



Proposed Chumash Heritage National Marine Sanctuary

Draft Management Plan



U.S. Department of Commerce
Gina Raimondo, Secretary

National Oceanic and Atmospheric Administration
Richard W. Spinrad, Ph.D., Under Secretary of Commerce for Oceans and Atmosphere and
NOAA Administrator

National Ocean Service
Nicole LeBoeuf, Assistant Administrator

Office of National Marine Sanctuaries
John Armor, Director



**NATIONAL
MARINE
SANCTUARIES**

Cover photo: The northern coastline from Point Conception, photographed at Point Conception Lighthouse. In the Chumash language, Point Conception is known as Humqag. Photo: Robert Schwemmer/NOAA



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Glossary of Acronyms

BE	Blue Economy, used in numbering strategies and activities
BOEM	Bureau of Ocean Energy Management
CalCOFI	California Cooperative Oceanic Fisheries Investigations
CC	Climate Change, used in numbering strategies and activities
CHNMS	Chumash Heritage National Marine Sanctuary
CINMS	Channel Islands National Marine Sanctuary
EO	Education and Outreach, used in numbering strategies and activities
ICAP	Indigenous Cultures Advisory Panel
ICH	Indigenous Cultural Heritage, used in numbering strategies and activities
IPC	Intergovernmental Policy Council
JPA	Joint Project Authority/Agreement
MBNMS	Monterey Bay National Marine Sanctuary
MH	Maritime Heritage, used in numbering strategies and activities
MOA	Memorandum of Agreement
NGO	Nongovernmental organization
NHPA	National Historic Preservation
NMSA	National Marine Sanctuaries Act
NOAA	National Oceanic and Atmospheric Administration
OA	Operations and Administration, used in numbering strategies and activities
OCNMS	Olympic Coast National Marine Sanctuary
OE	Offshore Energy, used in numbering strategies and activities
ONMS	Office of National Marine Sanctuaries
RAP	Research Activities Panel
RM	Research and Monitoring, used in numbering strategies and activities
RP	Resource Protection, used in numbering strategies and activities
SAC	Sanctuary Advisory Council
SIMoN	Sanctuary Integrated Monitoring Network
SLOCAL	San Luis Obispo, California
STAR	Sustainable Tourism and Recreation
WD	Wildlife Disturbance, used in numbering strategies and activities
WQ	Water Quality, used in numbering strategies and activities

Executive Summary

Assuming the proposed Chumash Heritage National Marine Sanctuary (CHNMS) joins the system of national marine sanctuaries administered by the National Oceanic and Atmospheric Administration (NOAA), an agency within the United States Department of Commerce, it will require a management plan. The draft plan provided herein focuses on how best to understand and protect sanctuary resources by addressing critical and emerging threats, research and monitoring needs, public engagement, and effectively implementing and sustaining core programs.

In preparing this plan, Office of National Marine Sanctuaries (ONMS) spent considerable time reviewing the nomination, public comments, and experience in other sanctuaries in California, as well as looking closely at the condition of and threats to sanctuary resources and learning from tribes and Indigenous community members.

The management plan includes 11 action plans covering issue-based and program-based themes that are intended to guide ONMS over the coming five to 10 years. Each action plan contains strategies with multiple activities to achieve goals.

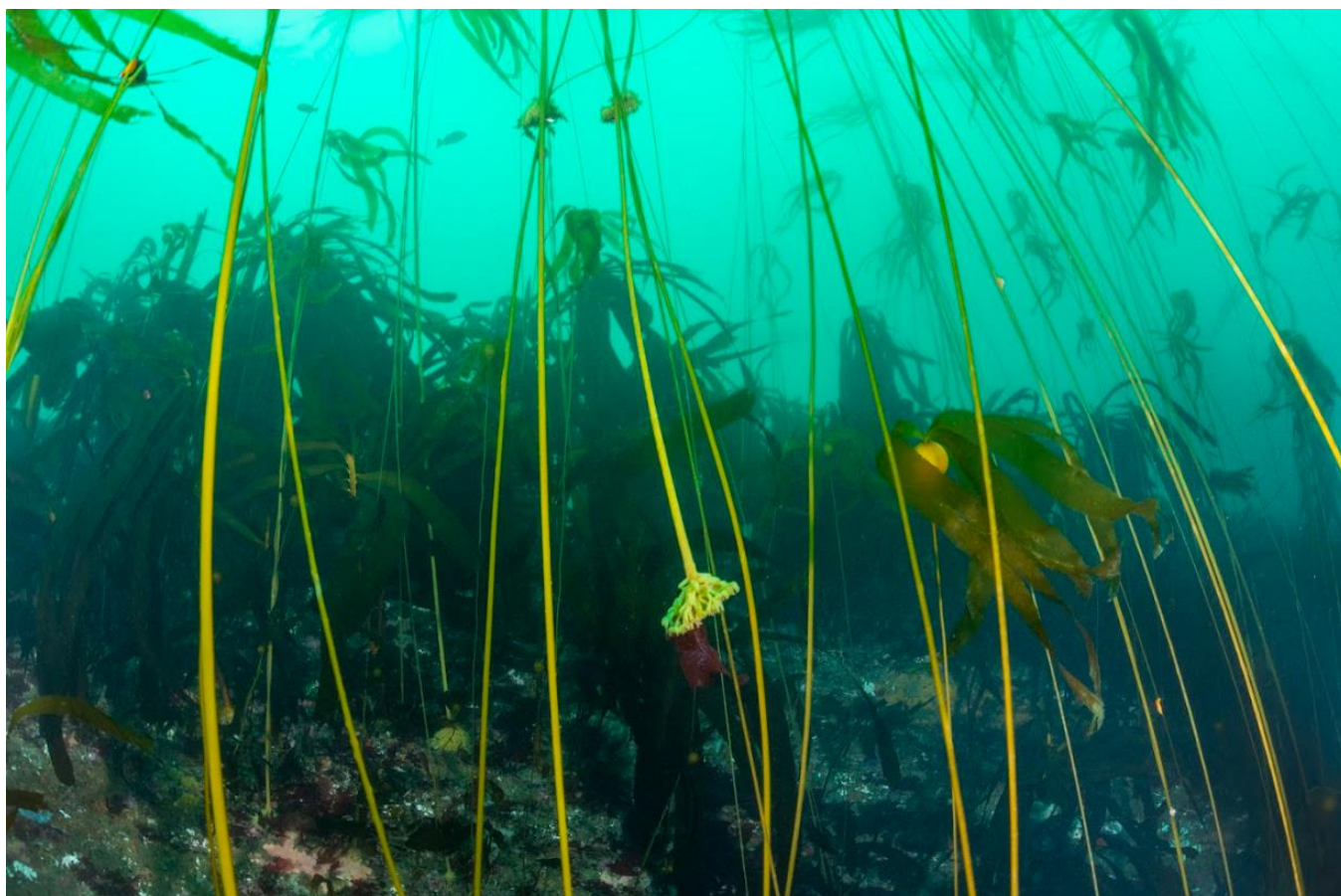
The proposed CHNMS would encompass an area of 7,573 square miles, along 152 miles of mainland coast just south of Monterey Bay National Marine Sanctuary. The boundary would start at the seaside village of Cambria, California and would run south along the coast toward Gaviota Creek. Offshore areas would include the Santa Lucia Bank, Rodriguez Seamount, Arguello Canyon, and other offshore features and resources to approximately 68 miles from the shoreline.

The area has special, nationally significant ecological qualities, shaped by important offshore geologic features. Seasonal upwelling along the California Current drives the area's high biological productivity, supporting dense aggregations of marine life. The presence of a biogeographic transition zone, where temperate waters from the north meet warmer southern currents, adds to the area's significance in terms of biodiversity and abundance of birds, marine mammals, sea turtles, fishes, invertebrates, and marine plants. The coast and sanctuary waters have been, and remain, sacred to Indigenous peoples.

The area is important for a variety of uses, such as recreation, tourism, commercial fishing, research, and education. The maritime heritage of the area includes historically significant shipwrecks and artifacts.

The opportunity to raise public awareness of Indigenous cultures, incorporate traditional knowledge into sanctuary management, and protect resources essential to these cultures, was a core motivation in the nomination and ultimate designation of the sanctuary.

