



Final Recommendations on Offshore Development  
Hawaiian Islands Humpback Whale National Marine  
Sanctuary Advisory Council  
January 18, 2012

**Offshore Development & Aquaculture**

**Management Recommendations**

**To**

**The Hawaiian Islands Humpback Whale**

**National Marine Sanctuary**

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The Hawaiian Islands Humpback Whale National Marine Sanctuary (sanctuary) Advisory Council (council) forwarded these final recommendations to sanctuary management at the January council meeting for consideration in the management plan review. This report is based on the work of a working group that was formed by the council in December 2010 to address one of the priority topics brought up during the 2010 public comment period. The working group met over the course of 12 months in 2011. A digital copy of this report can be downloaded at [http://hawaiihumpbackwhale.noaa.gov/management/pdfs/offshoredevelopment\\_rec\\_report.pdf](http://hawaiihumpbackwhale.noaa.gov/management/pdfs/offshoredevelopment_rec_report.pdf).

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## Preface

The “Introduction” (Section I) describes the assumptions and basis of the recommendations that follow in Section II and Section III. The recommendations are labeled ODW1 through ODW7, for ease of identification and for reference during discussion by the Sanctuary Advisory Council.

Recommendations ODW1 and ODW2 are “overarching” in the sense that if they are not adopted as recommendations, then some of the recommendations that follow become moot.



## I. Introduction

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During the initial meetings of the Offshore Development Working Group (ODWG), discussions of fundamental assumptions and contextual framework took place. The ODWG concluded with the following assumptions and framework:

There must be a difference in the basic resource management philosophy applied to waters inside the Sanctuary boundaries versus waters outside the Sanctuary. The ODWG feels that the Sanctuary's responsibilities are significantly greater -- its protective reach heightened -- for the marine ecosystem within the Sanctuary's borders.

While the Sanctuary is a single species sanctuary, the ODWG recognizes the trend in future resource management philosophy is to broaden resource management focus to an "ecosystem-based approach", i.e. the Sanctuary will concern itself with abiotic components (air, water, and benthic and sub-benthic substrate) as well as biotic components (plants and animal life) that affect the well-being of humpback whales.

Because the Sanctuary has distinct boundaries it is inherently "place-based" and place-based management tools are thought to be appropriate for planning and management.

Although the Sanctuary has distinct boundaries, and therefore specific jurisdictional limits, the ODWG recognizes that the marine environment is fluid – current, tides, wind – as well as mobile biotic components – fish migration, plankton drift, etc. Therefore, the Sanctuary will have to concern itself with marine uses and ecological impacts beyond its boundaries.

The ODWG also recognized that offshore development activities often require marine and terrestrial uses. For example, an offshore energy platform will require support vessels to travel to the offshore location and will also use harbor facilities. Conversely, terrestrial activities may result in marine uses, for example, energy generated on one island may be targeted for consumption on another island, requiring power transmission cables. Thus, the Sanctuary may need to concern itself with terrestrial development if there are direct development impacts within the Sanctuary.



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The ODWG interpreted the Sanctuary's jurisdictional mandate to exclude permitting powers, but to include the opportunity for public education and outreach. Additionally, the ODWG recognizes the multi-agency approach to marine resource management that exists in Hawaii and that the sanctuary must work within a political framework.

Finally, the ODWG excluded aquaponics in its definition of aquaculture and focused its efforts on near-shore and offshore (open ocean) aquaculture. Fishpond development can be adequately addressed within the overarching and specific recommendations mentioned below. It should also be noted that the terminology "offshore development", and the recommendations contained herein can and should be applied to any new development, including any new marine ferry service or energy project that may be proposed in the future.

As additional background, the ODWG provides the following literature summaries from: Handbook on Integrated Maritime Spatial Planning. Plan Coast Project. Berlin: sustainable projects, April 2008 (referred to as IMSP), L.B. Crowder, et al "Sustainability: Resolving Mismatches in U.S. Ocean Governance." Science 313, August 4, 2006, 617-18 (referred to as Crowder), and O.R. Young, et al "Solving the Crisis in Oceanic Governance: Place-Based Management of Marine Systems" Environment 49, no. 4 (May 2007): 20-32 (referred to as Young). The summaries are as follows:

Major contributing factors to the increase in spatial pressure are new forms and types of use. In particular, the greatest demands for marine space worldwide seem to be coming from mariculture and alternative energy uses such as wind and wave power. Once established, these types of static marine uses are difficult to relocate, either because they are dependent on a key resource or because the infrastructure investment is significant and difficult to dismantle. At the same time, areas of high biodiversity or key species or habitats that are under protection to meet conservation objectives are also located in areas that are highly spatially specific. (IMSP)

Historically, ocean management has focused on individual sectors, overseen by individual agencies, managing resources to meet often conflicting goals and objectives. Decision-making was often ad hoc, with no clear authority to resolve conflicts across sectors or to address the cumulative effects of multiple uses and impact on marine resources. (Crowder)

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Management regimes for individual sectors operate under different legal mandates and reflect the interests of different stakeholders, leaving the marine environment to be managed with a series of conflicting overlaps, while creating areas with management gaps. As the problem of fragmented governance continues to grow and new place-based activities are establishing themselves in specific locales of the marine environment, the potential range of conflicts across sectors is increasing as well. (Crowder)

In the ocean, the “ripple” effect of human use activities is particularly important due to the fluid nature of this environment. Not only can impacts be farther-reaching in the marine environment, the ocean is slow to respond and reveal its change. This also applies to long-range impacts, some of which may not be immediately apparent. For example, an area identified for offshore wind farming might make good sense in terms of spatial planning in the ocean; however, this no longer constitutes a wise planning decision if offshore wind farms turn out to impact migratory behavior of protected bird species. (IMSP)

In order for resource managers to be successful at implementing a place-based marine planning process, to understand cumulative impacts, and to address the effects on marine ecosystems, they must be able to:

Understand the spatial distribution of multiple human activities and the direct and indirect stressors on the ecosystem associated with those activities.

Assess cumulative effects of multiple current and future activities, both inside and outside their jurisdictions that affect target ecosystems and resources in the management area.

Identify sets of interacting or overlapping activities that suggest where and when coordination between agencies is critical.

Prioritize the most important threats to address and/or places to invest limited resources.

Effectively monitor management performance and changing threats over time. (Young).



## II. Overarching Recommendations

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### A. Active Participation in Public Comments (Implementation Timeline: Immediate)

[ODW1] During the MPR scoping meetings, numerous public comments were received indicating there is an expectation on the part of the public that the Sanctuary be engaged in the public comment process regarding developments that might impact the Sanctuary. In the past, the Sanctuary was “working with community members, aquaculture industry representatives, the University of Hawaii and NOAA to learn more” about aquaculture; and, “working with community members, the state of Hawaii and industry representative to learn more” about energy development issues. (State of the Sanctuary, Kohola Connection, Summer 2010 p.23) It is incumbent upon the Sanctuary to move from a passive observer to an active participant in aquaculture and energy development issues.

The Sanctuary must develop an internal process enabling it to quickly develop comments and meet comment deadline periods. Numerous local, state, and federal public engagement opportunities will arise. The Sanctuary must regularly monitor opportunities to comment such as through The Environmental Notice published regularly by the Hawaii Office of Environmental Quality Control and must be ready to engage these opportunities. Additionally, it is suggested that the Sanctuary's Island Coordinators monitor their respective island's Planning Commissions development proposals that may affect sanctuary waters and be aware of all related DLNR hearings.

A list of State and Federal permitting agencies and processes are listing in Appendix I through IV.

### B. Principle of Precautionary Approach (Implementation Timeline: Immediate)

[ODW 2] ODWG recognizes the importance of aquaculture as a component contributing to the supply of safe and sustainable food for the growing global population. ODWG further recognizes that some aquaculture operators have set high operating standards to assure that Best Aquaculture Management Practices are adopted and exercised. However, there are regions of the Pacific Ocean where aquaculture has been identified as a stressor to the regional marine



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ecosystem (Pacific Ocean Synthesis: Scientific Literature Review of Coastal and Ocean Threats, Impacts, and Stressors, Center for Ocean Solutions, 2009, p 8 - 24).

ODWG further recognizes that energy development, including accessory uses such as undersea transmission cables, may be necessary to combat current use of fossil fuels. Engineering and manufacturing improvements of alternative energy generation and cable technology occur constantly and have been installed in highly populated areas such as Hong Kong and throughout Europe. ODWG believes that the HIHWNMS must monitor development of these technologies as they develop in the future. Because of the long-term nature of these investments and project life, little is known of their true operational life and their complete life-cycle through the decommissioning stage. Despite improved technology, no technology can guarantee against system or component (cable) failure, thus repair will be inevitable. Repair of large systems could be more damaging to ecosystems than the initial installation itself.

ODWG, therefore, believes development of any kind within and around the HIHWNMS must adopt a precautionary approach. The ODWG discussed two different definitions of the precautionary approach. These discussions helped to better define corollary issues, including that while the ODWG does not propose offshore development or aquaculture be banned or excluded from the Sanctuary, it does propose the Sanctuary move from being a passive observer to an active participant in aquaculture and energy development issues. Additionally, the discussions made it clear that the ODWG would welcome an abundance of caution, stricter standards, better monitoring, and more comprehensive mitigation of impacts inside the Sanctuary than for other sites outside the boundaries. Noting that the Sanctuary itself does not have permitting authority, the ODWG agreed that as a condition of any potential approvals by permitting authorities, the Sanctuary should ask for, in writing, adaptive management plans whereby mitigation strategies up to and including removal and relocation of development projects to an area outside of the Sanctuary is agreed upon.

As part of the discussion of the precautionary principle, it was noted the National Ocean Policy had adopted the precautionary principle as defined by Principle 15 of the Rio Declaration (adopted by the United Nations Conference on Environment and Development on June 13, 1992). Additionally, it was noted the State of Hawaii had discussed the adoption of a precautionary principle and in the process analyzed the Precautionary Principle Ordinance

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adopted by the City of San Francisco (see Appendix V.) It became evident that the precautionary principle had been widely adopted by international, national, and local organizations, but its effect ranged from strong to weak precautionary measures.

A number of ODWG members, representing ocean recreation users, the Native Hawaiian community, various island community representatives, and conservation groups favored adoption of the following:

“The precautionary principle states if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action. “

Support for the above version of the precautionary principle includes the following rationale.

The National Ocean Policy already adopts the Rio Declaration version and it is applied to all federal waters.

Waters within the sanctuary should adopt a stronger precautionary principle than those already afforded for general ocean waters.

This version is more clear and easier to understand and clearly places the burden of proof on “those taking the action.”

The concept of holding developers and operators accountable is consistent with federal policies, such as NOAA’s recently adopted Aquaculture Policy (See Appendix VI ) The principle gives the Sanctuary the ability (but not requirement) to make strong precautionary arguments when providing comments at policy development or permit application public hearings.

C. National Marine Sanctuary Act, Section 304(d) (Implementation Timeline: 1 to 2 years) [ODW3] The ODWG recommends that Section 304(d) of the National Marine Sanctuary Act be implemented within the HIHWNMS. This action will provide a known process to federal agency proposals that may likely injure a Sanctuary resource and will require the federal government to begin a consultation process with the HIHWNMS. Implementation of Section 304(d) would authorize the HIHWNMS superintendent to propose alternatives to avoid or

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mitigate injury to Sanctuary resources. The ODWG further recommends that when a Section 304(d) consultation occurs, the superintendent notify the Sanctuary Advisory Council of such event. A summary of Section 304(d) is attached as Appendix VII.

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### III. Specific Recommendations

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A. The NOAA Sanctuary website presents these regulations:

“While each Sanctuary has its own unique set of regulations, there are some regulatory prohibitions that are typical for many sanctuaries:

1. Discharging material or other matter into the sanctuary,
2. Disturbance of, construction on, or alteration of the seabed,
3. Disturbance of cultural resources, and
4. Exploring for, developing, or producing oil, gas, or minerals (with a grandfather clause for preexisting operations).”

See: <http://sanctuaries.noaa.gov/protect/regulations/welcome.html>

There are five known potential mechanisms by which humpback whales and other marine mammals may be impacted by aquaculture and/or offshore development in HIHWNMS waters.

These are:

1. Aversion: The animals avoid an area because of the physical presence of a cable, pens or mooring lines, sounds produced by farm operations, electromagnetic field disturbances, or other impacts associated with an aquaculture or offshore development operation. These impacts could represent a behavior modification.
2. Attraction: The animals are drawn to the site of an aquaculture or offshore development operation by either provisioning (deliberate or inadvertent, and either farm stock escapees or other fish aggregated around the site) or other positive reinforcement, or other unknown behavioral characteristics (e.g. „scratching“ of skin on netting or mooring lines; curiosity, aggregative instincts, etc). In the case of energy, undersea cables may attract the attention of the humpbacks. These impacts could represent a behavior modification.
3. Entanglement: The animals become entangled in loose line or netting, or an undersea cable, and are injured or killed. These impacts could represent a threat to the animals“ life or welfare.

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4. Habitat degradation: The water quality, substrate, or surrounding ecosystem are significantly modified to the point that it impacts the health and welfare of the animals leads to aversion or attraction, or has other deleterious impacts on the ecosystem. For example, water runoff from large onshore construction activity may adversely affect water quality if not properly mitigated and/or managed.
5. Habitat Loss: Aquaculture or other offshore development requires space, which will reduce habitat space. Loss of habitat is not limited to the physical dimensions of the area designated for development, but may include a zone caused by aversion by plants and animals that may have inhabited the space.

B. Measures:

In evaluating the potential impacts of any development project proposed for Sanctuary waters, the Sanctuary administration should address the following analytical process for each of these four impact mechanisms:

1. Likelihood: What is the likelihood of the project creating this kind of impact? Are there any precedents that suggest the probability of an impact and its scale?
2. Significance: If there is some likelihood of this kind of impact, what is its potential significance? How many animals might be impacted and to what severity? What extent of area might be impacted and for what duration?
3. Mitigation: If the potential for impact is significant, are there any modifications to the project that would mitigate these impacts?
4. Learning: Are there opportunities for gathering meaningful data as the project moves forward that would enhance the Sanctuary's ability to respond to future questions and would enhance the understanding of marine mammal interactions with aquaculture generally? If so, how might these opportunities be best implemented?

C. ODWG Recommendations for HIHWNMS:

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1. [ODW4] The HIHWNMS needs to insure it has current information on relevant NOAA and State of Hawaii regulations and permitting requirements, as well as existing research regarding potential impacts to the seabed, cultural resources, and the whales in Sanctuary waters. (Implementation Timeline: 1 to 2 years)
2. [ODW5] Where HIHWNMS finds an absence of that research, it needs to make a serious and concerted effort to find the resources to enable that research. (Implementation Timeline: 2 - 3 years)
3. [ODW6] The Sanctuary needs to position itself as an active part of any development proposal, including the currently proposed undersea cable, but its active part is not necessarily limited to:
  - recommending specific, Sanctuary-sensitive siting criteria for energy developments that site in, on, or pass through, its waters;
  - insuring its role in any regulatory exemptions and related permit approvals,
  - While noting that avoidance is the most prudent of precautionary methods, should construction occur within or near the Sanctuary, construction and/or repair activities and deployment of any aquaculture pen, offshore energy structure, undersea cable, or any other structure should only occur during the time of year when whales are normally absent.
  - contributing to the community's knowledge of the project's potential impacts, and
  - wherever possible, including public commenting opportunities associated with permits and other government regulatory proceedings (e.g., EISs), stating its position on project components that impact the Sanctuary's mandated oversight responsibility(Implementation Timeline: Immediate)
4. [ODW7] Demonstration and limited research aquaculture and energy projects within Sanctuary waters should follow the precautionary principle stated above. Small projects that do not have major impact could provide valuable opportunities to learn. Not to allow any research may not be desirable. Any demonstration or research project conducted within Sanctuary waters should have a limited time horizon and a decommissioning plan. (Implementation Timeline: Immediate)

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## IV. Working Group Process

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In February 2011, solicitation letters were sent to a variety of individuals who were known to have knowledge, interest, or a professional background in offshore development or aquaculture. Specific individuals in private industry known to be involved in energy development or aquaculture were also directly solicited to join the working group.

In April 2011, the Working Group was formed with 19 members consisting of individuals from private industry, non-government organizations, government organizations, community representatives, and stakeholder representatives. Public comments received during the Management Plan Review scoping process was compiled and reviewed by the committee. Web-based conference meetings were held utilizing Go-To-Meeting. Additionally, email-based discussions occurred between bi-weekly meeting dates.

The Working Group decided to develop its own online blogsite. The website <http://odwg.wordpress.com> contains reference documents as well as discussion threads related to the development of working group issues and recommendations. Special note of appreciation goes to Peggy Bond, who organized and maintained the blogsite.

Technical, legal, and management questions were directed to HIHWNMS staff for research. Results of the research have been posted to the Working Group's blogsite.

Members of the Working Group are listed in Appendix VIII.



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- Appendix II NOAA Policy and Permit Guidance – Submarine Cable
- Appendix III List of Federal Permit Requirements – Hawaii Clean Energy Initiative
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## Appendix I – Offshore Aquaculture: Federal Permitting Process

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## Offshore Aquaculture: Federal Permitting Process

| Activity  | Federal Agency | Legislation            | Document/Permit Required                                       | Contact   |
|---|----------------|------------------------|--|---|
| To carry out scientific research  | NMFS           | Magnuson-Stevens Act   | Letter of Acknowledgement                                      | NMFS  |
| To hold juvenile fish for scientific research   | NMFS           | Magnuson-Stevens Act   | Exempted Fishing Permit  | NMFS  |
| To carry out activities necessary for the <i>continued</i> operation of <i>existing</i> commercial aquaculture activities*  | USACE          | Rivers and Harbors Act | Nationwide Permit 48   | US Army Corps of Engineers, Honolulu District; Fax: 808-430-4060  |
| To create “any obstruction” in federal waters to preserve unhindered navigational access of the nation’s waters   | USACE          | Rivers and Harbors Act | Section 10 Permit (aka Department of the Army Permit)          | USACE Headquarters  |
| To discharge into navigable waters while carrying out aquaculture projects in the open ocean OR (1) to produce more than 9,090 harvest weight kilograms of cold water fish or (2) produce more than 45,454 harvest weight kilograms of warm water fish for concentrated aquatic feeding | USEPA          | Clean Water Act        | National Pollution Discharge Elimination System (NPDES) Permit | Denis Lau, Hawaii Department of Health / Environmental Management Division / Clean Water Branch; ph: (808) 586-4352 |

|  |       |                         |  |   |
|--|-------|-------------------------|--|---|
| operations   |       |                         |  |   |
| To inject wastewater and sludge from wells associated with aquaculture (Class V wells) underground | USEPA | Safe Drinking Water Act | Underground Injection Control (UIC) Permit Application | U.S. EPA Region 9 Water Program<br>415-947-8707<br>(Region 9 Water Program) |

\* Activities include installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures necessary for the continued operation of the existing commercial aquaculture activity. It also authorizes discharges of dredged or fill material necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities.

### Offshore Aquaculture: State Permitting Process

| Activity  | Agency  | Document/Permit Required              | Contact                                  |
|---|---|---------------------------------------|--|
| To take regulated marine life including young mullet from the ocean or to acquire regulated marine life from non-ocean sources to stock their pond or facility with the intention of raising the marine life for commercial purposes. | Hawaii Department of Land and Natural Resources (Division of Aquatic Resources) | Aquaculture Facility License          | O'ahu (Main Office);<br>ph: 808.587.0100 |
| For any dealer, retailer, wholesaler, or restaurant to resell regulated marine life raised in a licensed aquaculture facility   | Hawaii Department of Land and Natural Resources (Division of Aquatic Resources) | Aquaculture Dealer License            | O'ahu (Main Office);<br>ph: 808.587.0100 |
| To participate in aquaculture activities that may have a negative impact on the human environment   | Hawaii Department of Land and Natural Resources (Division of Aquatic Resources) | EA/EIS                                | O'ahu (Main Office);<br>ph: 808.587.0100 |
| To participate in aquaculture activities in the open ocean  | Hawaii Department of Land and Natural Resources (Land                           | Conservation District Use Application | Office of Conservation and Coastal Lands |

|  |  |   |                                  |
|--|--|---|----------------------------------|
| (aquaculture sited in the US Exclusive Economic Zone)  | Division)  |   |                                  |
| To discharge pollutants into surface waters of the US (point sources of pollutants)  | Department of Health   | A revised NPDES permit                      | Clean Water Branch               |
| To discharge pollutants into surface waters of the US (point sources of pollutants)  | Department of Health   | Zone of Mixing Permit                       | Clean Water Branch               |
| To construct and operate convenience centers (only residential waste, not more than 40 tons per day), green waste composting facilities (not more than three thousand tons per year), land clearing, grubbing, and certain agricultural and inert waste landfills, recycling and drop-off and processing facilities using single source separated material for reuse | Department of Health   | Solid Waste Permit                          | Office of Solid Waste Management |
| To carry out aquaculture activities in special management areas (SMAs)   | County of Hawaii (Planning Dept.);<br>County of Kauai (Planning Dept.);<br>County of Maui (Planning Dept.); City & County of Honolulu (Dept. of Planning and Permitting) | County Special Management Area (SMA) Permit | Look at County Agencies          |

## Acronyms

NMFS: National Marine Fisheries Service  
USACE: United States Army Corps of Engineers  
USEPA: United States Environmental Protection Agency

[http://aquaculture.noaa.gov/pdf/16\\_uscommission.pdf](http://aquaculture.noaa.gov/pdf/16_uscommission.pdf)

<http://www.spn.usace.army.mil/regulatory/nwp/NWP48.pdf>

<http://masglp.olemiss.edu/Offshore%20Aquaculture.pdf>

[http://odwg.files.wordpress.com/2011/04/cinms\\_open\\_ocn\\_aquaculture\\_07\\_30\\_07\\_compressed.pdf](http://odwg.files.wordpress.com/2011/04/cinms_open_ocn_aquaculture_07_30_07_compressed.pdf)

<http://odwg.files.wordpress.com/2011/05/final20supplemental20ea20polarcirkel-kikkonet204-0920final20b.pdf>



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## Appendix II – NOAA Policy and Permit Guidance – Submarine Cable

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**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
OFFICE OF NATIONAL MARINE SANCTUARIES**

**INTERIM  
POLICY AND PERMIT GUIDANCE  
FOR SUBMARINE CABLE PROJECTS  
APRIL 2009**

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**PURPOSE AND APPLICATION**

The purpose of this policy and permit guidance is to define and describe how the NOAA Office of National Marine Sanctuaries (ONMS) will consider proposals to install and maintain submarine cables within national marine sanctuaries.<sup>1</sup>

**BACKGROUND**

This policy and the associated permit guidelines incorporate many lessons learned by the ONMS through direct experience with submarine cables in the Monterey Bay, Olympic Coast, and Stellwagen Bank national marine sanctuaries, as well as the experiences of other government agencies. In addition, the ONMS has taken into consideration comments received from an Advance Notice of Public Rulemaking (ANPR) regarding submarine cables in September 2000. The information provided in these comments as well as the research and monitoring it provoked are reflected in this policy statement and the associated permit guidelines.

