts of California's state agencies concerning ocean and coastal protection laws. The CSLC, while charged with permitting geophysical and geological exploration in State waters, lacks an enforcement arm by which it can follow up with permittees. Through a revision of the permitting program and more clearly outlined regulations, the CSLC will be better able to identify cases of non-compliance. In addition, the CSLC expects that a more streamlined process that better mirrors the Federal permitting program will promote the permitting program within prospective surveyors.

CONSISTENCY WITH THE OPC'S GRANT PROGRAM FUNDING GUIDELINES:

The proposed project is consistent with the OPC's Grant Program Funding Guidelines adopted November 20 2008, in the following respects:

Required Criteria

1. Directly relate to the ocean, coast, associated estuaries, or coastal-draining watersheds:

The proposed project will enable the CSLC to update its geophysical permit program which covers activities in state waters. The survey of the available literature on the impacts from geophysical activities will provide information that will lead to the reduction of threats to marine biota caused by a wide-range of geophysical surveys and activities that include an acoustic component. By requiring more acoustically-innocuous technology and practices, an improved geophysical survey permit program will minimize surveys' impacts on marine fish, mammals, turtles, and other marine life.

2. Support of the public: The proposal has also received letters of support from a broad spectrum of organizations, including federal, state, and local agencies, and fishing and industry representatives. See Exhibit 1, Letters of Support.

3. Greater-than-local interest: The proposed project will update a statewide permitting program that covers geophysical activities within California waters. In addition, this update will utilize the best-available science to better protect and manage marine ecosystems state-wide.

Additional Criteria

4. Improvements to management approaches or techniques: The proposed project's modeling component and the accompanying analysis will not only inform the CSLC's

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permit program and CEQA review, but can also aid in related, future research on anthropogenic noise and its effects on marine life.

- 5. Timeliness or Urgency:** Given that the CSLC's permitting program has not been updated in over 20 years, and that recent scientific findings have shed light on the complexity of ocean acoustic disturbances on marine life, it is critical for the CSLC to update its program as soon as possible in order to prevent potential adverse impacts to marine life.

CONSISTENCY WITH THE OPC'S PROGRAM PRIORITIES FOR 2009 THROUGH 2010:

Agency Coordination and Ocean Management Activities: The proposed project seeks to improve management of geophysical activities in the ocean by updating, streamlining and improving the permitting process.

Enforcement: The proposed project seeks to improve enforcement through clarifying the permitting guidelines for marine geophysical surveys.

Management-Driven Research: The proposed project may pursue low-energy acoustic modeling, which would be utilized to better understand management concerns with acoustic disturbances to marine wildlife.

COMPLIANCE WITH CEQA:

The proposed project is categorically exempt from review under CEQA pursuant to 14 Cal. Code of Regulations section 15306 because the project involves only data collection, research and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource. Staff will file a Notice of Exemption upon approval by the OPC.