Section 1: Introduction



Spooner Reef. Photo: Robert Schwemmer/NOAA

Background

Note: This draft management plan has been developed for the largest action alternative, the Initial Boundary Alternative. If a different action alternative or any sub-alternative(s), is adopted for the final sanctuary boundary, NOAA may remove/add portions of, or even the totality of, an activity articulated in an action plan below.¹ The final management plan may also be edited to adjust any partnering agencies or groups depending on the final boundary chosen. Other changes to the final management plan may be needed based on public comment on the draft management plan as well.

The area proposed for national marine sanctuary designation encompasses an area of 7,573 square miles, along 152 miles of California coast. Describing the boundary in a clockwise fashion, the proposed area starts from the southern terminal boundary of Monterey Bay National Marine Sanctuary (MBNMS) in Cambria, then runs south along the San Luis Obispo

¹ See Section 5.4.9 in the draft EIS for an explanation of what action plans would change based on the selection of the Agency-Preferred Alternative.

County coast and a portion of the coast in northern and western Santa Barbara County to approximately Gaviota Creek. The offshore areas would come to the western end of Channel Islands National Marine Sanctuary (CINMS). The boundary would then run north back to the southern end of MBNMS, to include the Santa Lucia Bank, its escarpment, Rodriguez Seamount, Arguello Canyon, and other offshore features and resources to 68 miles offshore.

The area has special, nationally significant ecological qualities, shaped by important offshore geologic features (e.g., Rodriguez Seamount, Santa Lucia Bank, and Arguello Canyon). Seasonal upwelling along the California Current drives the area's high biological productivity, supporting dense aggregations of marine life within and beyond the sanctuary. The presence of a biogeographic transition zone, where temperate waters from the north meet warmer southern currents, adds to the area's national and international significance in terms of biodiversity and the abundance of birds, marine mammals, sea turtles, fishes, invertebrates, and marine plants. Ocean productivity in the proposed sanctuary remains relatively high, despite recent recurrent marine heat waves.

NOAA has estimated that approximately 200 ships and aircraft have been lost within the sanctuary area. Major shipwrecks located within the sanctuary include the U.S. Quartermaster steam auxiliary bark *Edith* lost at San Antonio River, the USCG Cutter *McCulloch* which lies offshore from Point Conception (NOAA, 2020), and the Gold Rush era steamship *Yankee Blade* lost off Point Arguello. In 2016, NOAA successfully nominated the shipwreck SS *Montebello*, off Cambria, to the National Register of Historic Places, commemorating the 75th anniversary of the loss.

There are several cities along this stretch of coast in San Luis Obispo County beginning with the unincorporated township of Cayucos (pop. 2,505) in the north, then moving south are Morro Bay (pop. 10,578), Pismo Beach (pop. 8,180), and Grover Beach (pop. 13,535). At the southern end of the county coastline is the township of Oceano (pop. 7,600). In Santa Barbara County, the only city that lies relatively close to the sanctuary coastline is Guadalupe (pop. 7,654). Santa Maria, also in northern Santa Barbara County, is the largest city near the sanctuary with a population of approximately 106,000 located about 12 miles inland from the coast.

Most of the coast is rural and sparsely populated, interspersed with bluffs, long stretches of sandy beaches, sand dunes, and mountainous regions. The coast is home to a large military installation, a nuclear power plant, a National Wildlife Refuge, the Morro Bay National Estuary Program, and several state parks. The marine environment provides a special sense of place to coastal communities. Visitors are attracted by its significant historic, archaeological, cultural, and aesthetic resources as well as its beauty and recreational opportunities.

The Department of Defense operates the Point Mugu Sea Range off the coast of central and southern California, overlapping a large area of the proposed sanctuary boundaries. The Department of Defense also operates Vandenberg Space Force Base with commercial, civil, and military launches common from the base. Military readiness training and testing, warfare practice exercises, weapons testing including ballistic missile tests, and other operations occur within the overlapping area.

The ecosystem of the proposed sanctuary faces many challenges. Climate change threats include sea level rise, warming ocean temperatures, and increased ocean acidification.

- California is expected to experience one to six feet of sea level rise by 2100, which will greatly exacerbate coastal flooding, shoreline erosion, inundation of wetlands and estuaries, and saltwater intrusion into aquifers. Cultural and historic resources as well as existing “built” infrastructure along the coast face damaging consequences. Also at risk are archaeological sites important to tribes and Indigenous communities.
- California oceans are acidifying at twice the rate of the global ocean average. Acidic water makes it difficult for foraminifera (single-cell plankton) to flourish and for shellfish to build a thick calcium carbonate shell.
- As part of combating climate change, the region is experiencing increased efforts to advance offshore wind energy development. The area between CINMS and MBNMS is under particular pressure.
- Existing impactful activities include untreated agricultural irrigation from the Central Valley, sewage outfalls and wastewater treatment effluent, heated water discharge from the Diablo Canyon nuclear power plant, seismic surveys, whale-ship strikes, and the continued operation and eventual decommissioning of oil and gas production facilities. Lastly, pressures associated with human population growth pose additional direct and indirect threats.

Indigenous peoples, the Chumash in particular, view this coastal ecosystem as essential to their heritage. The Chumash are known for their ocean-going bands among the First Peoples of the Pacific Coast. They lived in well-organized villages comprised of domed grass mat dwellings. Chumash housing was round and made by setting willow poles in the ground in a circle, bent in at the top, with smaller saplings tied crosswise. Their diet was rich in acorn meal, fish, shellfish, elderberries, bulbs, roots, and mustard greens. Abalone shells were used to make everything from decorative inlay to jewelry and fishing hooks. Pelican bones were made into flutes, and seal pelts were made into skirts and capes. Musical shakers were made from kelp bulbs. Asphaltum, a gooey tar that washed up on the shore, was used to waterproof and seal baskets, canoes, and bowls made from abalone shells. Chumash canoes, or “tomols,” were critical for thriving villages along the Gaviota Coast. Travel expanded access to natural resources and distant areas like the Channel Islands.

The opportunity to incorporate traditional knowledge and facilitate tribal collaborative management are core parts of the proposed sanctuary.

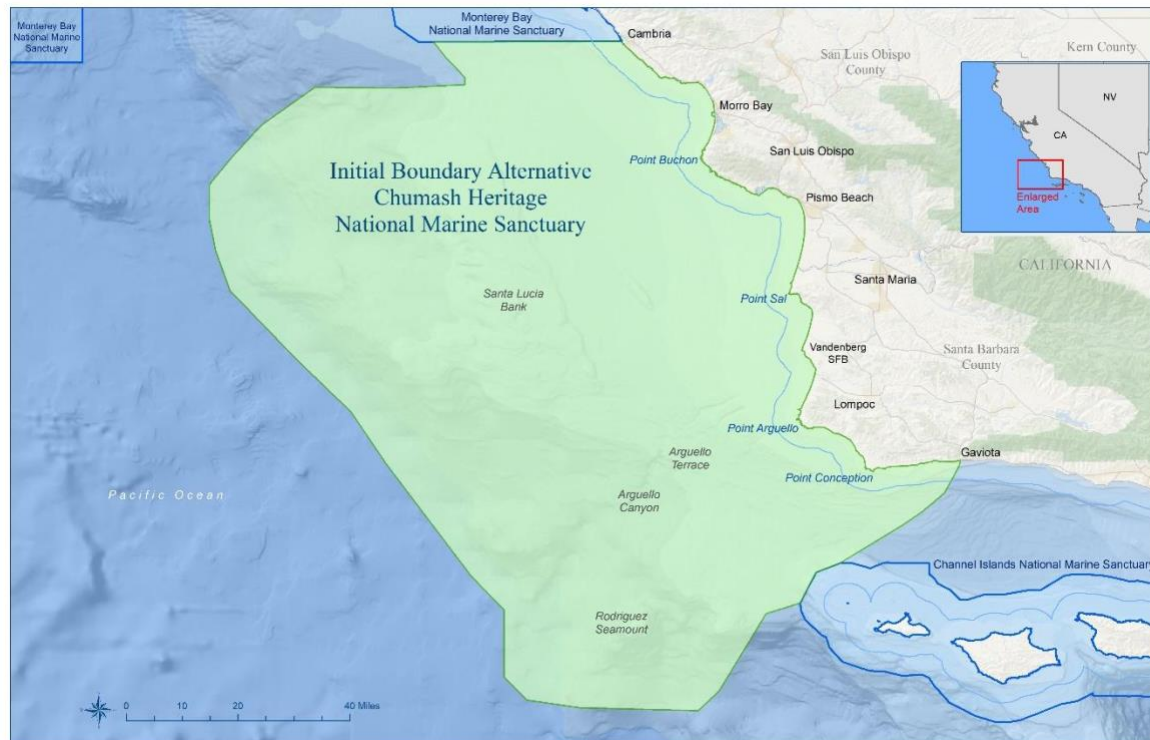


Figure 1. Initial Boundary Alternative, CHNMS Proposal. Source: NOAA

The National Marine Sanctuaries Act (NMSA; 16 U.S.C. § 1431 *et seq.*) authorizes the Secretary of Commerce to designate and manage areas of the marine and Great Lakes environments in a way that limits the impact of those human activities that are not compatible with the primary objective of sanctuary resource protection. A designation as a sanctuary is based on attributes of special national significance, including conservation, recreational, ecological, historical, scientific, cultural, archaeological, educational, or aesthetic qualities.