**DEFINITION**

For the purposes of this policy, submarine cable projects include those activities required to install and maintain cables on the seabed, including, but not limited to, cable installation (e.g., laying and burial), pre- and post-lay surveys, cable operations, maintenance and repairs, and cable removal.

**POLICY GUIDANCE**

It is the policy of the ONMS to review applications to install and maintain submarine cables in accordance with the guidelines provided. The ONMS will approve applications for submarine cable projects when they are found to be consistent with the criteria described in these guidelines.

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<sup>1</sup> Due to their unique regulations, this policy does not apply to the Hawaiian Islands Humpback Whale National Marine Sanctuary or the Thunder Bay National Marine Sanctuary. In addition, this policy does not apply to the Papahānaumokuākea Marine National Monument, which is governed by the Antiquities Act.

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## **LIST OF ACRONYMS**

|         |   |
|---------|---|
| AA      | Assistant Administrator                                   |
| ACOE    | Army Corps of Engineers                                   |
| ANPR    | Advance Notice of Proposed Rulemaking                     |
| CBNMS   | Cordell Bank National Marine Sanctuary                    |
| CINMS   | Channel Islands National Marine Sanctuary                 |
| DOC     | Department of Commerce                                    |
| FBNMS   | Fagatele Bay National Marine Sanctuary                    |
| FGBNMS  | Flower Garden Banks National Marine Sanctuary             |
| FKNMS   | Florida Keys National Marine Sanctuary                    |
| FMV     | Fair Market Value   |
| GFNMS   | Gulf of the Farallones National Marine Sanctuary          |
| GRNMS   | Gray's Reef National Marine Sanctuary                     |
| HIHWNMS | Hawaiian Islands Humpback Whale National Marine Sanctuary |
| MBNMS   | Monterey Bay National Marine Sanctuary                    |
| MNMS    | Monitor National Marine Sanctuary                         |
| NEPA    | National Environmental Policy Act                         |
| NMSA    | National Marine Sanctuaries Act                           |
| NMSs    | National Marine Sanctuaries                               |
| NOAA    | National Oceanic and Atmospheric Administration           |
| NOS     | National Ocean Service                                    |
| OCNMS   | Olympic Coast National Marine Sanctuary                   |
| ONMS    | Office of National Marine Sanctuaries                     |
| SBNMS   | Stellwagen Bank National Marine Sanctuary                 |
| SUP     | Special Use Permit  |
| TBNMS   | Thunder Bay National Marine Sanctuary                     |



## 1. Introduction

The NOAA Office of National Marine Sanctuaries (ONMS) manages a system of thirteen national marine sanctuaries (NMSs or sanctuaries) that protect special, nationally significant areas of the marine environment under the authority of the National Marine Sanctuaries Act (NMSA; 16 U.S.C. §1431 *et seq.*). The ONMS, along with the U.S. Fish and Wildlife Service and the State of Hawaii, also manages the Papahānaumokuākea Marine National Monument under the Antiquities Act. Sanctuaries and the monument protect a variety of marine habitats and cultural resources including coral reefs, mangrove forests, seagrass beds, deep-sea canyons, kelp beds, marine mammal feeding and breeding grounds, historic shipwrecks, and submerged cultural resources.

In the late 1990s, the ONMS received applications to install and maintain telecommunication submarine cables through the Olympic Coast National Marine Sanctuary (OCNMS), the Stellwagen Bank National Marine Sanctuary (SBNMS), and the Monterey Bay National Marine Sanctuary (MBNMS). Experience gained through the consideration and issuance of permits for those projects highlighted the need for more clarity on how such projects would be handled in the future.

The Department of Commerce convened a workshop in February 2000 with representatives from the telecommunications and fishing industries, environmental and conservation organizations, and state agencies. A white paper with key issues and guiding principles was distributed prior to, and discussed at, the workshop. The proposed guiding principles included: analysis of habitat types appropriate or inappropriate for cable laying, analysis of individual sanctuary regulations, and parameters for evaluating proposals for cable installations.

In August 2000, NOAA published an advance notice of proposed rulemaking (ANPR) on Installing and Maintaining Commercial Submarine Cables in National Marine Sanctuaries in the Federal Register (65 FR 51264, Aug. 23, 2000). A second ANPR was published in November 2000 at the request of the industry for additional time to comment (65 FR 70537, Nov. 24, 2000). The ANPR requested comments on both the guiding principles contained in the white paper and on the issues raised at the workshop.

Specifically, the ANPR requested comments on:

- Whether changes to existing ONMS regulations or some form of policy guidance was necessary to clarify NOAA's decision-making process regarding the installation and maintenance of commercial submarine cables within NMSs;
- If changes or additional guidance were appropriate, what those changes or guidance should contain; and
- Whether there were comments on the proposed principles on the installation of commercial submarine cables with the marine and coastal environment.

The ONMS received 36 comments from the telecommunications industry, the Department of Defense, the environmental community, state government, and various interested individuals.

General comments on the ANPR included the following:

- The telecommunications industry believed that existing regulations are adequate in NMSs.
- The environmental community urged NOAA to prohibit cables within NMSs, and to develop stringent permit application criteria, including removal of out-of-service cables.
- The telecommunication industry and the environmental community did not support a Programmatic Environmental Impact Statement (PEIS) or the concept of approving projects in the planning stage.
- The environmental community supported the idea of cable corridors while the telecommunication industry opposed it.
- The telecommunication industry wanted improved consultation between NOAA and other cable permitting authorities, such as the U.S. Army Corps of Engineers, the Federal Communications Commission, etc., and more specific, user-friendly criteria for permit applications.

These comments, in addition to lessons learned from past direct experience related to cables installed in sanctuaries, were factors that led to NOAA's decision not to pursue rulemaking at this time, but, rather to develop and issue interim permit guidelines. The ONMS believes that cable permit guidelines will ensure that applications to install and maintain submarine cables in sanctuaries are reviewed consistently and in a manner that adheres to the NMSA and ONMS regulations (15 CFR Part 922).

## **2. Guidelines for Processing Applications for Submarine Cables**

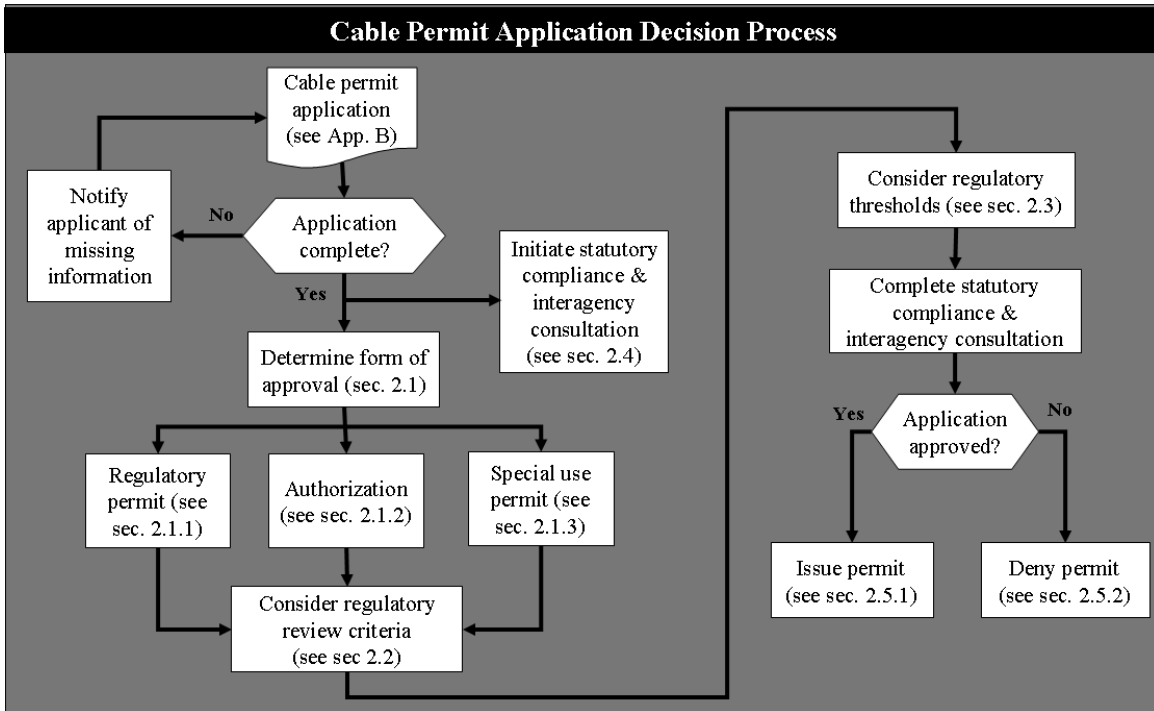
Anyone proposing to install and maintain a submarine cable within a national marine sanctuary<sup>2</sup> must obtain prior approval from the ONMS via a permit or other authorization. It is the policy of the ONMS to review applications to install and maintain cables in accordance with the guidelines provided in this section. The intent of this section is to ensure that such applications are processed consistently throughout the ONMS. This guidance will also provide greater predictability and clarity to prospective applicants. These guidelines are to be used instead of the normal ONMS permit application forms and guidelines.<sup>3</sup> Applications for submarine cable projects that are reasonably expected by the ONMS to meet the criteria contained herein will be reviewed consistent with these guidelines by ONMS staff.

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<sup>2</sup> See footnote 1.

<sup>3</sup> "Guidelines for Submitting Applications for National Marine Sanctuary Permits and Authorizations" available for download at <[http://sanctuaries.noaa.gov/library/national/nmsp\\_permits.pdf](http://sanctuaries.noaa.gov/library/national/nmsp_permits.pdf)>.

The process by which applications for submarine cable permits are considered is shown in Figure 1. These guidelines will go over the elements of the process in the sections indicated in the diagram.



**Figure 1. ONMS cable permit application decision process**

## 2.1. Forms of approval

Most sanctuaries have a regulation that prohibits the alteration of, or placement of materials on, the seabed without a sanctuary permit or other authorization. Since cable installation activities generally require seabed disturbance, cable installation is normally prohibited in most sanctuaries. However, regulations provide for some prohibited activities to be permitted to the extent they are compatible with the resource protection mandate of the National Marine Sanctuaries Act (NMSA) and meet the regulatory requirements for a sanctuary permit or authorization. The NMSA also provides authority to issue special use permits (SUPs) for specific activities and for the collection of fees for the conduct of any activity under an SUP. These forms of approval are covered in more detail beginning with section 2.1.1. Submarine cable installation and maintenance has been permitted in sanctuaries using a sanctuary regulatory permit, SUP, authorization, or combination of the three tools.

When a permit application for a submarine cable is received, the ONMS will first decide under which form of approval to consider it. As previously mentioned, cable proposals must be eligible for at least one of three primary forms of approval to be considered:

- “Regulatory Sanctuary Permits” issued pursuant to site-specific regulations and 15 CFR § 922.48;

- “Authorizations” of other government agency approvals issued pursuant to 15 CFR § 922.49; and
- “Special Use Permits” issued pursuant to section 310 of the NMSA.

Because submarine cable projects can be proposed for different purposes, the appropriate form of approval for which each application should be considered will vary. In addition, not all permit types (with the exception of SUPs) are available in all sanctuaries. As these will change, applicants should consult 15 CFR Part 922 for the current ONMS regulations or contact the appropriate sanctuary superintendent for the most current information on available permit types for that sanctuary.

Due to their unique regulations, this policy guidance does not apply to the Hawaiian Islands Humpback Whale National Marine Sanctuary or the Thunder Bay National Marine Sanctuary. However, if another Federal permit or license is required to install such cables, the Federal agency issuing such permit is required to first consult with the ONMS in accordance with section 304(d) of the NMSA.<sup>4</sup>

Just because a project qualifies for a permit or authorization does not guarantee that the ONMS will approve the application. ONMS staff will review the application concurrently for completeness and adherence to these guidelines. The office may hire an independent consultant or consult with other subject matter experts to assist in the administration of the technical review of the permit application.

If a project does not qualify for at least one of these three forms of approval (regulatory sanctuary permit, authorization, or special use permit) the project will not be reviewed further in accordance with these guidelines. These applications will either be denied without additional review or returned to the applicant without further consideration.

#### 2.1.1. Regulatory Sanctuary Permits

Most sanctuaries have regulations that allow permits to be issued for activities that would otherwise be prohibited when those activities are related to research, education, or management. Two other regulatory sanctuary permit categories for specific sanctuaries are also included here because they could potentially be used to allow installation and maintenance of submarine cables. In order to qualify for a regulatory sanctuary permit, a cable project must meet the description of these permit types, which are described in more detail below.<sup>5</sup>

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<sup>4</sup> Section 304(d) of the National Marine Sanctuaries Act (16 U.S.C. § 1434(d)) requires Federal agencies to consult with ONMS prior to taking any action likely to destroy, cause the loss of, or injure any sanctuary resource (for SBNMS, the threshold is any action that “may affect” sanctuary resources). Moreover, if a Federal agency takes an action other than the alternative recommended by the ONMS, resulting in the destruction of, loss of, or injury to a sanctuary resource, that agency is required to promptly prevent and mitigate further damage and restore or replace the sanctuary resource in a manner approved by the Secretary of Commerce. 16 U.S.C. § 1434(d).

<sup>5</sup> Other regulatory permit types were omitted because they could never reasonably apply to submarine cable projects (e.g., permits for “conduct general salvage and recovery operations” or “removal of jade”).

### *Research*

In order to qualify for a “research permit” a submarine cable project should further research related to sanctuary resources and qualities. Installation of cables should be part of a scientific research project whose goal is to answer scientific questions about sanctuary resources. The usefulness of this information to sanctuary management does not necessarily affect the eligibility of a particular cable project for this type of permit. However, research questions with little or no applicability to sanctuary management goals (i.e., the information it expects to yield is either widely known or inconsequential to sanctuary management) would not likely be approved after considering the impacts. This permit type is presently available at all sanctuaries.

### *Education*

In order to qualify for an “education permit” a cable project should be part of an educational project designed to increase the awareness of sanctuary users about the sanctuary or a particular aspect of the sanctuary. Teaching sanctuary users about submarine cables is not the same as teaching them about sanctuary resources. In addition, an educational project involving the placement of submarine cables must be done in a manner or in a location where a reasonable number of sanctuary users will be able to benefit from its presence. Education permits are available for all sanctuaries except the *Monitor* NMS.

### *Management*

In order to qualify as a “management permit” a submarine cable project should assist in managing the sanctuary. Applicability of any particular cable project to this type of permit is dependent upon the management goals outlined in the sanctuary-specific management plans. A cable project should be reasonably expected to help the sanctuary meet a previously stated management goal to qualify for this permit type. The sanctuary will not create new management objectives (i.e., management objectives not articulated in the sanctuary’s management plan) simply so that a proposed cable project might qualify for this permit type. This permit type is presently available at the following sanctuaries: Cordell Bank, Flower Garden Banks, Monterey Bay, Stellwagen Bank, Olympic Coast, Florida Keys.

### *Furthering the welfare of an Indian tribe adjacent to the sanctuary – Olympic Coast National Marine Sanctuary (OCNMS) only*

OCNMS regulations are unique within the national system in that they allow for the issuance of a permit to an individual to conduct an activity that would otherwise be prohibited if the activity is expected to promote the welfare of a federally-recognized Native American tribe with treaty rights within the sanctuary.

### *Otherwise further Sanctuary purposes – Florida Keys National Marine Sanctuary (FKNMS) only*

FKNMS regulations (15 CFR § 922.166(2)(vi)) allow the ONMS to permit prohibited activities that “otherwise further the [FKNMS] purposes, including facilitating multiple use of the [FKNMS], to the extent compatible with the primary objective of resource

protection.” The purposes of the FKNMS are as follows (taken from 15 CFR §922.160(a)):

- To protect, preserve and manage the conservation, ecological, recreational, research, educational, historical, and aesthetic resources and qualities of the area,
- To protect, restore, and enhance the living resources of the Sanctuary,
- To contribute to the maintenance of natural assemblages of living resources for future generations,
- To provide places for species dependent on such living resources to survive and propagate,
- To facilitate to the extent compatible with the primary objective of resource protection all public and private uses of the resources of the Sanctuary not prohibited pursuant to other authorities,
- To reduce conflicts between such compatible uses, and
- To achieve the other policies and purposes of the Florida Keys National Marine Sanctuary and Protection Act and the National Marine Sanctuaries Act.

If a cable project would further one of these purposes, it may be considered within FKNMS under this permit type.

#### 2.1.2. Authorizations

In addition to permits, in certain sanctuaries a superintendent can authorize an otherwise prohibited activity if that activity is permitted by a valid lease, permit, license, approval or other authorization issued by any federal, state, or local authority of competent jurisdiction. Such approval is known as an “authorization.” Since the general process and requirements governing the handling of authorizations and permits are very similar, in these guidelines the term “permit” applies to both permits and authorizations. When there is a difference in the requirements or process between permits and authorizations, this distinction is noted. The authority to issue authorizations is limited to the following sanctuaries: Florida Keys, Flower Garden Banks, Monterey Bay, Stellwagen Bank, Olympic Coast, and Thunder Bay. In those sites where it is an option, authorization authority would typically be used in cases where a regulatory sanctuary permit is not available or appropriate.

Through the authorization process, applicants must notify the sanctuary superintendent of their desire to use another agency’s permit to conduct an otherwise prohibited activity in the sanctuary. The ONMS will then notify the applicant and permitting agency as to whether or not it objects to the issuance of the other permit. If the ONMS does not object, it will authorize, in writing, the use of the other permit to conduct the activity. This “authorization” will resemble a permit and generally contain additional conditions on the conduct of the activity deemed necessary to protect sanctuary resources and qualities. If the ONMS objects to the other agency permit, or otherwise does not provide written authorization, the activity may not be conducted.

Most cable projects will require a permit from the U.S. Army Corps of Engineers (ACOE) pursuant to the ACOE’s authority under Section 10 of the Rivers and Harbors

Act and/or Section 404 of the Clean Water Act. If the ONMS decides to authorize another agency's permit (rather than issue a sanctuary permit), a permit from the ACOE is therefore the most likely vehicle through which the ONMS could authorize cable projects in cases where a regulatory sanctuary permit or a special use permit is not deemed appropriate.

### 2.1.3 Special use permits

Special use permits are issued pursuant to Section 310 of the NMSA (16 U.S.C. §1441), which allows issuance of special use permits for specific activities in a sanctuary only if such authorization is necessary (1) to establish conditions of access to and use of any sanctuary resource, or (2) to promote public use and understanding of a sanctuary resource. Activities that are necessary to establish conditions of access to and use of sanctuary resources generally have included concessionaire-type activities (profit-driven entities operating within the boundaries of a national marine sanctuary and other commercial activities that require access to the sanctuary to achieve a desired goal). Special use permits can be issued for any sanctuary.

The NMSA (16 U.S.C. § 1441(c)) requires that special use permits:

- Authorize the conduct of an activity only if that activity is compatible with the purposes for which the Sanctuary is designated and with protection of Sanctuary resources;
- Not authorize the conduct of any activity for a period of more than five years unless renewed;
- Require that activities carried out under the permit be conducted in a manner that does not destroy, cause the loss of, or injure sanctuary resources; and
- Require the permittee to purchase and maintain comprehensive general liability insurance, or post an equivalent bond, against claims arising out of activities conducted under the permit and agree to hold the United States harmless against such claims.

Should the ONMS determine that a special use permit is appropriate for the continued presence and operation of a specific submarine cable project, it must process that application consistent with Section 310 of the NMSA in addition to these guidelines. Clarification on the applicability of SUP requirements to certain categories of activities conducted within national marine sanctuaries was described in a Final Notice in the Federal Register in January 2006 (71 FR 4898, January 30, 2006).<sup>6</sup> The notice specifies that the continued presence of commercial submarine cables beneath or on the seabed will be subject to the requirements of special use permits under Section 310 of the NMSA.

NMSA section 310 also authorizes the assessment of fees for issuance of special use permits, including a fee that represents the fair market value (FMV) of the use of sanctuary resources. ONMS has issued two special use permits allowing the presence of

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<sup>6</sup> The Federal Register Notice is available for download at [http://sanctuaries.noaa.gov/management/fr/71\\_FR\\_4898.pdf](http://sanctuaries.noaa.gov/management/fr/71_FR_4898.pdf).

commercial submarine cables in two national marine sanctuaries, one each in Olympic Coast and Stellwagen Bank sanctuaries.

For special use permits only, the ONMS has the authority to recoup an application fee for processing the permit, the administrative cost of ongoing monitoring of the permit, and the fair market value (FMV) of the use of sanctuary resources. The ONMS has developed a process for determining the FMV of any special use permit issued for the presence of submarine cables. The final report of that analysis, “Fair Market Value Analysis for Fiber Optic Cable Permit in National Marine Sanctuaries,” presents the methodology by which the ONMS will assess the FMV for the presence of any future commercial submarine cable in a national marine sanctuary.<sup>7</sup> The notice of the availability of the FMV analysis report was noticed in the Federal Register in August 2002 (67 FR 55201, August 28, 2002). The FMV process described in the analysis was based on dozens of industry and government sources and draws on collaboration with and review by numerous experts in the business, legal, and technical arenas.

## 2.2. Regulatory Review Criteria

Once the form of approval (permit, special use permit, or authorization) under which the application is being considered is determined, the ONMS will evaluate applications for the installation and maintenance of submarine cables based on the criteria listed below. As a matter of policy, these criteria will be applied to every application regardless of the form of approval selected.

ONMS regulations provide review criteria by which office staff must evaluate permit applications. This document combines those criteria into four categories. First, the ONMS will conduct a technical review of the methods proposed to install and maintain the submarine cable(s). Next, the ONMS will evaluate the impacts of the proposed submarine cable on sanctuary resources. The ONMS will then consider the proposed benefits of the project. Finally, the ONMS will consider other matters important for the review of cable projects that are not specifically provided in the ONMS regulations.

### 2.2.1. Technical Review

The following criteria apply to the review of the project itself. Under these criteria the ONMS considers the applicant’s qualifications and financial resources, the methods proposed by the applicant to install and maintain the cable, and the route the applicant has chosen.

#### *Professional and financial responsibility*

The professional and financial responsibility of an applicant proposing to install a submarine cable must be demonstrated prior to ONMS approving such activity. The ONMS will first review the qualifications of the individual or entity proposing to

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<sup>7</sup> The report “A Fair Market Value Analysis for Submarine Cable Permit in National Marine Sanctuaries” is available for download at < <http://sanctuaries.noaa.gov/library/national/fmvfinalreport.pdf>>.



establish a submarine cable in a sanctuary. The ONMS will use the following questions to evaluate an applicant's qualifications:

- Does the applicant have the technical skills to install and maintain a submarine cable consistent with all applicable permit conditions?
- Will the applicant be able to fulfill any permit requirements established to minimize or eliminate impacts to sanctuary resources?

For example, if an applicant claims to be able to install a submarine cable in a precise corridor, the ONMS must ensure that the applicant has the skills and equipment available to do this. To ensure that an applicant has the technical skills to comply with a permit to install, maintain, and monitor a submarine cable, the ONMS will request that the applicant submit professional qualifications as stated in the permit guidelines in Appendix B for each those involved in the project installation and maintenance. The ONMS will not likely approve projects that rely on inexperienced individuals to perform activities related to the establishment and monitoring of a submarine cable when those activities are critical to the project's compliance with permit terms and conditions.

The financial responsibility in many cases relates to both the applicant's budget for the activity as well as the financial resources of the applicant to comply with the terms and conditions of any permit. The following questions will help the ONMS determine if an applicant can exercise appropriate financial responsibility for the proposed project:

- Can the applicant show adequate funds are available to remove or remediate the cable if something were to go wrong during or after installation?
- Can the applicant show that there are funds available to comply with permit terms and conditions for the life of the project, including any monitoring programs and cable removal requirements?

Projects that involve the installation and maintenance of cables should include plans and sufficient funding to remove the cable after the project is finished. Lack of adequate funding to remove the cable is not sufficient justification to avoid cable removal.

Applicants proposing projects involving cables that need to be in place long-term should be able to sufficiently justify that the length of time is necessary to meet the objectives of the project. In some cases the impacts of cable removal will be greater than leaving it in place. In these cases, the ONMS may consider allowing the cable to remain, although this will be considered initially before the cable is installed and will factor into the decision to permit the cable in the first place.

To ensure that funds are available for the life of a project, the ONMS will require the applicant to post a performance bond or equivalent financial assurance to ensure that permit terms and conditions will be met for the life of the project. This includes, but is not limited to, any requirements for cable removal and long-term monitoring.

#### *Appropriateness of methods*

The ONMS will also consider the appropriateness of the methods a permit applicant is proposing to use for cable installation and project maintenance. The ONMS will rely on past experience, sanctuary staff experience, and expert advice to ensure that more

efficient, less costly, or less damaging methods available to achieve a desired result have not been overlooked. Different methods of installing cables may be appropriate in different sanctuaries or in different habitats within a single sanctuary. The following will be considered to determine if the proposed methods are appropriate:

- The applicant should demonstrate why the proposed method was chosen and why it was deemed superior to other methods not selected.
- If the applicant has dismissed alternative methods that impact sanctuary resources to a lesser degree (as compared to the proposal), the applicant must provide a thorough justification.
- An applicant's lack of funds to pursue an alternative method is not, by itself, a justification for rejecting an alternative that the ONMS determines to be less damaging to sanctuary resources.

Under this criterion the ONMS will also carefully evaluate the method for installing and maintaining the cables. Appendix B discusses the information required from the applicant in order for the ONMS to make this assessment. As described in more detail in the appendix, applicants should include in their application a description of how these issues will be addressed by their project by providing the following:

- A detailed description of the cable route; information on construction, operations, and abandonment; and emergency response conditions;
- A monitoring plan for both installation and long-term placement that includes components addressing biological effects, effectiveness in meeting stated goals, and bonding/financial assurance; and
- An analysis of the environmental consequences of installation and long-term placement that includes details about the affected environment and the potential adverse and beneficial effects of the project.

As part of its responsibilities under this criterion and to comply with the National Environmental Policy Act (NEPA) (see section 2.4.1), the ONMS may ask the applicant to investigate and analyze other methods that can be reasonably expected to achieve the stated goals of the project. One of the alternatives the ONMS may require the applicant to investigate and analyze is one that does not involve the placement of any material on the seafloor (i.e., meet the project purpose without installing a cable). The ONMS may also require the applicant to provide a written analysis of other alternative methodologies. Related to this, the ONMS will also require the applicant to justify the site selected for the proposal and analyze alternative sites that can be expected to achieve the stated goals of the project, including sites outside the sanctuary.

#### *Activity needs to be in a sanctuary*

As stated previously, the installation of submarine cables in sanctuaries is prohibited except where permitted. A proponent of a cable project must justify to the ONMS that the cable needs to be located inside the sanctuary to achieve the stated goals.

To satisfy this criterion and a portion of the ONMS's obligations under NEPA, applicants for approvals to install a cable in a sanctuary should:

- Provide an analysis that compares the environmental impacts of the in-sanctuary proposal to at least one non-sanctuary alternative site;
- Explain why the in-sanctuary proposal is preferable to locating the project outside the sanctuary in terms of providing greater benefits; and
- Provide the siting criteria that led to the conclusion that the site within the sanctuary is the only one that meets the project's goals.

If any non-sanctuary alternative (either one analyzed by the applicant or another analyzed by the ONMS) can reasonably be expected to achieve the desired goals of the project, the application is not likely to be approved.

### 2.2.2. Evaluating the effects of the project

The following four criteria are used to examine the effects of proposed submarine cable projects and evaluate the significance of those effects. These effects will be evaluated in detail in the NEPA analysis described in section 2.4.1. Although they are among the most important criteria the ONMS will consider, they can usually be evaluated more effectively after the ONMS has completed its initial review of the project as described in section 2.2.1.

Because the long-term effects of submarine cable installation and long-term placement are not well understood, the applicant will be required to conduct or fund a long-term monitoring project. Refer to section 2.5.1 for details on monitoring requirements.

#### *Extent the activity will diminish or enhance the values of the sanctuary*

When processing submarine cable permit applications, the ONMS will consider the extent to which a proposed project is expected to affect the values for which the applicable sanctuary was designated. The following are the primary values of sanctuaries that will be considered under this criterion (as they relate to the installation of cables) along with questions that will help assess how each value is affected. Because the primary reason sanctuaries are designated is for the protection of sanctuary resources, the effects of a project on these resources are given the most weight:

1. Natural and cultural resource protection value:
  - Does the project enhance or diminish the protection of the natural and cultural resources in the sanctuary?
  - Will there be any long-term or short-term impacts to sanctuary resources? Will those impacts be significant?
  - What natural community can the ONMS reasonably expect to be displaced when the submarine cable is installed?
  - Will the installation and operation of the submarine cable inhibit the management or protection of a cultural resource site?
2. Value of the site as a source for scientific and educational information:
  - Does the project affect on-going or potential scientific monitoring projects?
  - Will the project enhance the ONMS's understanding of its resources?

- Will the project enhance sanctuary users' knowledge about sanctuary resources?
3. Aesthetic value of the site:
    - Does the project diminish or enhance the aesthetics of the sanctuary?
    - Is it visible from the water surface or shoreline?
  4. Human use value:
    - Will the project prevent (on a temporary, long-term, or permanent basis) some users from conducting their normal activities at the site?
    - Will the submarine cable create new conflicts between different user groups?
    - Will the cable create a hazard to navigation?

Under this criterion, the ONMS will consider both the positive and negative effects of a submarine cable project on these values.

#### *Duration of activity and effects*

The ONMS will consider the duration of a submarine cable project when evaluating each project. As a general rule, cables will be required to be removed at the end of the project.

The ONMS will also evaluate the duration of the effects of a submarine cable project before issuing a permit. A project whose adverse effects continue beyond the installation phase would have less chance of being permitted than a project whose adverse effects occur primarily during installation.

#### *Cumulative effects*

As part of its evaluation of the effects of each cable project, the ONMS will consider the cumulative effects of the project before making a decision. To facilitate this analysis, as part of the application package the applicant should:

1. Identify all natural resources (fish, benthic invertebrates, marine mammals, etc.), cultural resources (prehistoric archeological sites, historic shipwrecks, etc.), and current human uses (fishing, diving, etc.) that could potentially be affected, both positively and negatively, by the submarine cable project;
2. Identify and describe the geographic and temporal range of all affected resources;
3. Analyze how the project will affect all resources identified;
4. Describe all other natural and human-caused effects (both adverse and beneficial) on all resources identified (e.g., fishing, shipwrecks, and other cables); and
5. Describe how/if the proposed cable project will interact with the other natural and human-caused effects on the resources.

The ONMS will require a comparable level of analysis for each alternative. This criterion may result in ONMS denying a permit application due to the cumulative impacts of other projects combined, rather than solely the impacts of the proposed project.

The ONMS will evaluate cumulative effects consistent with the Council on Environmental Quality's implementing regulations for NEPA and its publication entitled *Considering Cumulative Effects under the National Environmental Policy Act*.<sup>8</sup>

#### *Impacts on adjacent Indian tribes*

The ONMS will consider the impacts of a proposed submarine cable project on federally recognized Native American tribes with treaty rights within the sanctuary. This is particularly important for projects proposed in the Olympic Coast National Marine Sanctuary (OCNMS), where staff has worked out a consultation procedure with the tribes to make this determination. If a tribe objects to the installation of the submarine cable based on expected impacts to them or their activities, the ONMS will consider that in the review of the application. The support or opposition of a tribal government will be taken into account when making a decision on a permit application.

#### 2.2.3. Considering the end value of the activity

Once the impacts of a submarine cable project have been evaluated (section 2.2.2), the ONMS will measure those impacts against the expected benefits, or "end value," of the project. The nature of the end value of a project may result in the ONMS approving a submarine cable project despite the environmental impacts that may result. In general, activities that have a positive end value to the sanctuaries will have a favorable rating under this criterion, whereas those that are expected to result in little or no end value to the sanctuaries will not. The end value of any cable project can be assessed by answering the questions:

- What benefits will the sanctuary gain by this cable being installed as proposed?
- How do these benefits compare to the benefits of the submarine cable not being installed and the overall impact on sanctuary resources and qualities?

#### 2.2.4. Considering other matters deemed appropriate

In certain special cases, the ONMS may consider other factors not presented above to determine whether or not to approve a particular submarine cable project. In making its decision, the ONMS may consider the socioeconomic effects of a submarine cable project and the human safety concerns that may result from a project. (Refer to Appendix B for a more detailed discussion of these two factors.) While these considerations are not specified in review decision criteria in ONMS regulations or part of the ONMS's legislative mandate, they may factor into decisions in some cases when these effects are considered to be significant. While socioeconomic factors by themselves are not likely to result in the denial or approval of a permit, they may result in the addition of certain permit conditions to minimize the adverse environmental effects.

### 2.3. Regulatory Thresholds

ONMS regulations bar the issuance of permits in some sanctuaries for activities that exceed certain specified thresholds of impact. The ONMS cannot approve applications

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<sup>8</sup> See <http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm> for the text of this publication.

for regulatory sanctuary permits in Fagatele Bay (FBNMS), Monterey Bay (MBNMS), Stellwagen Bank (SBNMS), and Olympic Coast (OCNMS) national marine sanctuaries if the proposed activity exceeds the threshold applicable to the sanctuary, as described below.

FBNMS has two thresholds that apply: (1) permitted activities must be conducted with adequate safeguards for the environment; and (2) the environment, after the completion of the project, will be returned to, or will regenerate to, the condition that existed before the activity occurred. MBNMS and SBNMS regulations both prohibit the issuance of regulatory sanctuary permits for activities with impacts on sanctuary resources that are greater than short-term and negligible. Finally, the ONMS cannot issue any regulatory sanctuary permit for an activity in OCNMS if it will substantially injure a sanctuary resource. These thresholds of impact will be evaluated through the NEPA analysis process described in section 2.4.

#### 2.4. Statutory Compliance and Interagency Consultation

When permitting submarine cables, the ONMS is a “Federal action agency” for the purposes of many Federal laws. As such, the ONMS must comply with various statutes including the National Environmental Policy Act (NEPA) 42 U.S.C. Section 4321 et seq.; Section 106 of the National Historic Preservation Act; Section 7 of the Endangered Species Act 16 U.S.C. 1531 et seq.; the Essential Fish Habitat provisions of the Magnuson-Stevens Act 16 U.S.C. Section 1801 et seq.; and the Federal consistency provisions of the Coastal Zone Management Act 16 U.S.C. Section 1451 et seq.

In most cases, these consultations and environmental documentation must be completed before the ONMS can issue a permit or authorization for a submarine cable. In many cases, particularly if the project requires an environmental assessment or environmental impact statement to comply with NEPA, completing these requirements can add significant processing time to making the decision on an application. The information included by the applicant as part of a complete application will assist the ONMS in completing its NEPA responsibilities.

#### 2.5. Taking Final Action on the Permit Application

The ONMS will make a decision on a pending permit application to install a submarine cable only after it has determined the appropriate form of approval as outlined in section 2.1, has considered all of the permitting review criteria and thresholds listed and described in sections 2.2 and 2.3 respectively, and prepared the appropriate NEPA documentation and conducted all of the interagency consultations described in section 2.4. Once a decision has been reached in this manner, the ONMS will adhere to the following procedures for issuance of the permit or denial, whichever the case may be. For the most part, the ONMS will do this in the same manner as all other permit applications consistent with long-standing protocols and permit processing procedures (and national policies).

Parties also have the right to appeal ONMS decisions on permit applications. The procedures for appeal are summarized in section 2.5.3 and are detailed in 15 CFR § 922.50.

#### 2.5.1. Permit Issuance

If the decision is to issue the permit, the ONMS will draft a permit with all necessary special and general conditions at the sanctuary in which the submarine cable is to be installed. In addition to the typical general conditions attached to all ONMS permits and authorizations, the items in the subsections below will be addressed in every approval to install a submarine cable as terms or conditions of the approval.

In an effort to ensure there are no misunderstandings or questions, once considering comments from other agencies, as a general rule the ONMS will provide the applicant with an opportunity to review the draft permit. If the applicant has questions or desires clarifications or changes to the permit language, such requests should take place at this time. The ONMS is under no obligation to change the draft permit, but will work with the applicant to clarify language and make any minor changes to which it has no objection. If the ONMS has not heard from the applicant during this opportunity to comment, the program will issue the final permit. The applicant is required to countersign the permit and return any originals as directed by the permit.

#### *Monitoring Requirements*

A person who is granted a permit for a submarine cable project in a sanctuary will generally be required as a condition of that approval to fund or conduct several types of monitoring. These monitoring requirements will be included as conditions in the permit.

Monitoring typically required for approved submarine cable permits include:

- Marine mammal monitoring (to include observers, safety zones, suspension procedures, and reports) during project installation and construction.
- Post-installation cable monitoring for the life of the cable, to include periodic cable route surveys, impact analyses, assessment of cable compared to the “as-built” plan, and reports.
- Other monitoring deemed necessary to protect sanctuary resources and qualities over the life of the project.

The ONMS will review proposed monitoring plans as part of the overall proposal. In addition, the permit will generally specify that certain plans must be approved by the ONMS before some activities relating to cable operations can take place. The applicant must show that funds or resources for the monitoring program will be available for the permit duration. As stated in section 2.2.1 of these guidelines, the ONMS will require a permittee to post a performance bond or equivalent financial assurance to ensure long-term monitoring and cable removal requirements can be met. This will ensure that any required monitoring will be completed even if a permittee becomes unable to fund or conduct it themselves. Proof of assurance will be required before activities under the permit will be allowed to occur.

### *Permit Terms and Conditions*

Permits for cable projects will include any terms and conditions deemed necessary to adequately protect and manage sanctuary resources. The specific terms and conditions will necessarily vary from project to project. Project-specific terms and conditions will be in addition to the standard general conditions required of all sanctuary permits. Schedules of the monitoring, reporting and notification requirements will be specified in the terms and conditions. These conditions will generally include, but will not be limited to, the following:

1. Cable installation requirements and procedures, including the entity and vessel-type to conduct the installation, NOAA observer coverage, weather restrictions, required cable burial depth, specifications for burial in different seabed types, prohibition on cable loops, and speed restrictions for vessel operations.
2. Any pre-installation survey requirements, such as pre-lay multi-beam sonar and grapple runs along the cable route;
3. Details of any monitoring or mitigation plans determined necessary to protect sanctuary resources and qualities, including required elements, schedules, and notifications;
4. Spill control measures, including development of a spill prevention and control and countermeasure plan (“spill plan”) and a drill fluid monitoring and remediation plan for any horizontal directional drilling activities.
5. Archeological resources assessment and procedures, including review of the cable corridor for historical resources and procedures to be followed if archeological resources are discovered during the conduct of permitted activities.
6. Any required notifications to affected sanctuary offices and other personnel or agencies;
7. Vessel operations requirements, including procedures for notification of vessels and the US Coast Guard of permitted activities, mitigations required to minimize marine bird collisions due to project lighting, and regulations of vessel discharge.
8. Any required coordination with fishermen or fishing organizations affected by the cable project, which may include fishermen reimbursement.
9. Procedures to be taken in event of a marine mammal or fishing gear entanglement;
10. Requirement for certain post-lay inspection and burial surveys, data, and reports, which may include a Post-Lay Inspection and Burial (PLIB) survey, raw georeferenced data from the PLIB survey, PLIB report from the survey, and updated charts.
11. When the permitted activities include placement of scientific equipment, requirements for requests for new equipment as well as procedures governing the removal and retrieval of equipment.
12. Development and implementation of cable monitoring and survey plans covering the life of the cable, to include survey types, frequency, ROV and observer coverage, TSS technology requirements, mitigation measures in case of unanticipated impacts to sanctuary resources, and a cable reburial plan.
13. Cable repair procedures, including any required plans, notifications, approvals, and post-repair reports;



14. Procedures governing removal of the cable, including development and approval of a cable removal plan;
15. Bonding and insurance requirements covering the conduct of activities under the permit, to include any required monitoring or removal of the cable and associated structures.
16. For cable projects authorized under special use permits, the amounts and payment schedule for fees associated with processing and administering the permit as well as the fair market value of the use of sanctuary resources.

#### 2.5.2. Permit Denial

If the decision is to deny an application, the ONMS will promptly notify the applicant via regular and electronic mail and make available the final NEPA document supporting this decision (if one was prepared). The ONMS may provide the applicant and/or other Federal, state, and local agencies involved with the proposal advance notice of a pending denial in order to solicit comment on that determination.

#### 2.5.3. Appeals

ONMS regulations (at 15 CFR § 922.50) allow for permit applicants to appeal a decision made by the ONMS. In addition, for permit applications in some sanctuaries (Monitor, Channel Islands, Gulf of the Farallones, Gray's Reef, Fagatele Bay, and Cordell Bank) other affected individuals may also appeal an ONMS decision. Appellants must make their appeal in writing and submit it to the Assistant Administrator for the National Ocean Service (AA). The AA may then request additional information if he/she deems such information necessary to process the appeal. The AA will then decide if an informal administrative hearing is warranted. If warranted, the AA will appoint an officer to hear the case who will make a recommendation to the AA after the hearing is closed. The AA will then decide the appeal based on (1) the regulatory requirements by which the ONMS made the initial decision, (2) the record before the ONMS available at the time the decision was made, as augmented by the AA, and (3) the record of the administrative hearing (if one was held).

APPENDIX A:  
 PERMITS ISSUED FOR SUBMARINE CABLES IN  
 NATIONAL MARINE SANCTUARIES

| Cable/Project Title  | Sanctuary       | Permit Number  | Permit Type                          | Current Permittee                                      | # Year |           | Comment   |
|--|-----------------|----------------|--------------------------------------|--|--------|-----------|---|
|  |                 |                |                                      |  | Cables | Installed |   |
| Monterey Accelerated Research System (MARS) Cabled Observatory         | Monterey Bay    | MBNMS-2002-039 | Research                             | Monterey Bay Aquarium Research Institute               | 1      | 2007      |   |
| Hibernia Transatlantic Telecommunications Project                      | Stellwagen Bank | SBNMS-2000-001 | Authorization/<br>Special Use Permit | Hibernia Atlantic                                      | 1      | 2000      | Former permittee: 360 networks  |
| Pacific Crossing (PC-1)  | Olympic Coast   | OCNMS-1999-001 | Authorization/<br>Special Use Permit | PC Landing Corp. and Tyco Telecommunications (US) Inc. | 2      | 1999      | Replaced perm# OCNMS-1-99. Former permittee: Global Crossing                  |
| Alaska Un ed   | Olympic Coast   | OCNMS-16-98    | Authorization                        | Alaska United Fiber System Partnership                 | 1      | 1998      |   |
| Acoustic Thermometry of Ocean Climate (ATOC) Cable at Pioneer Seamount | Monterey Bay    | MBNMS-2001-031 | Research                             | NOAA Office of Atmospheric Research (OAR)              | 1      | 1995      | Replaced perm# MBNMS-12-95. Former permittee: Scripps Institute of Technology |

**APPENDIX B:**  
**PERMIT APPLICATION REQUIREMENTS FOR**  
**SUBMARINE CABLES IN NATIONAL MARINE SANCTUARIES<sup>9</sup>**

**GENERAL GUIDANCE**

**Background**

The National Marine Sanctuaries Act (16 U.S.C. § 1431 *et seq.*) directs the Secretary of Commerce to designate and manage areas of the marine environment with nationally significant aesthetic, ecological, historical, or recreational values as national marine sanctuaries. The Office of National Marine Sanctuaries (ONMS) has issued regulations to implement this act, safeguard resources within sanctuary boundaries, and prohibit the conduct of some activities. Program regulations (15 CFR Part 922) also outline the procedure and criteria under which the ONMS will issue permits to allow certain activities beneficial to sanctuaries that would otherwise be prohibited.