Day-to-day management of national marine sanctuaries has been delegated by the Secretary of Commerce to NOAA's Office of National Marine Sanctuaries (ONMS), which serves as the trustee for 15 national marine sanctuaries and two marine national monuments, areas encompassing more than 620,000 square miles of ocean and Great Lakes waters from the Hawaiian Islands to the Florida Keys, and from Lake Huron to American Samoa. National marine sanctuaries protect our nation's most vital coastal and marine natural and cultural resources, and through active research, management, and public engagement, sustain healthy environments that are the foundation for thriving communities and stable economies.

Purpose of the Management Plan

Management plans reflect the best available science and input from the public to identify immediate, mid-range, and long-term challenges and opportunities and to outline management priorities, programs, and potential partners. A management plan describes programs geared toward resource protection, research, education, destination stewardship, and outreach that guide sanctuary activities and operations. A management plan also specifies how a sanctuary should best protect its resources. The draft management plan for Chumash Heritage National Marine Sanctuary outlines the goals, strategies, and range of activities that would be necessary

to conserve nationally significant biological, cultural, recreational, and historical sanctuary resources, and it explores innovative management practices to respond to emerging issues in the proposed sanctuary.

The first management plan for a new national marine sanctuary typically consists of broad goals and strategies, scaled appropriately for a new site with many strategies focused on developing and initiating programs. While this draft management plan includes more detail than what has been typically included in many initial management plans for other national marine sanctuaries, NOAA recognizes that it takes several years for new sanctuaries to take root in communities, receive resources for management activities, explore opportunities for partnerships, and determine more specific priorities. The management plan is intended to adapt over time as the sanctuary management implements elements of the plan to respond to current and emerging issues. Management plans are informed through the public comment process based on input from the general public, local governments, state and federal agencies, user groups, and other stakeholders, including tribes and Indigenous communities who have interest in the management and operation of the proposed sanctuary.

The Chumash Heritage National Marine Sanctuary draft management plan consists of 11 action plans:

1. Indigenous Cultural Heritage
2. Climate Change
3. Maritime Heritage
4. Offshore Energy
5. Water Quality
6. Blue Economy
7. Wildlife Disturbance
8. Education and Outreach
9. Resource Protection
10. Research and Monitoring
11. Operations and Administration

Developing and Implementing the Management Plan

The action plans were informed by the general public through scoping. To gather additional input on select topics, NOAA hosted workshops to inform development of the following action plans: climate change, Indigenous cultural heritage, water quality, wildlife disturbance, education and outreach, and research and monitoring. Each action plan provides specific strategies and activities to address key issues and sustain core sanctuary programs.

The proposed sanctuary's large coastal and oceanic area combined with the broad scope of issues and activities to be addressed necessitate the involvement of organizations beyond ONMS. To develop this management plan, ONMS has strengthened ongoing partnerships and developed new collaborations with: tribes and Indigenous communities, federal, state, and local agencies; academic institutions; organizations; and businesses.

Framework for Indigenous Collaborative Management

A key priority for the proposed Chumash Heritage National Marine Sanctuary is to deliberately provide mechanisms for tribes and Indigenous communities to participate. It is also NOAA's intent to highlight and honor the Indigenous cultural heritage of local peoples, the first stewards of these lands and waters. This approach is consistent with the Joint Secretarial Order on *Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters*, signed by the Secretary of Commerce in 2022.² NOAA, through outreach and coordination with interested tribes and Indigenous communities, will:

- Respect and honor the intent of the nomination for Indigenous community involvement.
- Adapt and improve collaboration over time through substantive, ongoing involvement.
- Build on traditional ecological knowledge to help achieve shared marine conservation goals.
- Provide for substantive involvement of all interested local Indigenous community groups (federally and non-federally recognized local tribes, and tribal nongovernmental organizations (NGOs)) in the ongoing management of the sanctuary.
- Strive to inform and inspire others by serving as an example of effective tribal collaboration in a national marine sanctuary.

An Indigenous collaborative approach to managing the sanctuary would be sovereignty-affirming for tribal governments and recognize and respect the independent authority of governing tribes. By collaborating with interested tribes and Indigenous communities, NOAA would invite meaningful input on sanctuary program development and management decision making, seeking to find consensus and protect cultural interests.

An Indigenous collaborative approach to sanctuary management would include:

- Bringing tribes and Indigenous communities into planning processes early.
- Providing suitable opportunities for tribes and Indigenous communities to join in decision making processes.
- Greater recognition of the need for tribal-federal coordination.
- Bringing Indigenous forms of knowledge and practice to solve resource management problems.
- Pooling of resources (e.g., funding, labor, knowledge) to address needs that parties could not address adequately on their own.
- Creating opportunities for mutual learning and building respect for different ways of knowing (Donoghue et al., 2010).³

As described in the Indigenous Cultural Heritage Action Plan, NOAA invites tribes and Indigenous communities to collaborate on a range of proposed activities, including:

² <https://www.doi.gov/sites/doi.gov/files/elips/documents/so-3403-joint-secretarial-order-on-fulfilling-the-trust-responsibility-to-indian-tribes-in-the-stewardship-of-federal-lands-and-waters.pdf>

³ Donoghue, Ellen M.; Thompson, Sara A.; and Bliss, John C. "Tribal-Federal Collaboration in Resource Management." *Journal of Ecological Anthropology* 14, no. 1 (2010): 22-38. Available at: <https://scholarcommons.usf.edu/jea/vol14/iss1/2>

- Working together to adopt an organizational framework for tribal and Indigenous participation and collaborative management.
- Identifying cultural resources within the sanctuary and integrating traditional ecological knowledge.
- Providing protection to cultural resources within the sanctuary.
- Providing cultural outreach and educational opportunities to serve tribal and Indigenous communities and the public.
- Facilitating and supporting tribal and Indigenous community cultural access, connection to, and activities within the sanctuary.
- Providing ongoing cultural training to sanctuary staff, volunteers, and advisory council members.

Following the completion of the proposed designation, additional details would be documented to define roles and responsibilities related to the participation of tribes and tribal group representatives. This would include development of a memorandum of agreement and a charter for the Intergovernmental Policy Council, as well as a charter for the Sanctuary Advisory Council. These groups are described further below.

NOAA has developed a collaborative management framework to guide and facilitate tribal participation and collaborative management of the proposed sanctuary. This framework is meant to provide a starting point, realizing that through mutual learning and experience, adaptations and improvements would be made over time as the proposed sanctuary matures and builds the relationships necessary for sustained success.

Framework for Collaboration

For thousands of years, the coast and waters off central California have been home to Indigenous peoples and remain of sacred importance to this day. NOAA recognizes the unique and special focus that a national marine sanctuary can bring to the cultural heritage of this coastal area. One of the principal objectives of designating this new sanctuary is to bring traditional knowledge together with Western approaches and science to guide sanctuary management.

This section describes initial concepts for collaborative management arrangements and approaches that would support meaningful engagement with tribes and Indigenous communities surrounding the proposed sanctuary. While a new collaborative management structure would likely take time to evolve and formally solidify, NOAA is committed to using a variety of approaches to work with these interests in support of mutual goals and improved management of a new sanctuary.