These guidelines describe the process and requirements by which an applicant may apply for a permit under this authority to install and maintain a submarine cable in a national marine sanctuary.

Anyone conducting prohibited activities without a valid national marine sanctuary permit may be subject to the penalties as provided under Section 307 of the National Marine Sanctuaries Act.

**When do I use this guidance?**

Applications should follow the format given in this guidance whenever an individual or organization wishes to install a submarine cable in or through a national marine sanctuary.

**How do I apply? Is there an application form?**

Due to the complex and (generally) extensive nature of the information required, there is no permit application form that must be completed for submarine cable applications. The applicant should instead develop an application “package” that includes all the information required by these guidelines. The applicant has wide latitude to decide what this package looks like, so long as it is well organized and contains all the required elements. A complete application package need not take the form of a single file or document.

**When should I apply?**

Permit applications must be submitted at least six (6) months in advance of the requested effective date to allow sufficient time for evaluation and processing. However, since applications for submarine cables can take up a year to process (due to required compliance with other laws, such as the National Environmental Policy Act), submissions of applications as far in advance as possible are encouraged.

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<sup>9</sup> Due to their unique regulations, submarine cables proposed to be installed in the Hawaiian Islands Humpback Whale National Marine Sanctuary and beyond 2 nautical miles of land in the Channel Islands National Marine Sanctuary do not require a sanctuary permit.

In order to expedite processing, applicants are encouraged to contact the appropriate sanctuary in advance of submitting a formal application to discuss any questions or issues they feel may complicate or delay the application process. Applications not received within the time frames specified above are not guaranteed to be processed before the requested effective date.

**Where do I apply?**

A complete permit application package and any supplemental materials should be submitted to the office for the sanctuary in which you plan to install the submarine cable. For activities proposed in more than one sanctuary, a “lead” sanctuary is usually designated to handle the application. If in doubt, contact the ONMS national permit coordinator for guidance.

**How are permit applications evaluated?**

Applicants will be contacted for clarification or if applications are incomplete within thirty (30) calendar days of receipt of the application package. If a sanctuary requests such additional information or clarification, and no response has been received from the applicant within ninety (90) calendar days, the application will be deemed withdrawn, no further action will be taken on the application by the sanctuary, and any application for this activity will have to be resubmitted by the applicant as a new request.

Complete applications are reviewed by ONMS program officials, on-site sanctuary personnel, and, when deemed necessary, peer-reviewed by outside experts. As described in more detail in the interim policy and permit guidelines for submarine cable projects, applications will be judged on the basis of:

1. The applicant’s professional qualifications to conduct and complete the proposed activity;
2. The adequacy of the applicant’s financial resources available to conduct and complete the proposed activity;
3. The duration of the proposed activity relative to its stated purpose;
4. The methods and procedures proposed by the applicant in relation to the activity’s impacts on sanctuary resources and qualities;
5. The compatibility of the proposed activity with the sanctuary’s primary objective to protect sanctuary resources and qualities, including considering the extent to which the conduct of the activity may diminish or enhance sanctuary resources and qualities, any indirect, secondary or cumulative effects of the activity, and the duration of such effects;
6. The necessity of conducting the proposed activity within the sanctuary to achieve its purposes; and
7. The reasonably expected end value of the activity to the furtherance of sanctuary goals.

Based on the review of the application in light of these criteria, ONMS will approve or deny the permit. If approved, the ONMS will issue the permit. If denied, applicants are notified of the reason(s) for denial and informed of the appeal process.

**What terms and conditions will be included on a cable permit?**

Permits for cable projects will include any terms and conditions deemed necessary to adequately protect and manage sanctuary resources. The specific conditions will necessarily vary from project to project. A description of the elements of a cable project that are generally subject to

terms and conditions are given in the interim policy and permit guidelines for submarine cable projects.

**What monitoring will take place of permitted cable activities?**

A permitted submarine cable project will be monitored to ensure compliance with the conditions of the permit. ONMS and on-site sanctuary personnel may periodically assess work in progress by visiting the study location and observing any permitted activity or by reviewing any required reports. The discovery of any irregularities in conformance to the permit shall be promptly reported and appropriate action shall be taken. Permits will include a provision that the terms and conditions governing the activity can be changed if deemed necessary by the ONMS to protect sanctuary resources as a result of monitoring results.

**How do I extend, change, or renew a permit?**

Once a permit or authorization has been issued, changes can be made in the form of an amendment. Requests for amendments (e.g., requests to change the activity location or to extend the expiration date) must conform to the interim policy and permit guidelines for submarine cable projects. Persons desiring to continue permitted submarine cable activities in a sanctuary must reapply for an extension of the current permit at least ninety (90) calendar days before it expires, unless otherwise specified in a condition of the original permit. Reference to the original application may be given in lieu of a new application, provided the scope of work does not change significantly and any required reports pertinent to the original permit have been submitted to and approved by ONMS staff. *Note: requests for amendments not received within the time frame specified above are not guaranteed to be processed before the requested effective date. In addition, expired permits cannot be amended.*

**Reporting Burden**

Submittal of the information requested in these guidelines is required to obtain a permit pursuant to ONMS regulations (15 CFR Part 922). This data is used to evaluate the potential benefits of the activity, determine whether the proposed methods will achieve the proposed results, evaluate any environmental impacts, and determine if issuance of a permit is appropriate. It is through this evaluation that the ONMS is able to use permitting to protect sanctuary resources and qualities.

Applicants are requested to indicate any information that is considered proprietary business information. Such information is typically exempt from disclosure to anyone requesting information pursuant to the Freedom of Information Act (FOIA). NOAA will make all possible attempts to protect such proprietary information, consistent with all applicable FOIA exemptions found at 5 U.S.C. § 552(b). Typically exempt information includes trade secrets, commercial, and financial information (5 U.S.C. § 552(b)(4)). Personal information affecting an individual's privacy will also be kept confidential, consistent with 5 U.S.C. § 552(b)(6).

The public reporting burden for this collection of information is estimated to average 80 hours, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to National Permit Coordinator, NOAA Office of

National Marine Sanctuaries, 1305 East-West Highway (N/ORM6), Silver Spring, Maryland, 20910.

Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number.

### **APPLICATION REQUIREMENTS**

All applications to install and maintain submarine cables in national marine sanctuaries should include, at a minimum, the following information:

A. General Project Information:

1. Name of the sanctuary(s) in which the submarine cable will be located;
2. Title of the submarine cable project;
3. Project summary or abstract (of no more than 3000 characters) that includes a statement of the project's objectives, the methods to be used, and why it is necessary that the activity occur within the boundaries of a sanctuary.
4. Objectives. Clearly state the objectives of the submarine cable project. Also state how these objectives further research, education, and/or management objectives of the sanctuary in which the cable project is proposed.
5. Project Significance. Discuss how the installation of the submarine cable, as proposed, would enhance or contribute to improving the state of knowledge, use of the sanctuary or overall objectives of the Sanctuary Management Plan. Explain why the project should be performed in the sanctuary and the potential benefits to the sanctuary. For educational permits, explain the educational value of the project.
6. The project's duration (i.e., the time from installation to removal of materials; if permanent indicate as such);
7. Funding source for the project.

B. Applicant Information and Certification:

1. Name, address, telephone number, fax number, email address and organizational affiliation (if applicable) of the primary applicant;
2. Identification of those authorized by the applicant to represent the applicant in meetings or phone consultations with sanctuary staff.
3. Identification of those who should receive project-related correspondence from the sanctuary;
4. Identification of individuals who would be supervising project activities. Provide qualifications and evidence of their ability to perform and supervise project-related tasks. For key personnel and the primary applicant, provide a list of other submarine cable projects from the past and any information that shows the current status of each project.
5. Identification of all applicant agents and consultants, as known at the time of application, and their contact information.

6. Signature of applicant certifying the application package is complete and correct to the best of the applicant's knowledge.

C. Project Route Description:

1. Provide a location and vicinity map showing where the proposed cable route is located in relations to other regional features. Include sanctuary boundaries on the location map.
2. The entire proposed project route should be described and depicted on route maps, drawn to scale. Starting and ending locations shall be clearly described and illustrated, as well as any connections to other project cables. The exact location of proposed landing sites shall be shown on a map and described with regard to size, location, and existing use. Route maps shall show sanctuary boundaries and other jurisdictional boundaries.
3. Provide a description of any routes that should be considered in the NEPA analysis of alternatives. Describe routes that were considered and eliminated and why they were eliminated. Include a site plan and description of each alternative.
4. Describe rationale for selecting proposed route, including specific factors that were considered.
5. Describe and map other fiber optic cable lines, pipelines, and/or telephone cable lines located in the project route area.
6. Define the minimum distance of separation your company believes is necessary between the proposed project and any existing cable, pipelines or other structures. Explain the rationale for maintaining the specified distance. Explain how conflicts with existing cables or other structures will be avoided.
7. Provide one full-scale set of maps or charts derived from side-scan sonar and sub-bottom profile surveys conducted for the proposed project. The maps should show bathymetry, seabed features and profile, and shallow geology (e.g., depth or thickness of sediment substrate).
8. A written report of the above survey results should be included describing the length and area (total disturbance due to installation) of cable crossing with regards to the following: (a) low relief rocky substrate, (b) medium to high relief rocky substrate, (c) all other substrate types and slope conditions.

D. Cable Installation, Maintenance and Removal Procedures

*General Requirements*

1. Provide a detailed description of all elements of construction and installation (including pre-construction activities), the timing of these elements, and the overall project installation timeline. Provide hours of operation for installation and construction activities when appropriate.
2. Provide data on the exact locations where the cable will be buried into the seabed, when the burial will occur, where the cable will be laid on the seafloor, and when the cable laying will occur.
3. Quantify the rate of cable installation for each installation technique (e.g., burial vs. laying cable on the seafloor). Identify cable size and width of cable corridor. Identify the number of proposed cable landings, borings, conduits, and cables.
4. Identify onshore facilities required and/or proposed for the cable and provide contact information for any landowners.

5. Describe the proposed installation methods, including the proposed cable laying and burial techniques for different areas or substrate types and cable crossings, target cable burial depth, and boring operations and locations.
6. Identify the organization(s) that will install the cable.
7. Define the method used to calculate cable burial depth, with regard to trawling hazards.

#### *Drilling/Boring Activities at Landing Sites*

8. If boring is required, provide a detailed drilling plan, including detailed specifications of the boring machine (e.g., maximum pulling and snubbing capabilities, directional survey methods and controls, and allowable bore deviation tolerances) and scheduling for boring. Provide a contingency plan in the event of accidental surface mud fractures or lost circulation events.
9. Describe the basis/criteria for selecting the proposed directional bore depth. Verify whether or not the proposed depth is based on the existing subsurface soil conditions at the bore locations. Confirm that the proposed depth is deep enough to avoid the potential risk of sea bottom rupture during boring operations.
10. Submit detailed specifications of the mud system, including safety measures and a listing of all activities to be used and copies of the Material Safety Data Sheet (MSDS) for the drilling fluids.
11. Describe the potential for sea bottom rupture during boring. Identify the risks, potential impacts, and contingency plans for inadvertent sea bottom rupture, including measures to prevent the release of drilling fluids into ocean waters.
12. Develop and submit a contingency plan, in the event boring activities are required to be suspended and a partially-completed bore hole abandoned.

#### *Vessel Operations*

13. Identify the vessel or type/class of vessel proposed to be involved in installation and/or construction operations.
14. Submit vessel anchoring plans, including plans for any dive support vessels, which include (1) maps of the proposed anchor spreads and anchor locations or offshore temporary mooring locations for each work vessel and (2) a description of the procedures to be employed to minimize seafloor impacts.
15. Provide a work plan for construction during adverse weather conditions (e.g., storms, high winds, high seas), which includes a critical operations and curtailment plan. The plan should define the limiting conditions of sea state, wind, or any other conditions that exceed the safe and effective operation of vessels and equipment or divers in the water. The plan shall identify the onsite person with authority to determine critical conditions and suspend work operations.

#### *Cable Burial Specifications*

16. Submit a report describing the degree to which the cable can be buried to target burial depth along the entire route. Identify the plow's limitations for penetrating ocean floor sediment (sand, silt, gravel, cobble, small rock, soft rock, and hard rock) and alternative burial/cable laying methods in locations where plow cannot be used.
17. Document how the cable will remain buried and what mechanisms are in place to ensure long-term burial.



18. Identify water depth and distance from shore for cable burial. Explain factors used to determine how far out the cable will be buried.
19. Define the area of disturbance related to project construction and cable burial.
20. Describe contingency plans for areas where the cable is not sufficiently buried or where the cable becomes exposed after presumed burial.

*Cable Maintenance, Repairs, and Removal*

21. Describe any planned project repair and maintenance activities, including routine inspections and maintenance of the cable.
22. Include an estimate of the frequency of cable faults, and a description of how emergency repairs would be made. Identify plans for periodic surveys and other activities proposed to monitor cable burial success and impact avoidance.
23. Describe the cable identification system used by the company to distinguish its cable from other cables.
24. Identify the life expectancy of the proposed cable.
25. Describe plans and procedures for removing the cable by the end of the permit's duration. If planning to abandon the cable in place, give the rationale including an explanation as to why the cable can not be removed.

- E. Environmental Impacts. The application should include an analysis of the anticipated environmental effects of conducting the proposed activity and alternatives to the proposed activity. This analysis should include:
1. Identification of all natural resources that could be affected by project construction, installation, operation, and removal (including the spatial and temporal range of these resources) and a description/analysis of how the project will impact these resources.
  2. Identification of existing human uses that could be affected by the project (including but not limited to commercial and recreational fisheries, commercial and recreational activities, and vessel traffic and operations) and a description/analysis of how the project will impact these uses.
  3. A description of any submerged historical resources that may reside in the project area, including any sonar/magnetometer surveys or other data used to arrive at the conclusion, a description/analysis of how they might impact these resources, and any proposed mitigations.
  4. Characterization of the benthic habitat to be affected by the project (including nearshore/landing areas, as applicable), and analysis of the impacts of the project on the biological resources of any affected habitat.
  5. Analysis of the geology and geophysical characteristics of the project area, including sediment types, location of hard bottom and rocky substrate, and the presence of canyons, faults and other potentially unstable areas.
  6. A description of how/if the proposed cable project will interact with other natural and human-caused impacts on natural and historical resources (e.g., cumulative effects).
  7. An analysis of each environmental effect of each alternative. Note that, depending on the alternatives selected, these descriptions may be redundant with the description of the environmental consequences of the proposal.

F. Supporting Information:

1. **Project Budget.** Include a project budget for the proposed project, including cost estimates for construction, installation, operations, monitoring and removal. Indicate if different portions of the project are being funded by different sources. Prior to undertaking any permitted activities, the applicant will be required (as a condition of any permit) to show proof of a performance bond or equivalent financial assurance to cover certain costs (including cable monitoring and removal) in the event the applicant is not able to fund or conduct any activities as required by the permit. This proof may be, but is not required to be, submitted at the time of permit application.
2. **Surveys and other data.** Include a summary of all surveys and studies conducted for the proposed project to date. These should include methods, geographic area covered, transect locations, and any associated photographs/video. In addition, copies of any ROV video, side scan sonar, or other survey data collected to date that may assist in determining both the current environmental state of the project area as well as potential impacts should be included. The office may request for full survey data to be provided based on review of summary information.
3. **Other permits:**
  - a. Submit a list of all federal, state, and local licenses, permits, or other authorizations required to install and operate the submarine cable. Provide copies of those obtained and status of those pending.
  - b. Identify the status of the project with the U.S. Army Corps of Engineers, National Marine Fisheries Service (NOAA Fisheries), U.S. Fish and Wildlife Service, and any other Federal, state, or local authority whose permit, authorization, or approval is required.



Final Recommendations on Offshore Development  
Hawaiian Islands Humpback Whale National Marine  
Sanctuary Advisory Council  
January 18, 2012

Appendix III – List of Federal Permit Requirements –  
Hawaii Clean Energy Initiative

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After completing the checklist at the end of the relevant resource guidebook, follow the links below for information on the federal permits you have identified as required based on your project specifics.

The following documents are available as Adobe Acrobat PDFs. Download Adobe Reader.

| Permit Packet | Permit   | Department |
|---------------|--|------------|
| Appendix F-01 | Department of the Army (DA) Permit   | USACE      |
| Appendix F-02 | Bridge Permit, Rivers and Harbors Act Section 9  | USCG       |
| Appendix F-03 | Marine and Harbor Activities Notice  | USCG       |
| Appendix F-04 | National Environmental Policy Act Categorized Exclusion (CE),<br>Environmental Impact Statement (EIA), Environmental Assessment (EA)           | CEQ        |
| Appendix F-05 | Underground Injection Control (UIC) Permit   | EPA        |
| Appendix F-06 | Prevention of Significant Deterioration (PSD) if Impacting a National Park<br>(recommendation to DOH Air Pollution Control Permit application) | NPS        |
| Appendix F-07 | Incidental Take Statement (ITS), Endangered Species Act (ESA) Section 7<br>(a)(2)  | NOAA       |
| Appendix F-08 | Incidental Take Permit (ITP), Endangered Species Act (ESA) Section 10(a)<br>(1)(B)   | NOAA       |

| Permit Packet | Permit   | Department |
|---------------|--|------------|
| Appendix FM09 | Letter of Authorization (LOA) or Incidental Harassment Authorization (IHA)   | NOAA       |
| Appendix FM10 | Incidental Take Statement, Endangered Species Act Section 7(a)(2)  | USFWS      |
| Appendix F11  | Incidental Take Permit, Endangered Species Act Section 10(a)(1)(B)   | USFWS      |
| Appendix F-12 | Notice of Proposed Construction or Alteration in Airspace  | FAA        |
| Appendix FM13 | Outer Continental Shelf (OCS) Renewable Energy Project Leases, Rights-of-Use and Easement (RUEs), and Rights-of-Way (ROWs) | MMS        |
| Appendix F-14 | Hydroelectric License  | FERC       |
| Appendix F-15 | Hydrokinetic Pilot Project License   | FERC       |

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**Final Recommendations on Offshore Development  
Hawaiian Islands Humpback Whale National Marine  
Sanctuary Advisory Council  
January 18, 2012**

**Appendix IV – List of State Permit Requirements –  
Hawaii Clean Energy Initiative**

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it's up to us.



## State Permits for Renewable Energy Projects

After completing the checklist at the end of the relevant resource guidebook, follow the links below for information on the state permits you have identified as required by the State of Hawai'i based on your project specifics.