ONMS seeks to offer and support a variety of ways interested tribes and Indigenous communities could get involved with the sanctuary after the completion of the proposed designation. These opportunities are shown and described below as a series of organizational groups that are envisioned to interconnect and work in concert to maximize Indigenous community involvement in support of the mission of the proposed sanctuary (Figure 2). The elements described include: (1) sanctuary management by NOAA pursuant to its federal agency responsibilities; (2) required government-to-government tribal consultations; (3) an

Intergovernmental Policy Council (IPC); (4) the Sanctuary Advisory Council (SAC); (5) an Indigenous Cultures Advisory Panel (ICAP); and (6) a nonprofit foundation (or foundations).

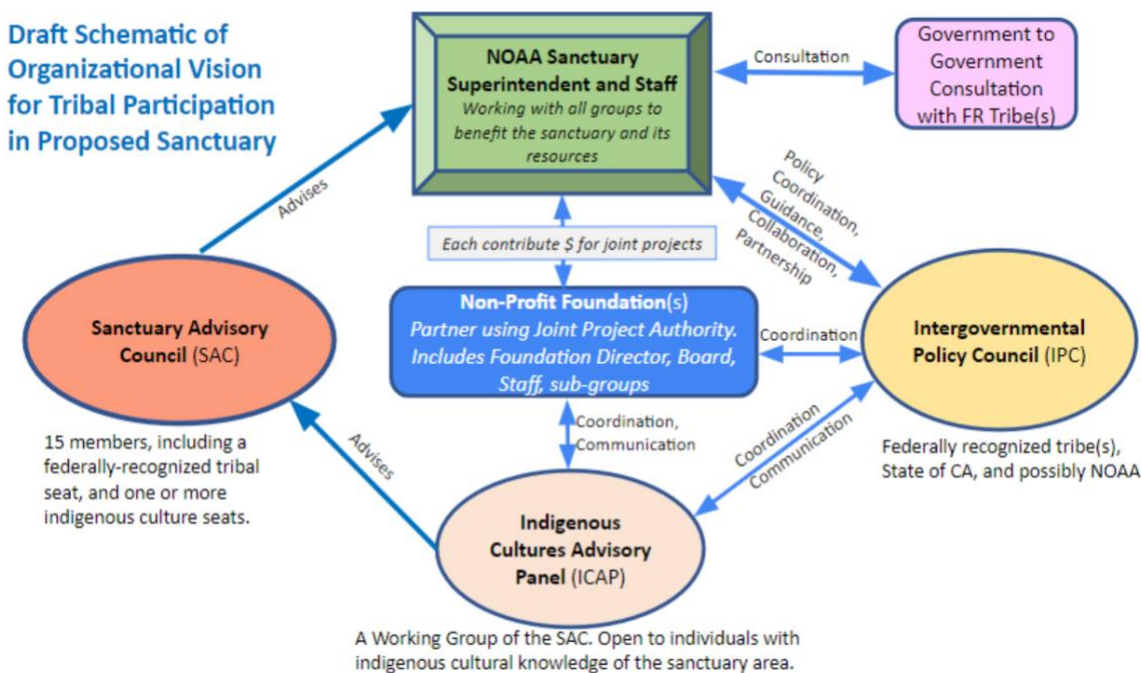


Figure 2. Diagram of Key Organizational Components to Support Tribal Collaborative Management for the Proposed Sanctuary. Source: NOAA
Within Figure 2, FR = Federally Recognized.

NOAA's Sanctuary Management Role and Responsibilities

The responsibility and legal authority to designate a national marine sanctuary, including its boundaries and federal regulations, rests with the federal government per the NMSA. Management authority and operational responsibilities, which are delegated to NOAA, include, but are not limited to:

- Hiring of federal staff and associated personnel management.
- Enforcement of sanctuary regulations.
- Management plan issuance and revision (with tribal and Indigenous community and broader public input).
- Issuance and oversight of sanctuary permits.
- Government-to-government consultation with federally recognized tribes consistent with Executive Order 13175.
- Periodic federal regulatory review and rulemaking for the sanctuary under the NMSA and other applicable laws.
- Management of the sanctuary's congressionally appropriated budget.
- Procurements made with federal funds.
- Environmental compliance responsibilities that rest with NOAA/ONMS related to sanctuary actions being considered.

- Adherence to National Historic Preservation Act (especially sections 106 and 110).
- Government-to-government consultation with federally recognized tribes.
- Maintenance and operation of federally owned or funded office facilities, associated information technology (IT) functions, and necessary security requirements.
- Research vessel acquisition, ownership, and responsibility for operation and maintenance, including compliance with certifications such as scuba diving.
- Establishment (under NMSA authority) of a Sanctuary Advisory Council, with seat structures, charter details, and operations to be overseen by ONMS.

Although NOAA has several fundamental responsibilities for establishing and managing the sanctuary, the sanctuary's overarching vision, and many of its programs and projects are of joint interest to ONMS and tribes and Indigenous communities. The organizational structures described below suggest a variety of ways that collaborative management could occur. NOAA anticipates that many sanctuary activities would remain solely implemented by ONMS.

Sanctuary Advisory Council

Sanctuary Advisory Councils⁴ are established by ONMS under the authority of section 315 of the NMSA (16 U.S.C. 1445a) to “advise and make recommendations to (NOAA) regarding the designation and management of national marine sanctuaries.” Each Sanctuary Advisory Council (SAC) has 15 voting seats, and a SAC, with the concurrence of the sanctuary superintendent, may create subcommittees and/or working groups that report to the full SAC on specific issues. Across the entire National Marine Sanctuary System, advisory councils have been critical for ensuring meaningful community involvement and have proven to be strong guides of sanctuary management. In fact, most significant sanctuary conservation actions developed from close involvement with, and the leadership of, advisory councils.

The proposed sanctuary's advisory council would provide one of several opportunities for tribal and Indigenous community members to become involved with the sanctuary. Among the council's 15 voting seats (per the NMSA), ONMS envisions its SAC having one or more voting seats for federally recognized tribes, as well as one to three voting seats to represent the knowledge, history, and culture of the Indigenous community. Each seat includes a primary member and an alternate member (two people per seat). Individuals with Chumash and Salinan cultural knowledge could seek to participate through one of these seats. Potentially, the SAC may organize these seats geographically (e.g., northern and southern sanctuary territory), as appropriate based on tribal and Indigenous community input. Beyond the 15 voting seats, additional non-voting seats would likely be added to allow additional government agencies to participate.

Intergovernmental Policy Council

Background. Another structural element ONMS is proposing is an Intergovernmental Policy Council (IPC), modeled after the IPC at Olympic Coast National Marine Sanctuary (OCNMS)⁵ in Washington State. The purpose of the Olympic Coast IPC is to provide: “*an effective and efficient forum for communication and exchange of information and policy recommendations*”

⁴ <https://sanctuaries.noaa.gov/management/ac/welcome.html>

⁵ <https://olympiccoast.noaa.gov/management/intergovernmentalpolicy.html>

regarding the management of the marine resources and activities within the boundaries of the OCNMS. Its role is to bring together state, federal and tribal governments for timely policy discussions, planning management initiatives, and to provide management direction to the OCNMS” (OCNMS IPC MOA, 2017, p. 2, Sec I.B.).⁶

Participation. For the proposed sanctuary, ONMS is interested in having an IPC-like body engaged in collaborative management. Participants would be governmental. Specific participants would include (at least initially):

- Federally recognized tribe(s) in the proposed sanctuary.
- State of California (led by an agency invested in tribal management and conservation, likely the California Natural Resources Agency or one of its departments).
- NOAA (if NOAA is involved, NOAA would be non-voting participant).

Currently, federally recognized tribal status in the area adjacent to the proposed sanctuary is limited to the Santa Ynez Band of Chumash Indians. That said, IPC participants could expand over time if additional tribes receive federal-recognition status.

Role. The IPC functions as a collaborative management entity for federally recognized tribes and the State of California, allowing direct input to NOAA as it administers the new sanctuary. The IPC could focus on cultural issues, opportunities, and projects that tribes and Indigenous communities could engage in to support sanctuary goals, as well as sanctuary actions that could support tribal community priorities. This could involve developing project proposals as well as providing management recommendations and guidance for the sanctuary.

A charter document would be created for the IPC to establish its structure, role, approach to meetings, seats, and additional details, and a memorandum of agreement (MOA) between the IPC and NOAA would further formalize the relationship. It is not envisioned that participation in the IPC would be administratively burdensome. Looking to the Olympic Coast IPC’s charter (Olympic Coast IPC Charter, 2007, Section II)⁷ and MOA with ONMS (2013 MOA),⁸ the following additional roles could be considered for the IPC:

- Engage with ONMS in identifying and evaluating emergent or critical issues involving use of the sanctuary and activities within it, or sanctuary resources and the impact of sanctuary management decisions. This may include advising ONMS on the development of annual budget and programmatic priorities, research and education objectives, and resource management initiatives.
- Coordinate and collaborate resource management efforts in the sanctuary among participating agencies and tribal governments.
- Assist in the development and review of the sanctuary management plan.
- Monitor and assess the success of the implementation of the management plan and related marine resource management initiatives.

⁶ <https://nmsolympiccoast.blob.core.windows.net/olympiccoast-prod/media/docs/moa-2017-136-11519.pdf>

⁷ <https://nmsolympiccoast.blob.core.windows.net/olympiccoast-prod/media/docs/20070530-olympic-coast-ipc-charter.pdf>

⁸ <https://nmsolympiccoast.blob.core.windows.net/olympiccoast-prod/media/docs/moa-2017-136-11519.pdf>

- Coordinate and prioritize research objectives, and exchange technical, scientific, and policy information related to sanctuary resources and management.
- Reinforce the cooperative relationship between participants and their respective staffs.
- Undertake efforts to improve the awareness and understanding of the sanctuary among interested constituencies.
- Strive to ensure the IPC's guidance, direction, and recommendations are consistent with the statutory obligations of NOAA and the National Marine Sanctuary System to implement the National Marine Sanctuaries Act and achieve the Act's primary objective of resource protection.

Indigenous Cultures Advisory Panel

Background. ONMS discussions with many tribes and Indigenous communities revealed an understanding that the proposed sanctuary's coastal boundary spans portions of the historical areas of multiple Salinan and Chumash peoples, and specific locations important to several tribes and tribal groups (e.g., Point Conception). ONMS has heard support for the idea of creating a group setting that appropriately invites a variety of Indigenous community members to work together on sanctuary-related issues. To this end, ONMS envisions that an Indigenous Cultures Advisory Panel (ICAP) could bring multiple tribal interests together to provide essential advice on Indigenous cultural issues and opportunities associated with the sanctuary.

Participation. The ICAP is envisioned to be open to individuals possessing relevant Indigenous cultural knowledge linked to the sanctuary area. Participants need not be members of a federally or non-federally recognized tribe. The ICAP is expected to be a group possessing deep Indigenous cultural knowledge about the sanctuary's coast and ocean areas, with its members having a meaningful interest in sanctuary management. Organizationally, the ICAP would be created by the SAC, with the concurrence of the sanctuary superintendent, as an Advisory Council Working Group. The SAC would develop a charter for the ICAP, including suggestions for determining its representative membership seats and processes for appointment of a chairperson.

Role. The ICAP would provide essential advice and guidance to the SAC on Indigenous cultural issues and opportunities related to the sanctuary. ICAP advice would flow to and through the SAC. NOAA envisions that expertise and knowledge of ICAP members, their ideas, and recommendations, could also be shared with the IPC as well as any nonprofit foundation that partners with ONMS (described below). Coordination and communication between groups will be important to ensure efforts are aligned in pursuit of the sanctuary's mission and goals. Workflow could be multidirectional. The ICAP is expected to develop its own recommendations on sanctuary cultural issues in need of attention or guidance. Also, the SAC, IPC, or a partnering foundation may identify items that need further investigation, cultural advice, or guidance, which the SAC could then choose to task to the ICAP, as appropriate.

Examples of areas the ICAP might focus on include but are not limited to, development of traditional programs that promote Indigenous culture, design of outreach materials containing cultural references or artwork, messaging for educational and outreach programs, and establishment of inter-tribal protocols related to cultural activities in different areas of the sanctuary.

Nonprofit Foundation(s) and use of Joint Project Agreements

Background. ONMS heard from some tribes and Indigenous communities that a nonprofit foundation (or more than one) could be a valuable partnering entity to support tribal community involvement in the implementation of sanctuary programs. For decades, ONMS has been partnering with a variety of nonprofit foundations that have entered into agreements supporting a partnership approach to advancing sanctuary goals. A national example is the National Marine Sanctuary Foundation.⁹ In California, other examples are the Greater Farallones Association and the California Marine Sanctuary Foundation.

These organizations raise funds from multiple sources, pursue and receive a variety of grants, and are run by their own leadership (executive directors) and a variety of staff. These organizations also have a Board of Directors and can form sub-groups as needed.

An important linkage between NOAA’s management of a sanctuary and local or national foundations is to rely on proven tools for collaboration, such as Joint Project Authority (JPA). The Department of Commerce’s JPA, 15 U.S.C. 1525, provides: “In the case of nonprofit organizations, research organizations, or public organizations or agencies, the Secretary may engage in joint projects, or perform services, on matters of mutual interest, the cost of which shall be apportioned equitably, as determined by the Secretary, who may, however, waive payment of any portion of such costs by others, when authorized to do so under regulations approved by the Office of Management and Budget.” NOAA-approved agreements under the JPA are currently in place in several locations to support sanctuary management, including the JPA Agreement between ONMS/Greater Farallones and Cordell Bank National Marine Sanctuaries and the Greater Farallones Association,¹⁰ and a relatively new JPA Agreement between ONMS/MBNMS/CINMS and the California Marine Sanctuary Foundation.¹¹

The purpose of these JPAs is to enable sanctuaries and partnering foundations to work together on joint projects that support the missions of the respective sanctuaries and of the nonprofit partner by providing structure including roles and responsibilities. Both entities—the sanctuary and the foundation—agree to invest equitably apportioned amounts of funding and/or in-kind resources to achieve project success. These collaborative projects must be justified as something that could not succeed without the unique and differing coordinated contributions of each partnering entity.

Roles. ONMS envisions that the use of a JPA, with an appropriate nonprofit, research, or public organization partner, could greatly enhance the capacity of the new sanctuary and provide another entity that could invite members of tribes and Indigenous communities to play important roles in supporting sanctuary programs. A JPA would be a tool to support sanctuary projects that ONMS staff could not implement alone, and would require the unique talents and traditional knowledge found within local Indigenous communities. Whether use of a JPA is appropriate in any instance, however, depends on the specific mission and objectives of the nonprofit foundation partner as well as sanctuary management.

⁹ <https://marinesanctuary.org/>

¹⁰ https://farallones.noaa.gov/manage/management_plan.html and <https://farallones.org/#sanctuary>

¹¹ <https://www.californiamsf.org/>

JPAs could allow co-development and co-implementation with ONMS a variety of important projects. Potential joint projects that might be of mutual interest include:

- Citizen science.
- Visitor center programs and exhibits.
- Tourism, heritage, and outdoor recreation.
- Coastal signage.
- Tribal cultural landscape assessments.
- Education and outreach events.

To ensure collaborations remain on track as agreed and designed, NOAA and foundation leadership would need to communicate regularly. Note that any new foundation formed with a mission to support the new sanctuary would be independent of NOAA. NOAA would not control the formation of any such foundation or the selection of its director, staff, or other organizational details.

Section 2: Action Plans



Deep-sea corals, R/V *Nautilus*. Photo: Robert Schwemmer/NOAA

This management plan document includes 11 action plans covering issue-based and program-based themes intended to guide ONMS over the coming five to 10 years. Each action plan contains strategies with multiple activities to achieve goals.