The following documents are available as Adobe Acrobat PDFs. Use the Adobe Reader.

| Permit Packet | Permit  | Department |
|---------------|---|------------|
| Appendix S 01 | Coastal Zone Management Federal Consistency Review                                      | DBEDT, OP  |
| Appendix S-02 | Agricultural Burning Permit   | DOH        |
| Appendix S-03 | Air Pollution Control (APC) Permit (Covered Source Permit and Noncovered Source Permit) | DOH        |
| Appendix S-04 | Biosolids Treatment Works Notice of Intent  | DOH        |
| Appendix S-05 | Environmental Impact Statement/ Environmental Assessment                                | DOH        |
| Appendix S-06 | Hazardous Waste TSD Permit  | DOH        |
| Appendix S 07 | Individual Wastewater Management Permit   | DOH        |
| Appendix S 08 | National Pollutant Discharge Elimination System Permit                                  | DOH        |

| Permit Packet | Permit  | Department |
|---------------|---|------------|
| Appendix S-09 | Solid Waste Management by Rule  | DOH        |
| Appendix S-10 | Hawaii Emergency Planning and Community Right-to-Know Act (HEPCRA) Chemical Inventory Reporting | DOH        |
| Appendix S-11 | Underground Injection Control   | DOH        |
| Appendix S-12 | Underground Storage Tank  | DOH        |
| Appendix S-13 | Variance from Pollution Control   | DOH        |
| Appendix S-14 | Zone of Mixing Permit   | DOH        |
| Appendix S-15 | Incidental Take License and Habitat Conservation Plan   | DLNR       |
| Appendix S-16 | Pesticide Experimental Use Permit (EUP)   | DOA        |
| Appendix S-17 | Pesticide Applicator Certification  | DOA        |
| Appendix S-18 | Noise Permit  | DOH        |
| Appendix S-19 | Section 401 Water Quality Certification (WQC) Permit  | DOH        |
| Appendix S-20 | Boiler/Pressure Vessel Permit   | DLIR       |
| Appendix S-21 | Elevator and Kindred Equipment Permit   | DLIR       |
| Appendix S-22 | Dams and Reservoirs Permit  | DLNR       |
| Appendix S-23 | Geothermal and Geothermal System Development Permitting   | DLNR       |
| Appendix S-24 | Geothermal Exploration Permit   | DLNR       |
| Appendix S-25 | Well Construction and Pump Installation Permit  | DLNR       |
| Appendix S-26 | Construction to Cross or Enter the State Energy Corridor  | DOT        |
| Appendix S-27 | Construction Upon a State Highway   | DOT        |
| Appendix S-28 | Operate or Transport Oversize and/or Overweight Vehicles and Loads Permit                       | DOT        |
| Appendix S-29 | Use and Occupancy Agreement (Lane Use Permit for Construction Work)                             | DOT        |
| Appendix S-30 | Work in Ocean Waters of the State   | DOT        |



| Permit Packet | Permit   | Department  |
|---------------|--|-------------|
| Appendix S-31 | Kakaako Development Permit   | DBEDT, HCDA |
| Appendix 8 32 | District Boundary Amendment  | DBEDT, LUG  |
| Appendix S 33 | Special Use Permit-Over 15 Acres   | DBEDT, LUG  |
| Appendix S 34 | Special Management Area Use Permit   | DBEDT, LUG  |
| Appendix S< 5 | Closed Watershed Entry   | DLNR        |
| Appendix S-36 | Conservation District Use  | DLNR        |
| Appendix S 37 | Conservation District Use Permit-State Marine Waters/Ocean Waters Construction Permit (OWCP) | DLNR        |
| Appendix S-33 | Drilling and Modification of Wells for Injection Use Permit                                  | DLNR        |
| Appendix S-39 | Easement for Use of State Land   | DLNR        |
| Appendix S 40 | Forest Reserve Special Use Permit  | DLNR        |
| Appendix S-4i | Geothermal Resource Subzone  | DLNR        |
| Appendix S-42 | Groundwater Control Area Permit  | DLNR        |
| Appendix S-43 | Historic Preservation Review   | DLNR        |
| Appendix S-44 | Historic Sites Review  | DLNR        |
| Appendix S 45 | Natural Area Reserves Permit   | DLNR        |
| Appendix S-46 | Stream Channel Alteration Permit   | DLNR        |
| Appendix S 47 | Wildlife Sanctuary Entry   | DLNR        |
| Appendix S 48 | Forest Reserve Entry/Access Permit   | DLNR        |
| Appendix S-49 | Certificate of Public Convenience/Necessity  | PUC         |
| Appendix S 50 | Power Purchase Agreement Approval  | PUC         |
| Appendix S-51 | Transmission Line Approval   | PUC         |



**Final Recommendations on Offshore Development  
Hawaiian Islands Humpback Whale National Marine  
Sanctuary Advisory Council  
January 18, 2012**

**Appendix V – Legislative Memorandum – December 20, 2004,  
Legislative Reference Bureau**

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LEGISLATIVE REFERENCE BUREAU  
State of Hawaii  
State Capitol  
Honolulu, Hawaii 96813

December 20, 2004

## **MEMORANDUM**

**TO:** All Legislators

**FROM:** Dawn Takeuchi  
Research Attorney

**SUBJECT:** Precautionary Principle

### **I. Introduction**

This memorandum responds to House Concurrent Resolution 49, H.D. 1, S.D. 1, adopted by the Twenty-second Legislature, Regular Session 2004, requesting the Bureau to conduct a review of the San Francisco precautionary principle ordinance.

House Concurrent Resolution 49, H.D. 1, S.D. 1 recognizes that, last year, San Francisco was the first city in the nation to adopt the precautionary principle--a new policy framework widely used in western and northern European countries for developing laws that protect the health and environment of its citizens.

Specifically, this memorandum explores the meaning and historic origins of the precautionary principle prior to the San Francisco ordinance; the history and components of the San Francisco ordinance; and the progress of the San Francisco ordinance a year after its enactment. The Bureau extends its appreciation to Debbie Raphael, Taxies Reduction Program Manager, City and County of San Francisco, for generously sharing her time and knowledge in several phone conferences and emails. We are grateful for her assistance.<sup>1</sup>

## II. The Meaning and Historical Origins of the Precautionary Principle

### A. The Meaning

The precautionary principle is an approach to decision making aimed at reducing potential harm by triggering a process to consider a wide range of alternatives to harmful action. The precautionary principle provides for anticipatory action to be taken when threats of serious or irreversible harm to people or nature exist, to prevent damages to human and environmental health, with the intent of safeguarding the quality of life for current and future generations.<sup>2</sup>

The precautionary approach utilizes an alternatives assessment over the traditionally used risk assessment in evaluating policy decisions and actions. In risk assessment, limits are determined based on acceptable levels of harm and whether the activity or product falls within that acceptable level.<sup>3</sup> The risk assessment approach of an environmental impact statement invites the parties to ask questions, but does not mandate taking the most protective action. According to a San Francisco city official, risk assessment involves good information and a "lot of non-information."<sup>4</sup> In contrast, precautionary principle decision making is based upon the best available science and other relevant information.

The precautionary principle provides a framework for governments to make protective decisions when they don't have all the answers on the table, but want to take protective action and no other decision-making framework is available.<sup>5</sup> The alternatives assessment of the precautionary principle asks whether the potentially hazardous activity or product is necessary and, further, what less hazardous options are available and how little damage is possible.<sup>6</sup> Based on the alternatives assessment, the selection of which alternative is preferable is a political or public decision.<sup>7</sup>

The precautionary principle includes the following key components:

1. Taking anticipatory action to prevent harm in the face of scientific uncertainty;
2. Exploring alternatives, including the alternative of "no action";
3. Considering the full cost of environmental and health impacts over time;
4. Increasing public participation in decision making; and
5. Shifting responsibility for providing evidence to proponents of an activity.<sup>8</sup>

Furthermore, in contrast to risk assessment, the precautionary principle requires public participation at an earlier stage. For example, under an environmental impact statement, public comment is invited only on the final document. The most significant differences in the analysis procedures appear to be the precautionary principle's earlier involvement of the public and its broader range of available information.

## **B. Historical Origins**

The precautionary principle's earliest applications to environmental policy and laws was found in Germany in the 1970s where forests were suddenly dying, yet there was no scientific proof that acid rain was the cause. The German government acted to slash power-plant emissions anyway, citing the principle of Vorsorge or "forecaring." Soon the Vorsorge prinzip--the forecaring or precautionary principle, became an axiom in domestic German environmental law.<sup>9</sup>

In 1992, the precautionary principle was made central to the "Rio Declaration," an international agreement signed by the United States at the United Nations Conference on Environment and Development Summit (UNCED) in Rio De Janeiro.<sup>10</sup> The precautionary principle has also been written into numerous international treaties and conventions, including the Ber en Declaration on Sustainable Development, the Maastricht Treaty on the European Union,<sup>1</sup> the Barcelona Convention, and the Global Climate Change Convention.

In 1998, the Wingspread Conference on the Precautionary Principle brought together activists, scholars, scientists and lawyers at the Johnson Foundation in Racine, Wisconsin to discuss methods for implementing the precautionary principle. The goal was to determine how the precautionary principle could be used in daily environmental and public health policy decisions at the state and federal levels.<sup>13</sup> The conference produced the most well-known definition, known as the 1998 Wingspread Statement on the Precautionary Principle (Wingspread Statement):

... When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action. In this context the proponent of an activity, rather than the public, should bear the burden of proof.<sup>14</sup>

## **III. The San Francisco Precautionary Principle Ordinance**

### **A. Political History and Development**

On June 17, 2003, after eighteen months of public hearings,<sup>15</sup> the San Francisco Board of Supervisors adopted the precautionary principle ordinance by a vote of 8 to 2.<sup>16</sup> The political road to June 17 began with a two-year study by the head of the City's Department of the Environment, Jared Blumenfeld.<sup>17</sup> The study involved determining how to integrate the precautionary principle into city and countywide policy.<sup>18</sup> In 2001, the Bay Area Precautionary Principle Working Group was formed by breast cancer activist Joan Reinhardt Reiss of the Breast Cancer Fund (San Francisco), Katie Silberman of the Center for Environmental Health (Oakland), Carolyn Raffensperger of the Science and Environmental Health Network (Ames,

Iowa) and the leading proponent of precautionary thinking in the United States, Blumenfeld, and Davis Baltz of Commonweal, a nonprofit health and environmental research institute (Bolin, California).<sup>19</sup>

While Blumenfeld was working within San Francisco government to develop precautionary policies, the Bay Area Working Group concentrated on building a coalition of non-governmental organizations to support and critique the language for the ordinance developed by Blumenfeld and his colleagues.<sup>20</sup>

Another major component of the campaign for the precautionary principle policy was the San Francisco White Paper on Precaution, which helped build support for instituting the precautionary principle.<sup>21</sup> The White Paper lays out the history, intent, content and implications of the precautionary principle.<sup>22</sup> Specifically, the White Paper points to elevated human exposures to environmental toxicants, changing patterns in human illnesses, scientific uncertainty and inadequate policies as reasons for the need for immediate policy change.<sup>23</sup>

The White Paper also addresses the popular concern over costs to implement the precautionary principle. The Paper presents three concepts for allocating responsibility, including negative externalities, life cycle analysis and performance bonds, as methods developed to better account for real costs and to distribute costs and benefits more fairly.<sup>24</sup> For example, the concept behind bottle deposits is simple: to encourage consumers to dispose of bottles in the most desirable way (recycling) and to help cover the cost if they do not. Performance bonds apply a similar concept in construction and mining projects. Bonds paid by strip miners of public lands, for example, are released only after the land has been restored. Environmental performance bonding could be developed more broadly and used to ensure that developers of new technologies or others seeking to use society's resources are held financially responsible for any potentially damaging activity.<sup>25</sup>

However, according to the San Francisco city government, research in general indicates that precautionary policies do not necessarily raise the costs of government.<sup>26</sup> Rather, precautionary policies result in a full array of cost options.<sup>27</sup> Should the most effective option prove more costly, then a political or public decision would be made.<sup>28</sup>

## **B. Ordinance Components**

The San Francisco precautionary principle ordinance created a new environmental code by: repealing the existing environmentally-related chapters; re-adopting the provisions with minor changes, including dissolving an inactive Clean Air Advisory Committee; and adding a precautionary principle policy statement as chapter 1 of the Environment Code.

The Precautionary Principle Policy Statement in chapter 1 of the ordinance provides the philosophical justification for implementation of the precautionary principle throughout governmental policy. The San Francisco Board of Supervisors found and declared that "Every San Franciscan has an equal right to a healthy and safe environment," and that "[t]he

duty to enhance, protect and preserve San Francisco's environment rests on the shoulders of government, residents, citizen groups and businesses alike."<sup>29</sup> Further, the Policy Statement explains that, historically, environmentally harmful activities were halted or dealt with only after major or extreme degradation or exposure was quantified.<sup>30</sup> The precautionary principle provides a more vigilant approach by providing an alternatives assessment to examine a broad range of available options to potentially environmentally-harmful governmental policies in such areas as transportation, construction, land use, planning, water, energy, health care, recreation, purchasing, and public expenditure.<sup>31</sup> The Policy Statement explains that a "central element" of applying the precautionary principle in decision making is the:

[C]areful assessment of available alternatives using the best available science. An alternatives assessment examines a broad range of options in order to present the public with different effects of different options considering short-term versus long-term effects or costs, and evaluating and comparing the adverse or potentially adverse effects of each option, noting options with fewer potential hazards. This process allows fundamental questions to be asked: "Is this potentially hazardous activity necessary?" "What less hazardous options are available?" and "How little damage is possible?"<sup>32</sup>

Public participation in the alternatives assessment process is another important component of the San Francisco precautionary principle ordinance, since the public bears the ecological and health consequences of environmental decisions.<sup>33</sup> According to a San Francisco city government official, it is public participation and public values that will determine whether a potentially hazardous activity is "necessary." She further indicated that because there is no existing definition of the term "necessary," generally, if there is no safer alternative, the activity may be deemed necessary.<sup>34</sup>

The Policy Statement maintains that adoption of the precautionary principle strengthens San Francisco's vision of a city powered by renewable sources, that recycles its wastes, employs vehicle fleets that produce only potable water as emissions, and keeps its Bay free from toxins and the ocean free from pollutants.<sup>35</sup> Additionally, the principle would help prevent environmental ills before harm manifests rather than finding after-the-fact cures.<sup>36</sup>

The San Francisco precautionary principle requires all officers, boards, commissions and departments of the City and County of San Francisco to implement the precautionary principle in conducting their affairs.<sup>7</sup> The precautionary principle requires the selection, based upon the best available science, of the alternative that "presents the least potential threat to human health and the City's natural systems."<sup>38</sup> However, under the ordinance, lack of full scientific certainty regarding cause and effect shall not be viewed as a sufficient reason for the City to postpone cost-effective measures to prevent degradation of the environment or protect the health of its citizens.<sup>39</sup>

San Francisco's precautionary principle ordinance differs from the Wingspread Statement on the controversial issue of burden of proof. The Wingspread Statement requires the proponent of the potentially environmentally harmful activity or project, rather than the

public, to carry the burden of proving that the activity is not harmful. However, San Francisco takes the view that the role of the activity's proponent to provide all relevant information on the activity so that the public and government may make a decision from a full array of alternatives<sup>40</sup>

The listed major tenets of the San Francisco precautionary principle approach to decision making are as follows:

1. A duty to take anticipatory action to prevent harm;
2. The right of the community to complete and accurate information on potential health and environmental impacts, which shall be the burden of the proponent;
3. An obligation to examine a full range of alternatives, including the alternative to do nothing;
4. A duty to consider all reasonably foreseeable costs, including raw materials, manufacturing, transportation, use, cleanup, eventual disposal, and health costs; and
5. Transparent, participatory, and informed decision making<sup>41</sup>

The San Francisco precautionary principle ordinance also requires a three-year review of the effectiveness of the policy from its date of enactment, as well as an updated website posting of all ordinances and resolutions that affect or relate to the environment.<sup>42</sup> Finally, the San Francisco ordinance limits exposure to liability by clarifying that it does not impose specific duties upon any City employee or official to take specific actions, but rather is simply an undertaking only to promote the general welfare.<sup>43</sup> This limitation of liability provides City departments and agencies with the leeway to examine and determine the best possible alternative for a given situation.

### **C. Progress in Implementation A Year Later**

At least a year has passed since the San Francisco precautionary principle ordinance was enacted. As adopted, San Francisco's precautionary principle ordinance is not self-implementing. However, legislation is being developed to implement the ordinance and is expected to be introduced January 2005. To execute the ordinance's intent, San Francisco has thus far focused on two major projects--developing a precautionary purchasing ordinance, and defining what is "meaningful public participation."<sup>44</sup> In conjunction with developing the key implementation legislation, the Environmentally Preferable Purchasing Program for Purchasing of Commodities, the City and County has led by example in alternatives assessments in the purchasing of city-utilized products, such as janitorial equipment, light bulbs, and pesticides.<sup>45</sup> The alternatives assessments require a review of all potential alternatives to maximize effectiveness and cost-effectiveness and to minimize harm.<sup>46</sup> The new purchasing ordinance will replace an existing, virtually identical Environmentally



Preferable Purchasing Pilot Program, which has resulted in verifiable cost savings over the last several years. The pilot program has established that applying the precautionary principle to government decisions does not result in cost increases.<sup>47</sup>

At the time of this memorandum, details of what constitutes "meaningful public participation" are being finalized.<sup>48</sup> City officials are working with local experts to create a way to publicly address designing the "public participation" element. There are existing precautionary principle models that San Francisco hopes to analyze in determining how to ensure "meaningful public participation" in decision making under San Francisco's precautionary principle ordinance.<sup>49</sup>

Despite these steps, progress in implementing the precautionary principle ordinance is slow, according to a city official, due to lack of staffing and the preoccupation of a new mayor with other issues. As a result, there is no example that may be cited to indicate that adoption of the precautionary principle has made a difference in governmental decision making regarding potentially hazardous activities. However, the official indicates that, to date, no problems with the ordinance have arisen during this first year of a three-year cycle, after which a review of the initial ordinance will be conducted.<sup>50</sup>

#### **IV. Conclusion**

The precautionary principle finds its origins outside of the United States and is essentially an environmental policy to evaluate the full range of available alternatives when pursuing an activity, new technology, or product and to ensure meaningful public participation in alternatives analysis and decision making. The City and County of San Francisco has made unprecedented strides in the advancement of the precautionary principle in the United States by adopting a precautionary principle ordinance that is a culmination of research, interest group involvement, and government support. So far, to implement the precautionary principle ordinance, the City and County of San Francisco has initiated development of a precautionary purchasing ordinance, including the use of alternatives assessments, and the defining of what is "meaningful public participation." Despite its efforts, however, little concrete achievements have occurred, due primarily to staffing constraints and the preoccupation of the city government in transitioning to a new mayoral administration. A review will be conducted on the effectiveness of the precautionary principle ordinance in 2006, at the end of the first three-year cycle. Further, the San Francisco precautionary principle ordinance is not self-implementing, and legislation to implement the ordinance will not even be introduced until early 2005. Given the far-reaching implications of the precautionary principle on state government, it would seem prudent to await the outcome of that evaluation before taking any further action to implement a precautionary principle in Hawaii.

## ENDNOTES

<sup>1</sup> In a December 15, 2004, phone interview, Ms. Raphael stated that she would be happy to provide additional information on the San Francisco precautionary principle ordinance to interested parties. She can be reached by mail at: Ms. Debbie Raphael, Toxic Reduction Program Manager, Department of the Environment, 11 Grove San Francisco, CA 94102; by telephone: (415) 355-3711; by fax (415) 554-6393; or by email del.) [debbie.raphael@sfggv.org](mailto:debbie.raphael@sfggv.org).

<sup>2</sup> "A Policy Framework for Adopting the Precautionary Principle", the Seattle Precautionary Principle Working Group, January 2004.

<sup>3</sup> "Precautionary Principle – From Vision Statement to Practical Policy," Debbie Raphael, Toxics Reduction Program Manager, City and County of San Francisco.

<sup>4</sup> Phone interview with Debbie Raphael, Toxic Reduction Program Manager, Department of the Environment, City and County of San Francisco, December 15, 2004.

<sup>5</sup> Id.

<sup>6</sup> "Precautionary Principle – From Vision Statement to Practical Policy," Debbie Raphael, Toxics Reduction Program Manager, City and County of San Francisco.

<sup>7</sup> Id.

<sup>8</sup> Id.

<sup>9</sup> Michael Pollan, "Precautionary principle," The New York Times, December 9, 2001.

<sup>10</sup> <http://www.greenaction.org/cancer/precautionaryprinciple.shtml>.

<sup>11</sup> "Review: Protecting Public Health and the Environment: Implementing the Precautionary Principle", by Carolyn Raffesperger and Joel Tickner. Electronic Green Journal, Issue 123, <http://egj.lib.uidaho.edu/egh12/maret2.html>.

<sup>12</sup> Id.

<sup>13</sup> Id.

<sup>14</sup> Id.

<sup>15</sup> Phone interview with Debbie Raphael, Toxics Reduction Program Manager, Department of the Environment, City and County of San Francisco, July 9, 2004.

<sup>16</sup> "San Francisco adopts the Precautionary Principle," Rachel's Environment & Health News #765, March 20, 2003.

<sup>17</sup> Id.

<sup>18</sup> Id.

<sup>19</sup> Id.

<sup>20</sup> Id.

<sup>21</sup> WHITE PAPER -The Precautionary Principle and the City and County of San Francisco, March 2003. The City and County of San Francisco, Department of the Environment.

<sup>22</sup> Id.

<sup>23</sup> Id.

<sup>24</sup> Id.

<sup>25</sup> Id.

<sup>26</sup> Phone interview with Debbie Raphael, Toxics Reduction Program Manager, Department of the Environment, City and County of San Francisco, July 9, 2004.

<sup>27</sup> Id.

<sup>28</sup> Id.

<sup>29</sup> San Francisco Precautionary Principle Ordinance, section 100.

<sup>30</sup> Id.

<sup>31</sup> Id.

<sup>32</sup> Id.

<sup>33</sup> Id.

<sup>34</sup> Phone interview with Debbie Raphael, Toxics Reduction Program Manager, Department of the Environment, City and County of San Francisco, December 15, 2004.

<sup>35</sup> San Francisco Precautionary Principle Ordinance, section 100.

<sup>36</sup> Id.

<sup>37</sup> San Francisco Precautionary Principle Ordinance, section 101.

<sup>38</sup> Id.

<sup>39</sup> Id.

<sup>40</sup> Phone interview with Debbie Raphael, Toxics Reduction Program Manager, Department of the Environment, City and County of San Francisco, July 9, 2004.

<sup>41</sup> San Francisco Precautionary Principle Ordinance, section 101.

<sup>42</sup> San Francisco Precautionary Principle Ordinance, section 102.

<sup>43</sup> Id.

<sup>44</sup> Phone inteNiew with Debbie Raphael, Toxics Reduction Program Manager, Department of the Environment, City and County of San Francisco, July 9, 2004.

<sup>45</sup> Id.

<sup>46</sup> Id.

<sup>47</sup> Phone inteNiew with Debbie Raphael, Toxics Reduction Program Manager, Department of the Environment, City and County of San Francisco, December 15, 2004.

<sup>48</sup> Id.

<sup>49</sup> Id.

<sup>50</sup> Phone inteNiew with Debbie Raphael, Toxics Reduction Program Manager, Department of the Environment, City and County of San Francisco, July 9, 2004.



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## Appendix VI – NOAA Aquaculture Policy

*The council is an advisory body to the sanctuary management. The opinions and findings of this document do not necessarily reflect the position of any individuals or agencies including the sanctuary, the National Oceanic and Atmospheric Administration, or the State of Hawai'i.*



## **National Oceanic and Atmospheric Administration MARINE AQUACULTURE POLICY<sup>1</sup>**

### **Purpose**

The purpose of this policy is to enable the development of sustainable marine aquaculture within the context of the National Oceanic and Atmospheric Administration's (NOAA) multiple stewardship missions and broader social and economic goals. Meeting this objective will require NOAA to integrate environmental, social, and economic considerations in management decisions concerning aquaculture. This policy reaffirms that aquaculture is an important component of NOAA's efforts to maintain healthy and productive marine and coastal ecosystems, protect special marine areas, rebuild overfished wild stocks, restore populations of endangered species, restore and conserve marine and coastal habitat, balance competing uses of the marine environment, create employment and business opportunities in coastal communities, and enable the production of safe and sustainable seafood.

### **Statement of Policy**

For purposes of this policy, aquaculture is defined as the propagation and rearing of aquatic organisms for any commercial, recreational, or public purpose. This definition covers all production of finfish, shellfish, plants, algae, and other marine organisms<sup>2</sup> for 1) food and other commercial products; 2) wild stock replenishment for commercial and recreational fisheries; 3) rebuilding populations of threatened or endangered species under species recovery and conservation plans; and 4) restoration and conservation of marine and Great Lakes habitat.

It is the policy of NOAA, within the context of its marine stewardship missions and its strategic goals with respect to healthy oceans and resilient coastal communities and economies, to:

1. Encourage and foster sustainable aquaculture development that provides domestic jobs, products, and services and that is in harmony with healthy, productive, and resilient marine ecosystems, compatible with other uses of the marine environment, and consistent

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<sup>1</sup> The term "marine aquaculture" is used because the majority of NOAA's aquaculture authorities and activities relate to marine species. However, this policy applies to all of NOAA's aquaculture authorities and activities, including those related to marine, freshwater, and anadromous species and includes the Great Lakes.

<sup>2</sup> This definition does not include marine mammals or birds.

with the National Policy for the Stewardship of the Ocean, our Coasts, and the Great Lakes (National Ocean Policy).<sup>3</sup>

2. Ensure agency aquaculture decisions protect wild species and healthy, productive, and resilient coastal and ocean ecosystems, including the protecting of sensitive marine areas.
3. Advance scientific knowledge concerning sustainable aquaculture in cooperation with academic and federal partners.
4. Make timely and unbiased aquaculture management decisions based upon the best scientific information available.
5. Support aquaculture innovation and investments that benefit the Nation's coastal ecosystems, communities, seafood consumers, industry, and economy.
6. Advance public understanding of sustainable aquaculture practices; the associated environmental, social, and economic challenges and benefits; and the services NOAA has to offer in support of sustainable aquaculture.
7. Work with our Federal partners, through the Joint Subcommittee on Aquaculture<sup>4</sup> and other venues, to provide the depth of resources and expertise needed to address the challenges facing expansion of aquaculture in the United States.
8. Work internationally to learn from aquaculture best practices around the world and encourage the adoption of science-based sustainable practices and systems.
9. Integrate Federal, regional, State, local, and tribal priorities along with commercial priorities into marine aquaculture siting and management and ensure aquaculture development is considered within other existing and potential marine uses to reduce potential conflicts.

### **Basis for the Policy**

NOAA has a long history of conducting regulatory, research, outreach, and international activities on marine aquaculture issues within the context of its missions of service, science, and environmental stewardship. The National Aquaculture Act of 1980, which applies to all federal agencies, states that it is “in the national interest, and it is the national policy, to encourage the development of aquaculture in the United States.” The statutory basis for NOAA’s aquaculture activities includes the Magnuson-Stevens Fishery Conservation and Management Act, the

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<sup>3</sup> EO 13547, which adopts the final recommendations of the Interagency Ocean Policy Task Force (July 19, 2010) is available online at <http://www.whitehouse.gov/oceans>.

<sup>4</sup> The Joint Subcommittee on Aquaculture of the Federal Coordinating Council on Science, Engineering, and Technology was created in the National Aquaculture Act of 1980. The purpose of the coordinating group is to increase the overall effectiveness and productivity of Federal aquaculture research, transfer, and assistance programs.

Marine Mammal Protection Act, the Endangered Species Act, the Coastal Zone Management Act, the National Marine Sanctuaries Act, and the Fish and Wildlife Coordination Act. Under these laws, in addition to the National Environmental Policy Act, NOAA is responsible for considering and preventing and/or mitigating the potential adverse environmental impacts of planned and existing marine aquaculture facilities through the development of fishery management plans, sanctuary management plans, permit actions, proper siting, and consultations with other regulatory agencies at the Federal, State, and local levels. Other statutes, including the National Sea Grant College Program Act, the Saltonstall-Kennedy Act, the Anadromous Fish Conservation Act, the Interjurisdictional Fisheries Act, the Merchant Marine Act, and the Agricultural Marketing Act, authorize NOAA to enable and provide assistance for both public and private sector aquaculture. In addition, the Oceans and Human Health Act calls for research related to aquaculture.

NOAA may engage in regulatory actions in the Exclusive Economic Zone under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) through Fishery Management Plans for species in need of conservation and management. NOAA may also engage in regulatory action under National Marine Sanctuaries Act (NMSA) authority with respect to aquaculture activities within or potentially affecting Sanctuaries. NOAA has a direct regulatory role for aquaculture within the sanctuaries, in both State and Federal waters, except in state waters when limited by formal written agreement with the Governor of that State. NOAA also engages in consultations with other Federal permitting agencies under the authority of the Endangered Species Act, Marine Mammal Protection Act, the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act, the National Environmental Policy Act, and other statutes. Through the Coastal Zone Management Act, NOAA also reviews and approves state coastal management programs, which identify permissible uses in the coastal zone, and oversees Federal consistency with these programs.<sup>5</sup>

In developing this policy, NOAA evaluated the application of past NOAA and Department of Commerce aquaculture policies and planning documents and considered the specific challenges and opportunities of today and tomorrow, drawing on the agency's institutional knowledge of the state of science on aquaculture and its potential impacts. In addition, NOAA considered public input provided via an initial public comment period and a series of seven public listening sessions during April and May 2010, and a 60-day public comment period on a public draft of this policy released in February 2011.<sup>6</sup> The policy also aligns with several objectives in NOAA's Next Generation Strategic Plan and is a primary component of NOAA's strategic objective for safe and sustainable seafood.<sup>7</sup>

This policy was also informed by the National Ocean Policy and the framework for effective coastal and marine spatial planning (CMSP).<sup>8</sup> Many of the themes found in the National Ocean

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<sup>5</sup> Some federal permit actions are subject to state review under the consistency certification provisions of the Coastal Zone Management Act.

<sup>6</sup> Summaries of the listening sessions and all comments submitted as public input to the development of the NOAA aquaculture policy are posted online at <http://aquaculture.noaa.gov>

<sup>7</sup> Available at [http://www.ppi.noaa.gov/strategic\\_planning.html](http://www.ppi.noaa.gov/strategic_planning.html)

<sup>8</sup> Final Recommendations of the Interagency Ocean Policy Task Force. Available online at <http://www.whitehouse.gov/administration/eop/ceq/oceans>



Policy – such as protecting, maintaining, and restoring healthy and diverse ecosystems; supporting sustainable uses of the ocean; and increasing scientific understanding and applying that knowledge to make better decisions – are echoed in this document. This policy also mirrors the National Goals for CMSP, setting the stage for aquaculture to be properly considered within the CMSP process. NOAA, as the primary bureau within the Department of Commerce with programmatic aquaculture responsibilities, developed this policy as a complement to the broader Department of Commerce aquaculture policy.

## Background

Approximately 84 percent of the seafood consumed in the United States is imported,<sup>9</sup> about half of which is sourced from aquaculture. In 2009, aquaculture crossed the threshold of providing more than half of all seafood consumed worldwide.<sup>10</sup> However, domestic aquaculture provides only about 5 percent of the seafood consumed in the United States.<sup>11</sup> Growing U.S. and worldwide demand for seafood is likely to continue as a result of increases in population and consumer awareness of seafood's health benefits. The most recent Federal *Dietary Guidelines for Americans* (2010) recommend Americans more than double their current seafood consumption.<sup>12</sup> Because wild stocks are not projected to meet increased demand even with rebuilding efforts, future increases in supply are likely to come either from foreign aquaculture or increased domestic aquaculture production, or some combination of both.

The existing domestic marine aquaculture community is mainly comprised of shellfish growing, but also includes finfish and algae production in coastal waters and hatchery production of fish and shellfish to replenish stocks of important commercial, recreational, and endangered species and to restore marine habitat (e.g., oyster reefs). Emerging technologies for marine aquaculture include land-based closed-recirculating systems, marine algae production technologies for biofuels and non-food products, systems that integrate different types of aquaculture or combine aquaculture with other uses, and systems in exposed open-ocean waters.

Federal support, engagement, and authorities related to aquaculture development span a number of agencies, in particular the Food and Drug Administration, Environmental Protection Agency, Army Corps of Engineers, Fish and Wildlife Service, and the U.S. Department of Agriculture. These agencies collaborate with each other, industry, states, and academia to address issues related to aquaculture facilities<sup>13</sup> and to promote the development of new technologies that

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<sup>9</sup> Source: U.S Department of Commerce, *Fisheries of the United States 2009*.

<sup>10</sup> United Nations Food and Agriculture Organization. (2009). FISHSTAT Plus: Universal Software for Fishery Statistical Time Series (Food and Agriculture Organization, Rome). Version 2.32. This figure includes both freshwater and marine production.

<sup>11</sup> This figure includes both freshwater and marine production. Not included in this figure is the amount of salmon produced in Alaska by regional aquaculture associations and others in Alaska's salmon stock enhancement program. In 2009, Alaska's salmon aquaculture stock enhancement programs produced over 45 million salmon, mostly pink and chum salmon.

<sup>12</sup> See [www.mypyramid.gov](http://www.mypyramid.gov)

<sup>13</sup> A recent example is the National Aquatic Animal Health Plan, which was developed in response to the growing need for a coordinated government effort to ensure aquatic animal health. See <http://aquaculture.noaa.gov/news/naahp.html>

improve the sustainability of the industry. This policy sets the stage for NOAA's continued involvement in these coordinated efforts.

## **Benefits and Challenges**

As interest in commercial aquaculture production and wild species restoration in the marine environment has increased, so too has debate about the potential economic, environmental, and social effects of aquaculture – and the need for better public understanding with respect to these issues. Benefits of sustainable aquaculture may include species and habitat restoration and conservation; nutrient removal; provision of safe, local seafood that contributes to food security and human health and nutrition; increased production of low trophic-level seafood; and synergies with fishing (e.g., using fish processing trimmings in aquaculture feeds). Sustainable aquaculture can also contribute economic and social benefits by creating jobs in local communities and helping to maintain the cultural identity of working waterfronts.

Environmental challenges posed by aquaculture, depending upon the type, scope, and location of aquaculture activity, may include nutrient and chemical wastes, water use demands, aquatic animal diseases and invasive species, potential competitive and genetic effects on wild species, effects on endangered or protected species, effects on protected and sensitive marine areas, effects on habitat for other species, and the use of forage fish for aquaculture feeds. Economic and social challenges may include market competition affecting the viability of domestic aquaculture and/or the prices U.S. fishermen receive for their wild seafood products; competition with other uses of the marine environment; degraded habitats and ecosystem services; and impacts to diverse cultural traditions and values.

Growing consumer demand for safe, local, and sustainably produced seafood, increasing energy costs, increasing seafood demand in countries that currently export seafood to the United States, and growing interest in maintaining working waterfronts are emerging drivers that support sustainable domestic aquaculture production. U.S. aquaculture production – both small-scale and large-scale – has evolved and improved over time through regulations at the Federal and State levels, scientific advancements, consumer demand, technological innovation, industry best management practices, and protocols for responsible stock replenishment and hatchery practices. This policy will allow NOAA to further advance these developments through the actions described below.

## **NOAA Aquaculture Priorities**

To implement the Statement of Policy, NOAA has identified the following priorities:

### **Science and Research**

- Expand NOAA's research portfolio to (1) provide the necessary ecological, technological, economic, and social data and analysis to effectively and sustainably develop, support, manage, and regulate private and public sector marine aquaculture and species restoration, including technologies deemed necessary under recovery and

conservation plans for depleted, threatened, and endangered species and habitat; (2) monitor, assess, and address the environmental and socioeconomic effects of marine aquaculture, including cumulative impacts; and (3) complement the scientific work of our federal, state, and academic partners.

- Evaluate alternative protein and lipid sources to be used in lieu of wild fish and fish oil in aquaculture feeds and develop cost-effective alternative feeds that maintain the human health benefits of seafood and reduce reliance on the use of wild forage fish in the diets of farmed fish.
- Develop and evaluate the cost-effectiveness of methodologies to prevent, minimize, and mitigate potential adverse ecosystem and socioeconomic impacts of aquaculture.
- Monitor and assess the effects of ocean acidification and climate change on marine aquaculture and develop adaptation strategies.

## **Regulation**

- Actively engage Federal agencies, Fishery Management Councils, Federal advisory councils or committees, coastal states, tribes, other stakeholders, and Congress to clarify NOAA's regulatory authority related to aquaculture in Federal waters in the context of other Federal, State, state, and tribal authorities and to establish a coordinated, comprehensive, science-based, transparent, and efficient regulatory program, taking into account relevant international standards, as appropriate, for aquaculture in Federal waters consistent with the President's Executive Order on Improving Regulation and Regulatory Review.
- Work with Federal, State, local, tribal, and regional agencies and organizations to clarify regulatory requirements and to establish coordinated, comprehensive, science-based, transparent, and efficient processes for permit reviews, permit consultations, and other regulatory and management actions for marine aquaculture in state waters – taking into account existing authorities, international standards, and regional, State, and local goals, policies, and objectives.
- Engage in coastal and marine spatial planning with other agencies and jurisdictions, including the Regional Planning Bodies being created under the National Ocean Council, to ensure siting of marine aquaculture that reduces conflicts among competing uses, minimize adverse impacts on the environment, and identify activities for potential co-location with aquaculture operations.

## **Innovation, Partnerships, and Outreach**

- Collaborate with Federal partners, coastal communities, States, tribes, the aquaculture industry, non-governmental organizations, and other stakeholders to transition innovative aquaculture technologies from laboratory studies to commercial and restoration projects and document and assess their environmental, ecosystem, and socioeconomic impacts.

Focus on projects that will create jobs in coastal communities, produce healthful local seafood, revitalize working waterfronts, support traditional fishing communities, avoid impacts to protected areas, and restore depleted species and habitat.

- Work with extension and outreach services to interpret technical and scientific data and provide informational products to transfer that knowledge to other stakeholders and the public.
- Support restoration and commercial shellfish aquaculture initiatives to restore shellfish populations that provide locally produced food and jobs, help improve water quality, and restore and conserve coastal habitat.
- Develop synergies among NOAA's fisheries management, enforcement, financial assistance, aquaculture, seafood inspection, Coastal Zone Management, National Marine Sanctuaries, and National Sea Grant programs to rebuild wild fish stocks and support alternative or supplemental economic options for fishermen.
- Engage within the Joint Subcommittee on Aquaculture and National Ocean Council to promote coordination among Federal agencies on marine aquaculture regulatory and science issues and pursue opportunities for collaboration, such as integrating aquaculture with other ocean uses and using aquaculture facilities as a platform for more comprehensive environmental monitoring.

### **International Cooperation**

- Work with other Federal agencies to establish a coordinated, consistent, and comprehensive international strategy on sustainable marine aquaculture that supports and is consistent with U.S. policies and priorities regarding food security, international trade, healthy oceans, and economic well-being.
- Work with other nations, as appropriate, to adopt sustainable aquaculture and seafood safety approaches using the best practices.
- Exchange scientific insights with other nations and promote joint participation in cooperative research that is of potential multinational value, including addressing impacts of aquaculture that breach international boundaries.

### **Implementation and Periodic Review**

NOAA will begin to implement this policy immediately upon release. This policy will henceforth guide all NOAA activities with respect to marine aquaculture, until such time as it is amended or rescinded by the NOAA Administrator.

## **Appendices**

NOAA will take a tiered approach with respect to this policy and may publish more detailed policies related to specific authority to regulate aquaculture activities. These tiered documents will be included as appendices to the overarching policy.

### **Appendix 1. NOAA Guidance for Aquaculture in Federal Waters**

Appendix 1 establishes goals NOAA's regulatory actions with respect to aquaculture production in federal waters of the U.S. Exclusive Economic Zone, and provides a list of principles and approaches that NOAA will take to achieve each goal. In the future, NOAA will be identifying specific actions to be taken to implement each goal.

## APPENDIX 1

### NOAA GUIDANCE FOR AQUACULTURE IN FEDERAL WATERS

The purpose of this appendix is to establish a set of goals to guide NOAA's regulatory and programmatic actions with respect to aquaculture production in Federal waters of the U.S. Exclusive Economic Zone and to provide a list of implementing actions that NOAA will take to achieve each goal. NOAA will take these actions to the extent of the agency's discretion and funding availability under relevant authorities and in coordination with our Federal partners.

These goals and implementing actions are an extension of the NOAA Aquaculture Policy, which applies broadly to all marine aquaculture-related activities at NOAA.

#### **Goal 1. Ecosystem compatibility – Aquaculture development in Federal waters is compatible with the functioning of healthy, productive, and resilient marine ecosystems.**

NOAA will achieve this goal by:

- developing, implementing, and enforcing ecosystem-based conservation and management measures for aquaculture that fulfill the agency's marine stewardship responsibilities to protect and restore healthy coastal and ocean ecosystems and to conserve living marine resources, their habitats, and other protected areas
- developing, implementing, and enforcing conservation and management measures for aquaculture designed to maintain the health, genetics, habitats, and populations of wild species; maintain water quality; prevent escapes and accidental discharges into the environment; and avoid harmful interactions with wild fish stock, marine mammals, birds, and protected species
- pursuing efforts to restore wild stocks
- supporting the use of only native or naturalized species in Federal waters unless best available science demonstrates use of non-native or other species in Federal waters would not cause undue harm to wild species, habitats, or ecosystems in the event of an escape
- employing science-based adaptive management
- taking into account the cumulative impacts of aquaculture throughout all trophic levels of the marine environment and in combination with the impacts of other activities
- encouraging the use of aquaculture feeds that either use fish from sustainably managed fisheries or alternative protein and lipid sources
- considering interactions with marine resources managed by other agencies and jurisdictions
- conducting programmatic or site-specific reviews of impacts related to proposed facilities in federal waters in compliance with National Environmental Policy Act requirements

**Goal 2. Compatibility with other uses – Aquaculture facilities in Federal waters are sited and operated in a manner that is compatible with other authorized uses of the marine environment.**

NOAA will achieve this goal by:

- coordinating with other agencies to develop tools to properly site aquaculture in Federal waters, including tools to reduce conflicts among competing uses and identify activities for potential co-location with aquaculture operations, in the context of regional and national coastal and marine spatial planning (CMSP) activities and ecosystem compatibility goals
- incorporating the preferences of states in decisions about aquaculture development in Federal waters
- facilitating discussions among interested aquaculture developers, concerned State agencies, Fishery Management Councils, tribes, other Federal agencies, Federal advisory committees, and the public as early as possible in project planning and development
- promoting the safety of human life at sea and providing situational awareness for those working on offshore aquaculture operations, including coastal and marine forecasts and marine navigation weather

**Goal 3. Best available science and information – Management decisions for aquaculture in Federal waters are based upon the best available science and information.**

NOAA will achieve this goal by:

- basing management decisions on best available scientific information – including biological, technological, ecological, economic, and social data – in management decisions
- synthesizing and delivering information on the current state of scientific understanding about the observed and potential impacts and benefits of open ocean aquaculture
- identifying gaps and uncertainties associated with the current body of knowledge and taking these uncertainties into account in agency decisions
- conducting and supporting scientific studies to inform agency decision-makers on open ocean aquaculture technologies, practices, benefits, costs, and risks and to develop new and improve existing sustainable practices and products
- monitoring, evaluating, and maintaining databases on the impacts of aquaculture, including cumulative impacts, on biodiversity, predator-prey relationships, and other important characteristics of healthy and productive ecosystems
- working with State and Federal agencies, academia, tribes, and other entities to improve scientific understanding of the effects of open ocean aquaculture and to develop cost-effective open ocean aquaculture technologies and practices that prevent, minimize, or mitigate negative environmental or societal effects
- updating and adapting conservation and management measures to reflect the best available scientific information
- incorporating the insights gained by other countries that actively participate in open ocean aquaculture activities

**Goal 4. Social and economic benefits – Investments in sustainable aquaculture in Federal waters provide a net benefit to the Nation’s economy, coastal communities, and seafood consumers while considering regional and state goals and objectives.**

NOAA will achieve this goal by:

- creating opportunities for new aquaculture jobs and economic growth for U.S. communities that complement commercial and recreational fishing, maintain and revitalize working waterfronts, provide upstream and downstream economic opportunities throughout the U.S. economy and provide additional domestic seafood choices for U.S. consumers
- assessing the food safety and human health effects of consumption of aquaculture products (foreign and domestic) in coordination with other Federal agencies
- making the agency’s fee-for-service seafood inspection services available to aquaculture producers operating in Federal waters
- assessing the likely positive and negative social, economic, and cultural impacts of management decisions, individually and cumulatively, over both the short and long term, on permit applicants, individual communities, the group of all affected communities identified, and the U.S. economy, including impacts on employment and the economic viability of working waterfronts
- identifying, developing, and supporting mitigation measures to address social, economic, and cultural impacts

**Goal 5. Industry Accountability – To secure long-term access to operate aquaculture facilities in Federal waters, operators are held accountable for protecting the environment, wild species, and human safety and for conducting and reporting ongoing monitoring.**

NOAA will achieve this goal by working with Federal agencies and other partners to develop an appropriate framework through which operators of aquaculture facilities will:

- conduct a baseline environmental analysis of the proposed site prior to permit review
- prepare and implement a broodstock management plan, an aquatic animal health plan, and a contingency plan for responding to emergencies
- prepare, obtain Federal approval for, and comply with an operating plan that uses recognized best management practices to ensure good husbandry, biosecurity, predator control, and maintenance practices that minimize the number and frequency of escapes, disease outbreaks, noise impacts, and entanglements
- prepare, obtain Federal approval for, and comply with a monitoring plan to meet all monitoring and reporting requirements, including reports of escapes, disease outbreaks, drug or chemical applications, nutrient discharges, and other environmental monitoring as required by NOAA or other Federal agencies
- incorporate environmentally efficient and responsible management practices that limit inputs and waste discharges into the environment from drugs, chemicals, feeds, etc.
- allow regular inspection of facilities by authorized officers
- provide, upon request, evidence of compliance with applicable laws, including those governing use of drugs and feeds and other operational details that are under the jurisdiction of other agencies



- provide evidence of an assurance bond to address facility removal and site remediation
- safely remove facilities and organisms once operations end and, to the extent necessary and practicable, restore environmental conditions of the site
- ensure the safety of human life at sea

**Goal 6. Approval process – Management decisions for aquaculture operations in Federal waters are made in an efficient and transparent manner that produces timely, unbiased, and scientifically based decisions.**

NOAA will achieve this goal by:

- implementing efficient, coordinated, transparent, and timely processes for science-based permit review and issuance and making easily understood information about the permitting process and requirements available on the agency's website
- reducing regulatory uncertainty and minimizing unnecessary regulatory burden on individuals, private or public organizations, or Federal, State, tribal, or local governments
- coordinating permit review, approval, and enforcement, both internally and with other Federal agencies, to ensure compliance with existing regulatory requirements and to foster an efficient and timely regulatory process
- providing public notice and opportunities for Fishery Management Council, State, tribal, local government and stakeholder input on agency management decisions
- providing leadership in conducting periodic reviews of Federal statutory and regulatory requirements to identify gaps or overlaps in Federal authority, clarify Federal agency roles and responsibilities, and develop streamlined processes for authorizing aquaculture and enforcing regulatory requirements in Federal waters, in consultation with Congress, other Federal agencies, Fishery Management Councils, and States

**Goal 7. Public information – The public has an accurate understanding of sustainable aquaculture development in Federal waters and the associated environmental, social, and economic challenges and benefits; monitoring information is readily available to the public.**

NOAA will achieve this goal by:

- developing, widely disseminating, and effectively communicating regional and national informational materials on the merits, trade-offs, technologies, species, and practices used to conduct aquaculture in Federal waters
- making publicly available – in a timely manner and in accordance with applicable standards for transparency and confidentiality – monitoring data, results, and information submitted by aquaculture facilities operating in Federal waters, analyses of the data reported by aquaculture operators in Federal waters, and the results of research conducted by NOAA and others
- communicating to the public, through extension or other outreach services, new research findings, particularly those from local research and demonstration projects



**Final Recommendations on Offshore Development  
Hawaiian Islands Humpback Whale National Marine  
Sanctuary Advisory Council  
January 18, 2012**

**Appendix VII – Overview of Conducting Consultation Pursuant to Section  
304(d) of the National Marine Sanctuaries Act**

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**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
OFFICE OF NATIONAL MARINE SANCTUARIES**

**OVERVIEW OF  
CONDUCTING CONSULTATION PURSUANT TO SECTION 304(d)  
OF THE NATIONAL MARINE SANCTUARIES ACT (16 U.S.C.  
1434(d))**

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**SEPTEMBER 2009**

The primary purpose of this document is to assist Federal agencies in complying with the consultation requirements of section 304(d) of the National Marine Sanctuaries Act (16 U.S.C. § 1431 et seq.; NMSA). This overview is for general information and educational purposes only; it is not an enforceable document or intended to establish policy and should not be cited to for 304(d) consultation compliance purposes.