1. Indigenous Cultural Heritage Action Plan
2. Climate Change Action Plan
3. Maritime Heritage Action Plan
4. Offshore Energy Action Plan
5. Water Quality Action Plan
6. Blue Economy Action Plan
7. Wildlife Disturbance Action Plan
8. Education and Outreach Action Plan
9. Resource Protection Action Plan
10. Research and Monitoring Action Plan
11. Operations and Administration Action Plan

Indigenous Cultural Heritage Action Plan

Goal: Respectfully honor, highlight, and protect the unique Indigenous cultural heritage and resources connected to the sanctuary through meaningful collaboration and partnership with Indigenous communities. This could include sharing Indigenous history and culture, where appropriate, with the public.

Introduction

With reverence and respect for the Indigenous people of the sanctuary coastline and for the submerged lands occupied by their ancestors, NOAA is honored to work in partnership with tribes and Indigenous communities to commemorate and protect this sacred ocean space. Collaboration, respect, and partnership serve as a foundation for the strategies and activities proposed within this action plan. Priorities focus on the understanding and protection of cultural resources within the sanctuary, the appropriate application of Indigenous knowledge, and giving prominence to local Indigenous culture through sanctuary programs. Supporting the self-determined interests and needs of the Indigenous peoples of this coast is a priority for management of the sanctuary. Success will require support for Indigenous community sanctuary access, uplifting Indigenous voices, strengthening connection to place, fostering meaningful involvement in sanctuary management, and working together to be effective stewards.

For past, present, and future Chumash and Salinan people, the coast and waters within the sanctuary are of deep cultural significance. Of foremost importance for this sanctuary is the enduring presence of the area's Indigenous peoples. Their unique knowledge, wisdom, cultural practices, and deep understanding of this place offer expertise and inspiration essential to sustaining both marine ecosystems and cultural identity. For hundreds of generations the Indigenous people of this coast have lived in a reciprocal relationship of balance, adjustment, and reverence with nature, actively sustaining and caring for the environment and their culture, while resiliently surviving the brutal trials and trauma of their history. These include having been forced to live and work on missions, other enslavement, devastating smallpox, murder, and the loss of traditional lands.

ONMS is grateful for the generous sharing of ideas, advice, and wisdom provided by a wide range of local tribes and Indigenous community members that have inspired and informed preparation of this draft action plan. Input was provided over multiple years, including through sanctuary nomination proposal development, from multiple tribes and Indigenous community members commenting during the scoping period (see Draft Environmental Impact Statement Appendix A), and during numerous tribal group meetings and workshops.

NOAA intends to create a collaborative management structure for the sanctuary to provide for the respectful and meaningful involvement of local representatives and partners from multiple tribes and Indigenous communities. Although final details and agreements for such a management structure may take time to evolve and formally solidify, ONMS is committed to thoughtfully using a variety of inclusive approaches to work closely with tribes and Indigenous community members in support of mutual interests and improved sanctuary management.

As this new sanctuary emerges and staff begin formative work, respectful and dedicated efforts will be required by all involved to build partnerships and trust over time between ONMS, tribes, and local Indigenous communities. ONMS is committed to this long-term effort.

Given that honoring Indigenous cultural heritage (ICH) is a foundational purpose of the proposed sanctuary, there are many additional supporting strategies and activities related to Indigenous engagement within the other action plans of this management plan.

Strategy ICH-1: Work with tribal and Indigenous communities to adopt an organizational framework for tribal and Indigenous participation and collaborative management

Activity ICH-1.1: Work with tribes and Indigenous community partners to adopt and then to implement an organizational framework for engagement and collaboration, including developing necessary agreements, policies, and procedures to implement the framework (Figure 2). This could include development of protocols regarding potentially sensitive information.

Activity ICH-1.2: Work with the tribes and Indigenous communities, the Sanctuary Advisory Council, and other partners as appropriate to seek ways to adapt and improve the Framework for Indigenous Collaborative Management.

Strategy ICH-2: Identify Indigenous cultural resources and integrate Indigenous knowledge

Activity ICH-2.1: Identify priorities for future cultural resource surveys in the sanctuary, including an assessment of resources required. Work with tribal entities to develop uniform guidelines/protocols for cultural resource data collection in the sanctuary while maintaining consideration for Indigenous data sovereignty and information security.

Activity ICH-2.2: Prioritize the analysis of threats, conditions, and trends for known culturally sensitive or sacred sites, and other submerged cultural resources, in or immediately adjacent to the sanctuary during development of the sanctuary's first condition report.

Activity ICH-2.3: Enhance sanctuary management and research by working with tribes and Indigenous community members and other cultural experts to explore ways to gather, share, and apply (when and where appropriate) traditional ecological knowledge, local and customary knowledge, and information obtained from cultural resource analyses. Work collaboratively with participating partners to produce a guidance document on these practices, including implementation recommendations.

Activity ICH-2.4: Host scholarly and educational events that bring together experts in Indigenous knowledge, natural science, and social science to discuss sanctuary conservation management issues (resource protection, science needs, educational programming) and the potential applications of Indigenous knowledge.

Activity ICH-2.5: Provide interested tribes and Indigenous communities with support and guidance to conduct tribal cultural landscape characterization, including searching for, studying, and protecting paleoshorelines or submerged archaeological and cultural resources. There is a paucity of information on the threats and pressures from rising sea levels, beach loss, and coastal erosion on archaeological sites in the area. These assessments will help deepen holistic

understanding of a tribe's connection to place (sanctuary waters and adjacent coastal lands) and cultural identity. Use the framework presented in the *Guidance Document for Characterizing Tribal Cultural Landscapes* (Ball et al., 2015) and coordinate with the Bureau of Ocean Energy Management (BOEM) and partners that have also been offering cultural landscape assessment assistance. Support development of tribes' knowledge bases through ethnographic and oral history inquiries, use of non-invasive and culturally sensitive methods, and following established tribe-specific protocols regarding any disposition of culturally sensitive information.¹²

Strategy ICH-3: Provide protection for Indigenous cultural resources within the sanctuary

Activity ICH-3.1: Develop and provide cultural resource training and information to law enforcement partners that enforce sanctuary regulations (see also Resource Protection Action Plan) and sanctuary volunteers/educators. Raise awareness (where appropriate and supported by tribes) of culturally sensitive sites, culturally important species and locations, and potentially harmful activities in need of greater oversight and protective interpretation/outreach.

Activity ICH-3.2: Seek ways to avoid disturbance to submerged Indigenous cultural resources when processing sanctuary research permit requests or through other decision points under the sanctuary regulations. Coordinate with appropriate tribal experts. Integrate local cultural values and cultural resource sensitivity information into permitted educational materials and briefings on actions with the potential to adversely affect Indigenous cultural resources.

Activity ICH-3.3: Following outreach to and coordination with partners, develop and adhere to a set of best practices for respecting, protecting, and avoiding disturbance to sanctuary cultural resources when conducting ONMS research and management activities or promoting tourism. Include guidance for pre-mission briefings, use of cultural observers, and handling/reporting unplanned activities.

Activity ICH-3.4: Conduct timely and meaningful tribal consultation processes prior to ONMS decision making on projects that could affect cultural resources or tribal interests. Work with local tribes and Indigenous communities to develop and follow project consultation and engagement protocols. This process is inclusive of, but not limited to, NOAA meeting legally required government-to-government consultation responsibilities with the federally recognized Santa Ynez Band of Chumash Indians.

Strategy ICH-4: Collaborate with Indigenous communities on education programs

Activity ICH-4.1: Ensure Indigenous cultural information is incorporated into public outreach and education programs of the sanctuary based upon direct guidance and involvement from participating tribes and Indigenous community members.

¹² Tribal Cultural Landscape: Any place in which a relationship, past or present, exists between a spatial area, resource, and an associated group of Indigenous people whose cultural practices, beliefs, or identity connects them to that place. A tribal cultural landscape is determined by and known to a culturally related group of Indigenous people with relationships to that place (<https://sanctuaries.noaa.gov/Tribal-landscapes/>).

Activity ICH-4.2: Partner with interested tribes and Indigenous groups to identify meaningful support to incorporate sanctuary information into existing or new tribal educational programs and initiatives.

Activity ICH-4.3: Develop a sanctuary internship program that provides meaningful opportunities for high school- and college-level students from Indigenous communities. Mentor youth to help them build skills and experience in sanctuary program areas (leadership, volunteer coordination, marine science, cultural heritage, resource stewardship, education and outreach, marine operations). This may require grants in partnership with tribal representatives.