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## 1.0 INTRODUCTION

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### 1.1 BACKGROUND

#### 1.1.1 *National Marine Sanctuaries Act*

The National Marine Sanctuaries Act (16 U.S.C. § 1431 et seq.; the Act or NMSA) authorizes the Secretary of Commerce to designate and manage areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or esthetic qualities as national marine sanctuaries. The NMSA provides the National Oceanic and Atmospheric Administration's Office of National Marine Sanctuaries (ONMS) with authority to comprehensively manage uses of the National Marine Sanctuary System (System)<sup>1</sup> and protect its resources through regulations, permitting, enforcement, research, monitoring, education and outreach.

#### 1.1.2 *Consultation under section 304(d)*

In 1992, Congress amended the NMSA to require interagency coordination pursuant to section 304(d).<sup>2</sup> Section 304(d) requires Federal agencies to consult with the ONMS whenever their proposed actions are *likely to destroy, cause the loss of, or injure a sanctuary resource*.<sup>3</sup> Through the same legislation, Congress designated the Gerry E. Studds Stellwagen Bank National Marine Sanctuary (SBNMS) and required Federal agencies to consult on proposed actions that *may affect* resources of that area.<sup>4</sup> Collectively, these interagency consultation requirements will be referred to as “the NMSA consultation requirements” throughout this document. The complete text of section 304(d) can be found in Appendix A.

The purpose of NMSA consultation is to protect sanctuary resources by requiring Federal agencies to consider alternatives to proposed actions that might otherwise destroy, cause the loss of, or injure these resources. The staff of the ONMS works diligently with Federal agencies to assist them in achieving full compliance with NMSA consultation. The ONMS encourages Federal agencies to work proactively with office staff to identify actions that may require NMSA consultation and to complete this consultation at the earliest practicable time. The first point of contact for questions about the NMSA consultation requirements is the appropriate sanctuary superintendent (see Appendix B for contact information).

#### 1.1.3 *Purpose of this document*

The primary purpose of this document is to assist Federal agencies in complying with the consultation requirements of section 304(d) of the National Marine Sanctuaries Act (16 U.S.C. § 1431 et seq.; NMSA). This overview is for general information and educational purposes only; it is not an enforceable document or intended to establish policy and should not be cited to for

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<sup>1</sup> The “System” as used in this document refers collectively to all national marine sanctuaries designated pursuant to the NMSA. The processes presented in this document do not apply to the Papahānaumokuākea (Northwestern Hawaiian Islands) Marine National Monument, which is jointly administered by NOAA, the U. S. Fish and Wildlife Service, and the State of Hawaii.

<sup>2</sup> Public Law 102-587

<sup>3</sup> 16 U.S.C. § 1434(d)

<sup>4</sup> Section 2202(e) of Public Law 102-587

304(d) consultation compliance purposes. Among other things, this overview is designed to serve as an introduction to the requirement and answer the following questions about the NMSA consultation requirements:

| <b>Question:</b>   | <b>Refer to:</b> |          |
|--|------------------|----------|
| To whom do the NMSA consultation requirements apply?                                       | Box 1            | Page 4   |
| When do the NMSA consultation requirements apply?  | §2.1             | Page 4   |
| How should the NMSA consultation process be initiated?                                     | §3.0             | Page 8   |
| How should a Federal agency respond to ONMS recommended alternatives?                      | §3.4             | Page 9   |
| What if the ONMS's recommended alternatives cannot be implemented?                         | §3.4             | Page 9   |
| What happens if sanctuary resources are injured in the course of conducting an action?     | §4.2             | Page 10  |
| How does one integrate the NMSA consultation requirement with NEPA and other Federal laws? | §5.0             | Page 11  |
| Who should one contact with questions about the NMSA consultation process?                 | Appendix B       | Page B-1 |

## 1.2 ORGANIZATION OF THIS DOCUMENT

This document presents an overview of the sequence of steps set out in the NMSA for consultation on Federal agency actions that are likely to injure the resources of a national marine sanctuary. These steps can be divided into three general phases: pre-consultation, the NMSA consultation process, and post-consultation (see Figure 1). Specifically, section 2.0 of this document discusses the evaluation necessary to determine whether NMSA consultation is required and the steps to be taken prior to initiating consultation; section 3.0 describes the consultation process; and section 4.0 identifies the steps to be taken after completing NMSA consultation.

In addition to describing each phase of the consultation, this overview contains information about integrating the NMSA consultation requirements with other regulatory and statutory requirements, including sanctuary permits (Section 5.0).

The complete text of section 304(d) of the NMSA can be found in Appendix A, and contact information for NMSA consultations is contained in Appendix B.

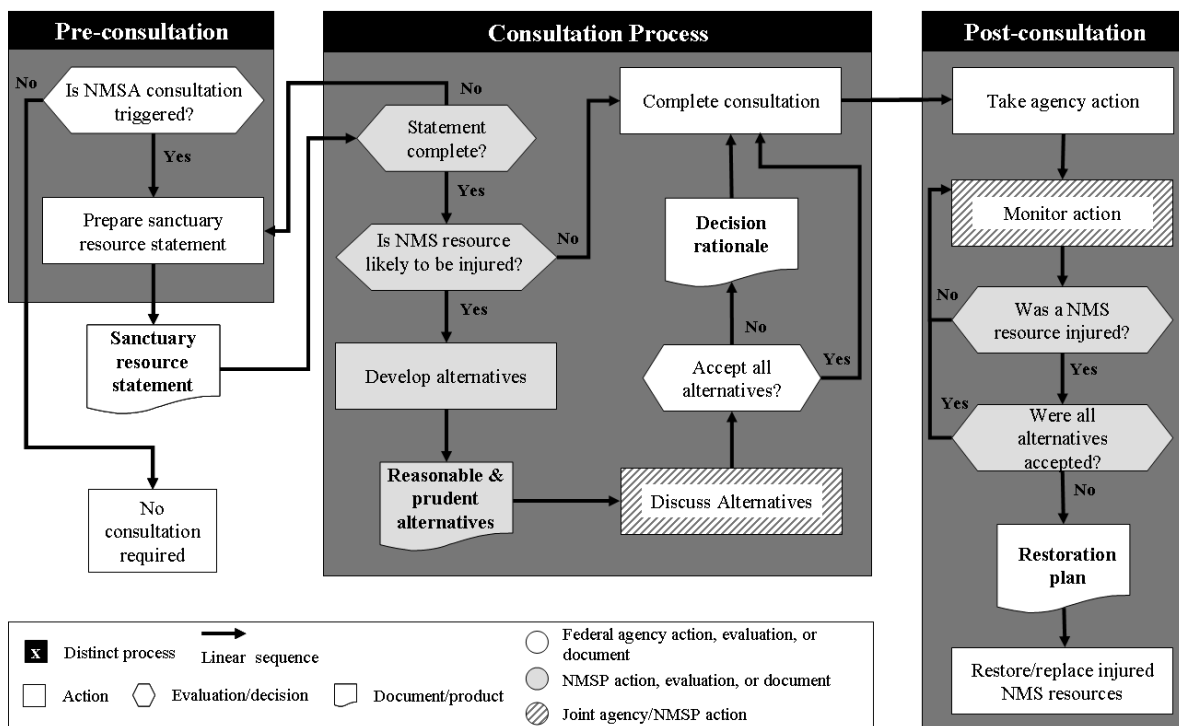


Figure 1. Overview of the NMSA Consultation Process

## 2.0 PRE-CONSULTATION STEPS

Before a Federal agency takes an action, there are a number of steps necessary to determine whether the NMSA consultation threshold is triggered and if consultation is required (see Figure 2).

### 2.1 WHEN IS NMSA CONSULTATION REQUIRED?

NMSA consultation is triggered when the effects of a proposed *Federal action* are *likely to injure a sanctuary resource*.<sup>5</sup> These terms are described in more detail below. Federal action agencies are responsible for evaluating their proposed actions and for determining whether their proposed actions are likely to injure sanctuary resources.<sup>6</sup> Where appropriate, however, the ONMS may independently evaluate proposed Federal actions and request that those agencies prepare a sanctuary resource statement and initiate the NMSA consultation process.

#### 2.1.1 Federal actions subject to consultation

Federal actions subject to the consultation requirements of Section 304(d) include actions inside or outside the boundary of a national marine sanctuary, including private activities authorized by licenses, leases, or permits. The Federal action agency must review any such action to determine whether it is likely to injure sanctuary resources.

For example, a Federal agency undertaking a dredging project in a national marine sanctuary would trigger the NMSA consultation requirement if the dredging is likely to injure sanctuary resources.<sup>7</sup>

In addition, a Federal agency that discharges waste outside the boundary of a national marine sanctuary may trigger the consultation requirement even though the actual dumping, or outfall, does not occur within the sanctuary boundary (if such discharge is likely to enter the sanctuary and injure sanctuary resources).

As an example regarding authorization of private activities, a Federal agency proposal to issue a license to a third party to operate a liquefied natural gas terminal or deepwater port would trigger NMSA consultation if that action is likely to injure sanctuary resources.

#### Box 1. Who is required to consult?

The NMSA consultation requirements only apply to federal agency actions, including the issuance of licenses and permits to non-federal entities. These requirements do not apply to private citizens, corporations, state, territory, tribal, or local governments, or other entities not affiliated with the federal government.

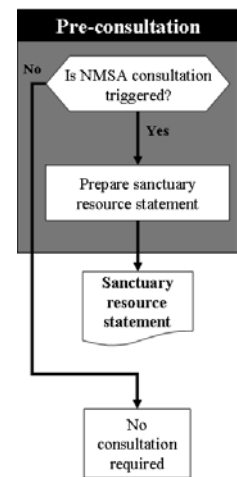


Figure 2. Pre-consultation Steps

<sup>5</sup> As previously discussed, for Stellwagen Bank NMS only this threshold is “may affect” sanctuary resources (see section 2.1.3). For brevity, this distinction is assumed throughout the document when discussing the consultation threshold. In addition, this document will use the term “injure” to be inclusive of the phrase “destroy, cause the loss of, or injure” (see section 2.1.3).

<sup>6</sup> The legislative history of the 1992 amendments to the NMSA makes clear that Congress intended federal action agencies to be responsible for initiating the NMSA consultation process (House Report 102-565, June 15, 1992).

<sup>7</sup> Federal actions affecting sanctuaries such as these may also require a ONMS permit or other authorization if occurring within the sanctuary (see section 4.1)



### 2.1.2 *Sanctuary resource defined*

The NMSA defines sanctuary resources as:

“any living or nonliving resource of a national marine sanctuary that contributes to the conservation, recreational, ecological, historical, educational, cultural, archeological, scientific, or aesthetic value of the sanctuary;”<sup>8</sup>

Sanctuary resources are further defined in ONMS regulations as:

“any living or non-living resource of a National Marine Sanctuary that contributes to the conservation, recreational, ecological, historical, research, educational, or aesthetic value of the Sanctuary, including, but not limited to, the substratum of the area of the Sanctuary, other submerged features and the surrounding seabed, carbonate rock, corals and other bottom formations, coralline algae and other marine plants and algae, marine invertebrates, brine-seep biota, phytoplankton, zooplankton, fish, seabirds, sea turtles and other marine reptiles, marine mammals and historical resources. For Thunder Bay National Marine Sanctuary and Underwater Preserve, Sanctuary resource means an underwater cultural resource as defined at [15 CFR 922.191].”<sup>9</sup> For Hawaiian Islands Humpback Whale National Marine Sanctuary, sanctuary resource means “any humpback whale, or the humpback whale’s habitat within the sanctuary.”<sup>10</sup>

“Cultural resources” are defined at 15 CFR 922.3 as:

“any historical or cultural feature, including archaeological sites, historic structures, shipwrecks, and artifacts.”<sup>11</sup>

“Historical resource” is defined at 15 CFR 922.3 as:

“any resource possessing historical, cultural, archaeological or paleontological significance, including sites, contextual information, structures, districts, and objects significantly associated with or representative of earlier people, cultures, maritime heritage, and human activities and events. Historical resources include “submerged cultural resources”, and also include “historical properties,” as defined in the National Historic Preservation Act, as amended, and its implementing regulations, as amended.”<sup>12</sup>

As defined by the NMSA and its implementing regulations, therefore, the term *sanctuary resource* is very broad and includes virtually every living and nonliving component of the sanctuary ecosystem, with the exception of the Thunder Bay and Hawaiian Island Humpback Whale national marine sanctuaries, which have a more limited definition of sanctuary resources as noted above.

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<sup>8</sup> 16 U.S.C. § 1432(8)

<sup>9</sup> 15 CFR 922.3

<sup>10</sup> 15 CFR 922.182

<sup>11</sup> 15 CFR 922.3

<sup>12</sup> 15 CFR 922.3

### 2.1.3 Determining injury

NMSA consultation is required whenever a Federal action—

1. Is likely to destroy, cause the loss of, or injure a sanctuary resource; or
2. May affect a resource of the SBNMS.

These thresholds established by Congress relate to both to the nature of the impact of proposed actions on sanctuary resources and the probability those impacts will occur.

Section 304(d) of the NMSA requires Federal agencies to consult with the ONMS when they determine a proposed action is *likely to destroy, cause the loss of, or injure a sanctuary resource*. This document uses the term “injury” to be inclusive of the phrase “destroy, cause the loss of, or injure.” The term “injure” is defined in the ONMS regulations to “change adversely, either in the short or long term, a chemical, biological or physical attribute of, or the viability of. This includes, but is not limited to, to cause the loss of or destroy.”<sup>13</sup>

Section 304(d) also uses the words “destroy or cause the loss of,” which are phrases subsumed in the regulatory definition of “injury.” “Destroy or cause the loss of” generally refers to killing living resources, or, when in reference to non-living sanctuary resources, completely removing that resource.

For SBNMS, agencies must consult with ONMS upon a determination that an agency action “may affect” SBNMS resources. This is a lower threshold; therefore, discussions with SBNMS staff will be helpful in determining whether consultation is required.

## 2.2 SANCTUARY RESOURCE STATEMENT

When a Federal agency determines that an agency action is likely to injure a sanctuary resource, the NMSA requires the Federal agency to provide the ONMS with a written statement (hereafter referred to as “sanctuary resource statement”) describing “the [agency] action and its potential effects on sanctuary resources”. The action agency must submit the sanctuary resource statement at the earliest practicable time, but in no case later than 45 days before the final approval of the action unless such Federal agency and the Secretary<sup>14</sup> agree to a different schedule.”<sup>15</sup>

The purpose of the sanctuary resource statement is to provide the ONMS with enough information to understand the nature of the proposed activity and its potential impacts on sanctuary resources. It is important to recognize that sanctuary resource statements are not necessarily separate documents prepared by the Federal agency and may consist of documents prepared in compliance with other statutes such as National Environmental Policy Act (NEPA), Endangered Species Act (ESA) and Magnuson-Stevens Fishery Conservation and Management Act (MSA). The agency need only ensure complete information is provided to the sanctuary superintendent and may use existing analyses, processes, or mechanisms to provide this information.

Sanctuary resource statements may include, for example:

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<sup>13</sup> 15 CFR 922.3

<sup>14</sup> Delegated to the NOAA ONMS Director

<sup>15</sup> 16 U.S.C. § 1434(d)(1)(B)

- A statement of the purpose or objectives of the action or activity;
- The location of the proposed action and any alternative locations, including any alternatives outside national marine sanctuary boundaries;
- A description of the methods and means for carrying out the activity or action and any alternative methods available;
- A description of the equipment proposed to be used and any alternative equipment;
- Documentation supporting the likelihood of the action causing injury to sanctuary resources;
- The views of recognized experts on the likely or potential effects of the action on sanctuary resources;
- The results of an on-site survey of the action area by agency personnel and/or ONMS staff;
- A review of pertinent literature and related information;
- An analysis of alternatives to the agency action that are not likely to injure sanctuary resources, including conduct of the action outside sanctuary boundaries;
- Copies of any Federal, territory, state, tribal, or local authorizations, permits, licenses, or other forms of approval (or applications for authorizations, permits or licenses if not yet granted) required for the project or a summary of such approvals that have been sought;
- Copies of pertinent reports, including, but not limited to, any environmental impact statement, environmental assessment or biological assessment prepared, and any other relevant information.

**Box 2. Can an EA or EIS suffice as a sanctuary resource statement?**

An appropriate environmental assessment (EA) or environmental impact statement (EIS) prepared pursuant to the National Environmental Policy Act (NEPA) can be used to satisfy the requirement for a sanctuary resource statement. Because an EA or EIS will often contain significant information not relevant for section 304(d) purposes, the agency should identify the portions of the document that pertain directly to impacts on sanctuary resources. In this way, the NEPA document can be readily analyzed and a determination of whether the information provided by the action agency is complete can be made.

### 3.0 THE CONSULTATION PROCESS

#### 3.1 INITIATING THE NMSA CONSULTATION PROCESS

The NMSA consultation process begins once the Federal action agency submits the sanctuary resource statement. The steps and sequence involved when conducting the consultation is depicted in Figure 3 and further explained in Box 3.

#### 3.2 EVALUATION OF THE SANCTUARY RESOURCE STATEMENT

##### 3.2.1 Completeness evaluation

Upon receipt of a sanctuary resource statement from a Federal action agency, the ONMS will determine whether it contains sufficient information to evaluate the likelihood that the action will destroy, cause the loss of, or injure sanctuary resources and develop any necessary reasonable and prudent alternatives to protect sanctuary resources. The ONMS will notify the Federal action agency when it determines a sanctuary resource statement is complete or when the ONMS requires additional information. The ONMS will make every effort to complete this initial evaluation promptly and accommodate the schedules of action agencies. In some cases, additional information may be necessary to fully evaluate the action and develop ONMS recommended alternatives to protect sanctuary resources. Upon receiving the requested information, the ONMS will reevaluate the sanctuary resource statement for completeness.

The ONMS's 45-day period to recommend alternatives to the action begins when complete information has been received.

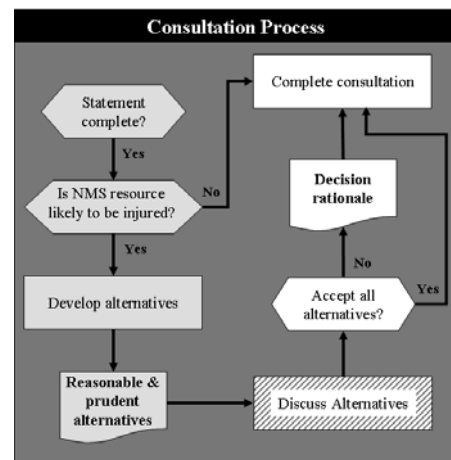


Figure 3. Consultation Process Steps

#### Box 3. Timing of NMSA consultation

*Initiating NMSA consultation*—The NMSA consultation requirements direct federal action agencies to submit a sanctuary resource statement at the “earliest practicable time” indicating the need to initiate NMSA consultation as early in the decision making process as feasible.