Strategy ICH-5: Facilitate and support tribal community cultural access, connection to, and activities within the sanctuary

Activity ICH-5.1: Support access to and connection with the sanctuary for Indigenous cultural activities. Provide ONMS assistance for maritime events and activities, ranging from tomol paddling and associated vessel safety services, coastal gatherings and ceremonies, tribal community participation in vessel- and shore-based science and stewardship activities, field trips for Indigenous youth, traditional fishing demonstrations, cultural tourism, beach cleanups, coastal hikes, and more.

Activity ICH-5.2: Support gathering of ceremonial cultural materials within the sanctuary, such as feathers, shells, bones, and traditional foods. In particular, develop permit guidance, as appropriate, for the new proposed permit category for Native American cultural or ceremonial activities. Where permits are required, provide guidance and assistance.

Activity ICH-5.3: Work with tribes and Indigenous community partners and government agencies to connect their Indigenous language place names, species names, stories, traditions, and other cultural information to maps, interpretive materials, exhibits, signage, online presence, and other identifying sanctuary resources.

Strategy ICH-6: Provide ongoing Indigenous cultural training to sanctuary staff, volunteers, and advisory council members

Activity ICH-6.1: Work with partners to develop and deliver appropriate training experiences for sanctuary staff members. Training topics may include, but not be limited to, regional history of Indigenous peoples, cultural values and heritage of contemporary tribes and Indigenous communities, protocols for territorial acknowledgements, and best practices for respectful and meaningful Indigenous community engagement.

Activity ICH-6.2: Work with partners to develop and deliver appropriate training experiences for sanctuary volunteers and advisory council members. See Activity ICH-5.1 for subject matter details. Additionally, assure adequate tribal and Indigenous community representation on the Sanctuary Advisory Council.

Activity ICH-6.3: Work to build tribal presence within sanctuary staff and partner organizations through hiring, volunteer programs, and internships.

Potential Partners

The following list reflects potential sanctuary partners, and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

Santa Ynez Band of Chumash Indians, Northern Chumash Tribal Council, yak tityu tityu yak tilhini Northern Chumash Tribe and ytt Northern Chumash Nonprofit, Northern Chumash Bear Clan, Coastal Band of the Chumash Nation, Barbareño Band of Chumash Indians, Barbareño Chumash Tribal Council, Barbareño/Ventureño Band of Mission Indians, Chumash Heritage Foundation, Chumash Maritime Association, Wishtoyo Foundation, Salinan Tribe of Monterey and San Luis Obispo Counties, and the Xolon Salinan Tribe.

Climate Change Action Plan

Goal: Protect and enhance ecosystem function and resilience to climate change through research and monitoring, assessment and adaptation, mitigation actions, education and outreach, and Indigenous community partnerships.

Introduction

The impacts of climate change from unabated greenhouse gas emissions are intensifying both globally and locally, threatening physical, social, economic, and environmental wellbeing. The waters of CHNMS and surrounding coastal areas and communities are experiencing climate-driven stressors, including sea level rise and erosion, increasing water temperature, deoxygenation, changing oceanographic processes, and ocean acidification. These stressors are expected to worsen over the coming decades, which is expected to impact both biological and cultural resources, and to reduce ecosystem function within the sanctuary. Confronting and addressing the effects of climate change on national marine sanctuaries is a top priority for ONMS. The 2021–2023 ONMS Climate Resilience Plan¹³ commits to integrating a climate-informed approach to management, and recent climate change-related projects have increased our understanding of the immediate threats and feasibility of responses to climate change within the greater west coast region.

The special setting of CHNMS, at the convergence of two different oceanographic regimes, provides one of the best ecological and oceanographic opportunities in the world for the study of ecosystem transition zones and climate change. Understanding climate impacts on the highly diverse communities of organisms found at this transition, and how these communities and their associated ecosystem functions and services may change with shifting oceanographic regimes is critical. To understand these changes and to maintain ecosystem function and resilience considering worsening climate impacts, this action plan focuses on four strategies that will support climate-informed management of CHNMS through increased understanding and prediction, communication, partnerships, and adaptation and mitigation actions. Meaningful

¹³ <https://sanctuaries.noaa.gov/management/climate/>

climate action should focus on Indigenous and community values and experiences and be rooted in strong climate science and traditional ecological knowledge.

Strategy CC-1: Assess and plan for climate impacts on sanctuary resources and communities

To ensure climate resilience of sanctuary resources and communities, ONMS will develop both a thorough understanding of current climate impacts and an assessment of likely future vulnerabilities to climate change (CC). These products will enable the development of targeted management strategies to reduce future vulnerability and increase resource resilience while simultaneously supporting community conversations around stakeholder and Indigenous community adaptive capacity to climate impacts.

Activity CC-1.1: Conduct a review and characterization of climate-driven impacts, including cumulative effects, on sanctuary resources (biological, cultural, and historical) and adjacent communities to develop a baseline understanding of resource conditions and the influence of climate change.

Activity CC-1.2: Conduct a comprehensive review of existing vulnerability assessments, adaptation plans, resilience plans, and other climate planning and assessment documents and activities already completed in the region to inform sanctuary-focused planning and assessment.

Activity CC-1.3: Conduct a climate vulnerability assessment to identify how and why biological and cultural resources as well as ecosystem services within the sanctuary may be affected by future climate and ocean conditions. This should cover, where known, thresholds or tipping points. Outcomes will include: (1) a set of local ocean climate indicators that link to larger scale regional indicators (e.g., ocean acidification, sea surface temperature) that will help focus research and monitoring across the region to detect and track climate effects; and (2) a climate vulnerability assessment report with information on the species, habitats, cultural resources, and ecosystem services that are most vulnerable to projected climate change impacts and that will aid future adaptation planning.

Activity CC-1.4: Develop a climate adaptation plan, detailing management actions that target specific climate impacts and vulnerabilities identified in Activities 1.1, 1.2, and 1.3, to increase the resilience of sanctuary resources to climate change.

Activity CC-1.5: Engage in public and Indigenous community outreach and communication, creating workshops to review climate impact and community vulnerability. Collect baseline information about the adaptive capacity and awareness of sanctuary communities to climate change impacts and evaluate the adaptive capacity for future community resilience.

Strategy CC-2: Minimize greenhouse gas emissions and contribute to natural atmospheric carbon dioxide sequestration and storage

To limit to the extent practical the sanctuary's own contribution to climate change, ONMS will minimize greenhouse gas emissions from any new infrastructure or operations in support of CHNMS. ONMS will also support climate mitigation measures by investigating the application of blue carbon habitat protection and enhancement and marine carbon dioxide removal

approaches. Future management plans could assess the need to further reduce this sanctuary's carbon footprint based on this initial level of operation.

Activity CC-2.1: In the development of facilities plans, include consideration of facility locations and design to minimize greenhouse gas emissions and seek carbon neutrality to the extent possible. Include considerations for activities which occur within sanctuary boundaries but fall outside the scope of sanctuary operations (e.g., the application of voluntary ship speed reductions to reduce greenhouse gas emissions).

Activity CC-2.2: Map and measure the extent of blue carbon habitats (kelp forest, salt marsh, eelgrass), and areas of potential restoration of blue carbon habitats, and assess the impact of both climate change and non-climate stressors on the capacity of these habitats to continue sequestering carbon (using information from Activity 1.3).

Activity CC-2.3: Develop management approaches to maintain and, where possible, enhance or restore natural carbon sequestration and storage in the sanctuary by using the information gathered as part of Activity 2.2.

Activity CC-2.4: Investigate the practicality, authority, and impacts associated with marine carbon dioxide removal approaches and applications that are compatible with the sanctuary's resource protection goals, such as blue carbon habitat conservation and restoration, macroalgal aquaculture, marine spatial planning, and other potential strategies and technologies.

Strategy CC-3: Engage with the public on sanctuary resources and solutions relative to climate change

To ensure a climate-literate community that is supportive of sanctuary efforts to reduce harm from climate change, ONMS will work to understand existing climate education programs and products in the region and fill identified gaps. ONMS will also incorporate climate action recommendations in products and messaging to encourage community involvement in reducing the impacts of climate change.