*Submitting a sanctuary resource statement*—The NMSA consultation requirements direct federal action agencies to submit sanctuary resource statements a minimum of 45 days before “final approval” of the action

*ONMS response*—The ONMS will review a sanctuary resource statement as soon as possible upon receipt. Within 45 days of receiving complete information on the proposed action, the ONMS shall recommend alternatives to the action agency (or conclude consultation, upon a determination that the action will not destroy, cause the loss of, or injure sanctuary resources).

*Alternative timeframes*—These timeframes may be extended or shortened if the ONMS and action agency agree to a different schedule.

### 3.2.2 *Potential effects determination*

The ONMS will review complete sanctuary resource statements to assess the intensity and duration of the potential effects on sanctuary resources and the probability those potential effects will injure sanctuary resources. The ONMS may also use information obtained from other sources (e.g., published literature, independent experts, and documents or reports prepared by other Federal agencies to assist in making its determination).

If the ONMS determines sanctuary resources are not likely to be injured by the proposed Federal action, the ONMS will so notify the action agency and consultation is concluded. If the ONMS finds the agency action will be likely to injure sanctuary resources, it will, in coordination with the action agency, develop recommended alternatives to protect against injury to sanctuary resources in accordance with section 3.3 of this document. These recommended alternatives will be submitted to the action agency within 45 days of the ONMS's receipt of a complete sanctuary resource statement unless the agencies agree to a different schedule.

### **3.3 DEVELOPMENT OF ONMS RECOMMENDED ALTERNATIVES**

Once it has completed its evaluation of the proposed Federal action, the ONMS, in coordination with the Federal action agency, will prepare recommended alternatives which may be incorporated into the proposed action or implemented in addition to the proposed action to protect sanctuary resources. Recommended reasonable and prudent alternatives in the context of section 304(d) can best be understood as those actions necessary to protect sanctuary resources. These alternatives generally focus on the location, timing, and methods of the proposed action. The ONMS may recommend, for example, the activity be conducted—

1. At an alternate location, including a location outside the sanctuary (or sanctuaries, if more than one are the subject of the consultation);
2. During a different season or that it be delayed for a specified period of time;
3. With alternative equipment or procedures; or
4. Some combination of these recommendations.

Recommended alternatives will be developed by the superintendent of the affected sanctuary (in consultation with the ONMS Director, as necessary) and then transmitted to the Federal action agency. If multiple sanctuaries are affected by a proposed action, the recommendations will be developed by the affected sanctuary superintendents and transmitted by the Regional Superintendent or the ONMS Director, as appropriate.

### **3.4 AGENCY RESPONSE**

Promptly upon receiving the recommended alternatives from the ONMS, the action agency must consult with the ONMS to discuss the recommendations. If the action agency plans to fully implement the ONMS recommended alternatives and fully incorporate them into its proposed action, no further NMSA consultation is necessary prior to conducting the action. If the agency decides not to follow the ONMS recommended alternatives, the agency must provide a written explanation to the ONMS that describes the reason or reasons for not following the alternatives. If the agency determines that its action changes such that the nature or likelihood of injury to sanctuary resources changes, the action agency should determine whether a new consultation is required.

## 4.0 POST-CONSULTATION ACTIONS

After the action agency considers the ONMS's recommendations, it can then determine its course of action, approve the final action and take the necessary steps to implement it. There are a variety of steps that may occur after the action has been taken, in the post-consultation phase of the process (see Figure 4).

### 4.1 MONITORING THE ACTION

Once the determination has been made to move forward with a particular course of action, monitoring the activity is important to ensure recommendations agreed to by the agency are implemented and to document any injury to sanctuary resources. Specific monitoring requirements may be part of the alternatives and recommendations made to the Federal action agency during NMSA consultation. Depending on the situation, this monitoring may be conducted by the action agency, the ONMS, or both.

### 4.2 INJURED SANCTUARY RESOURCES

Section 304(d)(4) of the NMSA requires agencies not adopting ONMS recommendations to take certain steps if their action results in injury to sanctuary resources.

#### 4.2.1 Immediate steps to be taken

If injury to sanctuary resources results from the conduct of the agency action, the NMSA requires the agency to promptly prevent further damage and develop and implement measures to mitigate further damage in a manner approved by the ONMS.

#### 4.2.2 Restoration

Once the injury to sanctuary resources has been stopped, the NMSA requires Federal agencies to "restore or replace the sanctuary resource in a manner approved by the [ONMS]."<sup>16</sup> Restoration or replacement can take many forms depending on the type of injury caused and the nature of the resource. For example, restoration for a Federal action which resulted in destruction of a seagrass bed might involve replanting and/or erection of aids to navigation to prevent further injury. In any case, the action agency should first submit a restoration plan to the ONMS for approval before committing agency resources to implementing the restoration.



**Figure 4. Post-consultation Steps**

<sup>16</sup> 16 U.S.C. § 1434(d)(4)

## 5.0 RELATIONSHIP TO OTHER REQUIREMENTS

### 5.1 ONMS REGULATIONS AND PERMITS

While the NMSA consultation requirements apply only to Federal agencies, the ONMS regulations apply to individuals, private and public entities, and officers, employees, agents, departments, agencies, and instrumentalities of the Federal government, of any state, tribal or local unit of government, or of any foreign government.<sup>17</sup> Nothing in the language of the NMSA consultation requirements supplants ONMS regulatory requirements or procedures. The NMSA consultation requirements are, therefore, statutory requirements in addition to any requirements or prohibitions found in the ONMS's implementing regulations.

Among other things, ONMS regulations define the boundaries for the sanctuaries, list activities that are prohibited within each sanctuary, and establish permitting procedures for the lawful conduct of certain of these activities. If a Federal action is prohibited by ONMS regulations, the agency or person may not conduct that activity unless a permit is granted by the ONMS. See Figure 5 for a depiction of how the two processes integrate.

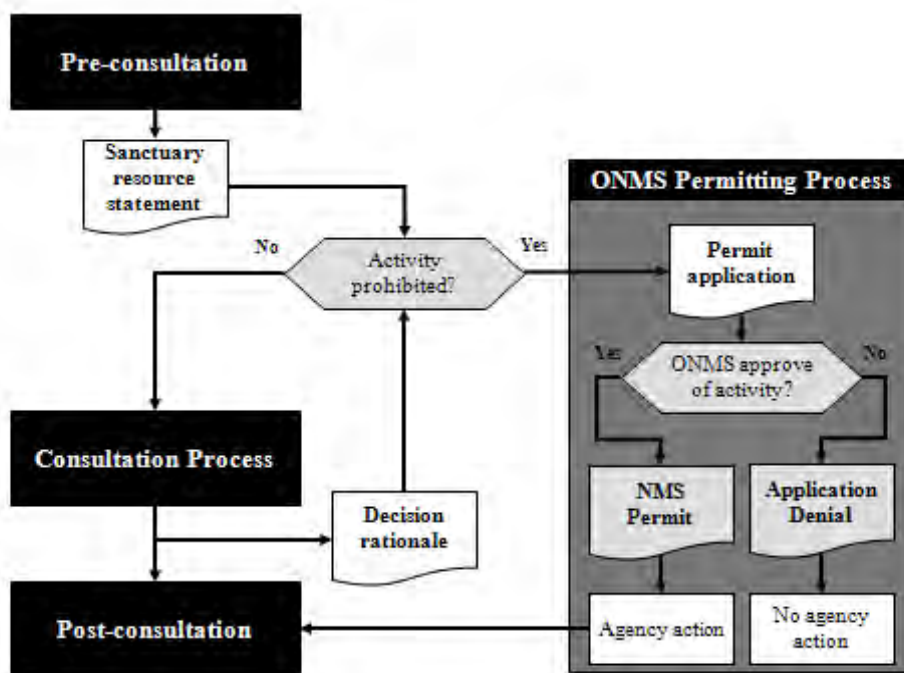


Figure 5. Integration of NMSA Consultation with ONMS Permits

Since ONMS regulations do not prohibit any and all activities that trigger the NMSA consultation requirements, it is likely that many proposed Federal actions will trigger the NMSA consultation requirements without requiring a permit. For example, vessel transits through a

<sup>17</sup> 15 C.F.R. § 922.3

sanctuary are generally not prohibited and therefore do not require a permit. However, if a proposed Federal action in or near a sanctuary would result in an increase in vessel traffic that is likely to injure sanctuary resources, the Federal agency would be required to consult under section 304(d).

If a proposed Federal action requires both NMSA consultation and a sanctuary permit, the ONMS will conduct both processes simultaneously, to the extent practicable. For example, a dredging project conducted by a Federal agency within a national marine sanctuary may require both a sanctuary permit and trigger NMSA consultation. Because the nature of the proposed Federal agency action may change as a result of NMSA consultation and the Secretary’s recommended alternatives, it will often be necessary to complete the NMSA consultation process before ONMS action on a permit application. In some cases, the ONMS’s recommended alternatives may modify the proposed activity such that a permit is not necessary (e.g., conduct of an activity outside the System).

## 5.2 NATIONAL ENVIRONMENTAL POLICY ACT

The NMSA consultation and National Environmental Policy Act (NEPA) processes should run concurrently. The legislative history of the 1992 amendments to the NMSA made it clear that the burden for compliance with NEPA does not shift to the ONMS to prepare a NEPA analysis of its recommended alternatives.<sup>18</sup> Whether an EA/EIS is required or the action is categorically excluded, the Federal action agency is responsible for complying with all NEPA requirements.

Figure 6 illustrates how the NMSA consultation requirements can be integrated with NEPA and other consultation processes described in section 5.3. To the extent practicable, the ONMS will strive to coordinate the NMSA consultation process with any other required consultations triggered by the proposed action.

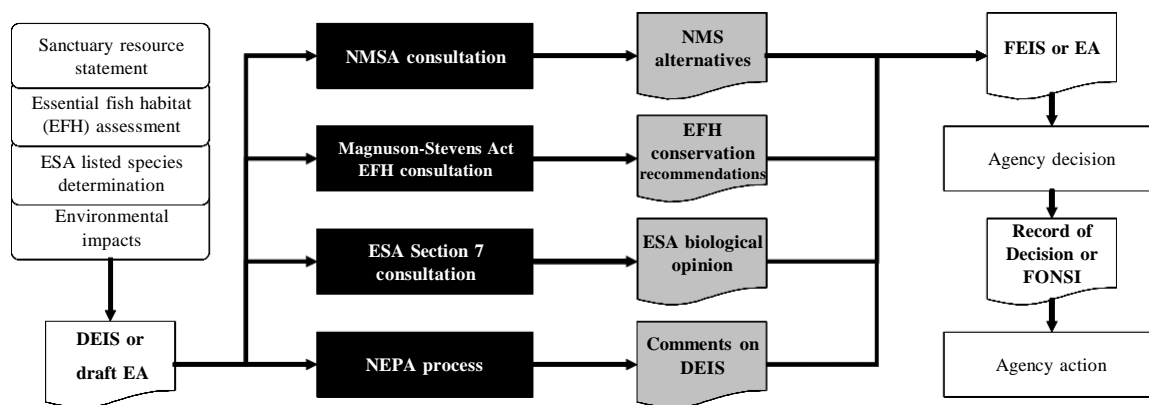


Figure 6. Integration of NMSA Consultations with NEPA

## 5.3 OTHER CONSULTATION REQUIREMENTS

Aside from the NMSA consultation requirements addressed in this document, section 7 of the Endangered Species Act (ESA) and section 305(b)(2) of the Magnuson-Stevens Fishery

<sup>18</sup> House Report 102-565, June 15, 1992



Conservation and Management Act (MSA) each require Federal agencies to consult with NOAA in various circumstances. The ESA requires consultation when proposed Federal actions may affect listed species or critical habitat.<sup>19</sup> The MSA requires consultation when proposed Federal action may adversely affect areas identified and described as essential fish habitat.<sup>20</sup> MSA consultations are conducted by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries). ESA consultations are conducted by either or both NOAA Fisheries and the U.S. Fish and Wildlife Service (USFWS) depending upon the affected species.

To the extent possible, the action agency, the ONMS, and other agencies as appropriate should work to facilitate compliance with all three statutory requirements in a coordinated and efficient manner.

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<sup>19</sup> For more information about NMSA consultations under the ESA, refer to the *Section 7 Handbook*. The document is available at <http://endangered.fws.gov/consultations/s7hndbk/s7hndbk.htm>.

<sup>20</sup> For more information about consultations under the MSA, refer to the *EFH Consultation Guidance* document available at [http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/consult\\_index.htm](http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/consult_index.htm).

## **APPENDIX A. THE NMSA CONSULTATION REQUIREMENT**

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Section 304(d) of the NMSA reads:

- “(d) INTERAGENCY COOPERATION.—
- “(1) REVIEW OF AGENCY ACTIONS.—
- “(A) IN GENERAL.—Federal agency actions internal or external to a national marine sanctuary, including private activities authorized by licenses, leases, or permits, that are likely to destroy, cause the loss of, or injure any sanctuary resource are subject to consultation with the Secretary.
- “(B) AGENCY STATEMENTS REQUIRED.—Subject to any regulations the Secretary may establish each Federal agency proposing an action described in subparagraph (A) shall provide the Secretary with a written statement describing the action and its potential effects on sanctuary resources at the earliest practicable time, but in no case later than 45 days before the final approval of the action unless such Federal agency and the Secretary agree to a different schedule.
- “(2) SECRETARY’S RECOMMENDED ALTERNATIVES.—If the Secretary finds that a Federal agency action is likely to destroy, cause the loss of, or injure a sanctuary resource, the Secretary shall (within 45 days of receipt of complete information on the proposed agency action) recommend reasonable and prudent alternatives, which may include conduct of the action elsewhere, which can be taken by the Federal agency in implementing the agency action that will protect sanctuary resources.
- “(3) RESPONSE TO RECOMMENDATIONS.—The agency head who receives the Secretary’s recommended alternatives under paragraph (2) shall promptly consult with the Secretary on the alternatives. If the agency head decides not to follow the alternatives, the agency head shall provide the Secretary with a written statement explaining the reasons for that decision.
- “(4) FAILURE TO FOLLOW ALTERNATIVE.—If the head of a Federal agency takes an action other than an alternative recommended by the Secretary and such action results in the destruction of, loss of, or injury to a sanctuary resource, the head of the agency shall promptly prevent and mitigate further damage and restore or replace the sanctuary resource in a manner approved by the Secretary.”

Section 2202(e) of Public Law 102-587 states, as it applies to SBNMS:<sup>21</sup>

"CONSULTATION.—In accordance with the procedures established in 304(d) of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended by this title, the appropriate Federal agencies shall consult with the Secretary on proposed agency actions in the vicinity of the Sanctuary that may affect sanctuary resources."

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<sup>21</sup> As amended by section 9(g) of Public Law 104-283

## **APPENDIX B. CONTACT INFORMATION**

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For more information about the NMSA consultation requirements and process at a specific site, please contact the superintendent of the appropriate sanctuary from the list below.

If the action affects more than one sanctuary, or for general information about consultations, contact the ONMS national permit coordinator in Silver Spring, Maryland.

### **Office of National Marine Sanctuaries**

National Permit Coordinator  
1305 East-West Highway (N/ORM6)  
Silver Spring, MD 20910-3282  
301-713-3125  
Fax: 301-713-0404  
[nmspermits@noaa.gov](mailto:nmspermits@noaa.gov)

### **Florida Keys National Marine Sanctuary**

Superintendent  
33 East Quay Road  
Key West, FL 33040  
305-809-4700  
Fax: 305-293-5011  
[floridakeys@noaa.gov](mailto:floridakeys@noaa.gov)

### **Channel Islands National Marine Sanctuary**

Superintendent  
113 Harbor Way  
Santa Barbara, California 93109  
805-966-7107  
Fax: 805-568-1582  
[channelislands@noaa.gov](mailto:channelislands@noaa.gov)

### **Flower Garden Banks National Marine Sanctuary**

Superintendent  
4700 Avenue U, Building 216  
Galveston, TX 77551  
409-621-5151  
Fax: 409-621-1316  
[flowergarden@noaa.gov](mailto:flowergarden@noaa.gov)

### **Cordell Bank National Marine Sanctuary**

Superintendent  
P.O. Box 159  
Olema, CA 94950  
415-663-0314  
Fax: 415-663-0315  
[cordellbank@noaa.gov](mailto:cordellbank@noaa.gov)

### **Gray's Reef National Marine Sanctuary**

Superintendent  
10 Ocean Science Circle  
Savannah, Georgia 31411  
912-598-2345  
Fax: 912-598-2367  
[graysreef@noaa.gov](mailto:graysreef@noaa.gov)

### **Fagatele Bay National Marine Sanctuary**

Superintendent  
P.O. Box 4318  
Pago Pago, American Samoa 96799  
684-633-7354  
Fax: 684-633-7355  
[fagatelebay@noaa.gov](mailto:fagatelebay@noaa.gov)

### **Gulf of the Farallones National Marine Sanctuary**

Superintendent  
Fort Mason, Building 201  
San Francisco, CA 94123  
415-561-6622  
Fax: 415-561-6616  
[farallones@noaa.gov](mailto:farallones@noaa.gov)

**Hawai'ian Islands Humpback Whale  
National Marine Sanctuary**

Superintendent  
6600 Kalaniana'ole Highway, Suite 301  
Honolulu, Hawai'i 96825  
808-397-2651  
Fax: (808) 397-2650  
[hihumpbackwhale@noaa.gov](mailto:hihumpbackwhale@noaa.gov)

**Monitor National Marine Sanctuary**

Superintendent  
c/o The Mariner's Museum  
100 Museum Drive  
Newport News, VA 23606  
757-599-3122  
Fax: 757-591-7353  
[monitor@noaa.gov](mailto:monitor@noaa.gov)

**Monterey Bay National Marine  
Sanctuary**

Superintendent  
299 Foam Street  
Monterey, CA 93940  
831-647-4201  
Fax: 831-647-4250  
[montereybay@noaa.gov](mailto:montereybay@noaa.gov)

**Olympic Coast National Marine  
Sanctuary**

Superintendent  
115 East Railroad Ave, Suite 301  
Port Angeles, WA 98362  
360-457-6622  
Fax: 360-457-8496  
[olympiccoast@noaa.gov](mailto:olympiccoast@noaa.gov)

**Stellwagen Bank National Marine  
Sanctuary**

Superintendent  
175 Edward Foster Road  
Scituate, MA 02066  
781-545-8026  
Fax: 781-545-8036  
[stellwagen@noaa.gov](mailto:stellwagen@noaa.gov)

**Thunder Bay National Marine Sanctuary  
and Underwater Preserve**

Superintendent  
500 West Fletcher Street  
Alpena, Michigan 49707  
989-356-8805  
Fax: 989-354-0144  
[thunderbay@noaa.gov](mailto:thunderbay@noaa.gov)



**Final Recommendations on Offshore Development  
Hawaiian Islands Humpback Whale National Marine  
Sanctuary Advisory Council  
January 18, 2012**

## Appendix VIII – List of Members and Affiliations

*The council is an advisory body to the sanctuary management. The opinions and findings of this document do not necessarily reflect the position of any individuals or agencies including the sanctuary, the National Oceanic and Atmospheric Administration, or the State of Hawai'i.*

| NAME               | ISLAND     | AFFILIATION                               | AFFILIATION                          |
|--------------------|------------|---|--------------------------------------|
| ODWG MEMBERS       |            |   |                                      |
| Mike Stanton       | Big Island | Atlantis Submarines                       | ex-SAC member                        |
| Ron Baird          | Big Island | Consultant                                | Energy                               |
| Neil Sims          | Big Island | Kampachi Farms                            | Aquaculture                          |
| Phil Fernandez     | Big Island | SAC - Fishing Seat & ODWG Chair           | Fisherman                            |
| Glenn Sato         | Kauai      | County of Kauai                           | County Government                    |
| Makaala Kaaumoana  | Kauai      | SAC - Conservation Seat                   |                                      |
| Walter Ritte       | Molokai    | SAC - Molokai Seat                        |                                      |
| Peggy Bond         | Molokai    | Consultant                                | Energy                               |
| Jim Coon           | Maui       | SAC - Whale Watching Seat                 | Whale Watching Boat Operator         |
| Robin Kaye         | Lana'i     | SAC - Alternate Lana'i Seat               |                                      |
| Sol Kaho'ohalahala | Lana'i     | SAC - Lana'i Seat                         |                                      |
| Allen Kam          | Oahu       | DBEDT                                     | State Government                     |
| Malama Minn        | Oahu       | DBEDT                                     | SAC - Alternate Native Hawaiian Seat |
| Marnie Mayer       | Oahu       | SAC DBEDT - Office of Planning            | State Government                     |
| Sam Lemmo          | Oahu       | DLNR - Conservation and Coastal Lands     | State Government                     |
| Thorne Abbott      | Oahu       | SAC - Alternate Conservation              |                                      |
| Kehau Watson       | Oahu       | SAC - Native Hawaiian Seat                | Attorney                             |
| Eric Kingma        | Oahu       | SAC - WESPAC                              | Wespac                               |
| Benny Ron          | Oahu       | SAC - Business/Commerce & ODWG Vice Chair | UH Aquaculture                       |
| Susanne Shriner    | Big Island | Food & Water Watch - Hawaii               |                                      |

Note: Under Affiliation, the notation "SAC" means that the individual is a member of the HIHWNMS Advisory Council.

**HIHWNMS Staff:**

|                  |            |  |                    |
|------------------|------------|--|--------------------|
| Justin Viezbicke | Big Island | Sanctuary Hawaii Island Coordinator    | ODWG Staff Lead    |
| Joe Paulin       | Oahu       | Sanctuary Advisory Council Coordinator | ODWG Staff Support |
| Jean Souza       | Kauai      | Sanctuary Kauai Island Coordinator     |                    |
| Patty Miller     | Maui       | Sanctuary Maui Island Coordinator      |                    |
| Malia Chow       | Oahu       | Sanctuary Superintendent               |                    |
| Paul Wong        | Oahu       | Sanctuary Operations Coordinator       |                    |