Activity CC-3.1: Develop multilingual, culturally appropriate climate messaging and effective materials for its delivery to various audiences in partnership with educators in the region, including formal K–16 curricula and informal products and programs in partnership with informal education providers in the area (signage in zoos, aquaria, etc.).

Activity CC-3.2: Develop and share education and communication resources, and support partners that are promoting community-based, climate-friendly actions and solutions. Incorporate NOAA and ONMS Ocean and Climate Literacy messages into education and communication materials. Share best practices to help advance public understanding of climate change impacts and the role of marine protected areas in reducing its impacts.

Strategy CC-4: Support, track, and share climate change research and monitoring

To understand the impacts of climate change on the unique setting of CHNMS as an ecological transition zone, and to support the long-term tracking of climate-relevant ocean conditions, ONMS will pursue and develop collaborative research and monitoring partnerships. This strategy is cross-cutting with the Research and Monitoring Action Plan.

Activity CC-4.1: Conduct a gap analysis of current research and monitoring programs/projects in the sanctuary for the climate indicators developed in Activity 1.3. Collaborate with research partners to develop a plan for filling those gaps and supporting long-term climate indicator monitoring programs to track regional changes in management-relevant oceanographic, coastal, and biogeographic conditions.

Activity CC-4.2: Develop partnerships to collaborate on research efforts to understand the impacts of climate change on culturally significant archaeological and Indigenous cultural sites. This research should be developed and implemented with partners with archaeological and tribal knowledge.

Potential Partners

The following list reflects potential sanctuary partners and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

Santa Ynez Band of Chumash Indians, Northern Chumash Tribal Council, yak tityu tityu yak tilhini Northern Chumash Tribe and ytt Northern Chumash Nonprofit, Northern Chumash Bear Clan, Coastal Band of the Chumash Nation, Barbareño Band of Chumash Indians, Barbareño Chumash Tribal Council, Barbareño/Ventureño Band of Mission Indians, Chumash Heritage Foundation, Chumash Maritime Association, Wishtoyo Foundation, Salinan Tribe of Monterey and San Luis Obispo Counties, and the Xolon Salinan Tribe.

Academic and affiliated institutions

Cal Poly San Luis Obispo and the University of California Santa Barbara.

Governmental agencies

California Ocean Protection Council, California Department of Fish and Wildlife, U.S. Fish and Wildlife, California Coastal Commission, California State Parks, and National Marine Fisheries Service.

Maritime Heritage Action Plan

Goal: Identify, protect, and raise awareness of the sanctuary’s maritime, historical, and archaeological resources. Collaborate with community partners engaged in maritime traditions, traditional ecological knowledge, and protection of sanctuary waters.

Introduction

This action plan describes strategies and activities focused on the understanding, protection, and interpretation of the unique maritime heritage resources and values connected to sanctuary waters. Inclusive of this important work is collaborative engagement with the community and Indigenous partners who seek to continue stewarding these invaluable waters. ONMS prioritizes education and outreach to increase public awareness and appreciation of the cultural connections and maritime history associated with sanctuaries.

Historical archaeological and cultural resources are collectively referred to as “maritime heritage” (MH) and include the wide variety of tangible and intangible resources that represent human connections to ocean areas, such as shipwrecks, lighthouses, archaeological sites, and other cultural resources within the sanctuary.

The 2015 sanctuary nomination for CHNMS described the coastal area as occupied for centuries by early Chumash, an ocean-going, Indigenous coastal people. The area embodies a special sense of place with sacred meaning and significant cultural values for the Chumash, Salinan, and other Indigenous peoples that still reside in the region today (NOAA, 2020). During the historic period, the California central coast comprised maritime activities since the mid-16th century. Juan Rodriguez Cabrillo and his successor, Bartolome Ferrer, led the first European exploration of this coastline from 1542–1543. The Spanish east-bound Manilla Galleon Trade Route starting in 1565 continued for about 250 years with vessels sailing south along the central coast. In the years to follow, Pedro Unamuno, 1587, and Sebastian Vizcaino, 1602, were in the region exploring and mapping the coastline and establishing place names (Bailey, 1982). During the Spanish Mission period (1769–1821), missions and presidios were established along the California coast extending from Sonoma to San Diego. San Luis Obispo de Tolosa (1772) was the first mission founded in the land of the Chumash people. In the early 19th century, agriculture and ranching activities led to the growth of the hide and tallow trade. Other maritime activities included the fur trade, whaling, commercial fisheries, and foreign and domestic trade. During World War II, the Japanese Imperial Navy's submarines were attacking U.S. merchant shipping in the region, successfully sinking the Union Oil Company of California tanker SS *Montebello* in 1941 (Webber, 1992).

There are numerous submerged historic maritime heritage resources that include the remains of landings, wharves, piers, and ship and aircraft wrecks located in the area, some of which are important to our nation’s history and are listed on the National Register of Historic Places (Davidson, 1889). Over 200 ship and aircraft wrecks have been reported in the region.

Strategy MH-1: Inventory and assess maritime heritage resources

In compliance with section 110 of the National Historic Preservation Act (NHPA), ONMS will inventory, assess, and protect traditional cultural properties, submerged shipwrecks, aircraft, and other maritime heritage resources.

Activity MH-1.1: Inventory maritime heritage resources within the sanctuary, populate shipwreck databases, and expand the ONMS Maritime Anthropological Resource Inventory System. Potential historic properties under the jurisdiction or control of the sanctuary should be identified and evaluated using the National Register of Historic Places criteria for nomination.

Activity MH-1.2: Develop plans for and, if funding allows, conduct survey expeditions focused on maritime heritage sites, with a particular concentration on identifying paleo-shorelines and historical habitation along those shorelines. Archaeological surveys should include seafloor mapping associated with historic research and paleo-shorelines. Develop partnership programs for annual site monitoring of known maritime heritage resources to document environmental change or human impacts. Develop strong partnerships and effective consultations with tribes and Indigenous community members, as well as partnerships for external funding opportunities.

Activity MH-1.3: Build upon external partnerships to inventory traditional historic properties, shipwrecks, aircraft, and other maritime heritage sites with federal, tribal, state, and local agencies; private sector and avocational archaeologists; commercial and recreational divers; and fishermen.

Activity MH-1.4: Continue to work with partners, including Indigenous knowledge holders, to analyze sanctuary seafloor mapping data, remotely operated vehicle footage, and autonomous underwater vehicle surveys to identify new maritime heritage resources. Information sources will include previously acquired data as well as new data of opportunity from NOAA and other partner mapping missions.

Strategy MH-2: Manage and protect submerged maritime heritage resources

In compliance with section 106 of the NHPA, ONMS is required to take into account the effects of their undertakings on historic properties. ONMS will protect and manage maritime heritage resources via: (1) permitting and authorization decisions; (2) education initiatives to inform the public of the regulations and mentoring in a stewardship capacity; and (3) enforcement coordinated with federal, tribal, and state partners.

Activity MH-2.1: Regularly conduct NHPA section 106 reviews for proposed undertakings, including when issuing permits. Section 106 of the NHPA requires federal agencies to consider the impact of their actions on historic properties. Consider development of a Programmatic Agreement under section 106 of the NHPA to provide a framework for consultation with the California State Historic Preservation Officer, tribes, and other parties that fosters a consistent process as to how undertakings are defined, reviewed, and documented throughout the ongoing management of the national marine sanctuary.

Activity MH-2.2: Coordinate stewardship initiatives with key partners to protect maritime heritage resources including: (1) Indigenous partners; (2) the sport diving community; (3) learning centers and museums; and (4) appropriate local law enforcement agencies.

Activity MH-2.3: Work toward the development of future protocols to monitor climate-related effects on maritime heritage resources. Sanctuary waters are experiencing the effects of climate-

related stressors (e.g., ocean acidification, increasing water temperatures, deoxygenation, and changing oceanographic processes) that are expected to worsen over the coming decades.

Strategy MH-3: Develop maritime cultural landscape-focused education and outreach

Maritime cultural landscapes, which describe the relationship between people and the ocean, provide an assessment tool for better understanding the wide range of heritage resources and values associated with marine protected areas. Effectively implementing the landscape approach offers opportunities to acquire a deeper knowledge of these resources across the span of history and geography of these places, providing essential context for contemporary management decision making, and actively engaging key communities.

Activity MH-3.1: Cultivate partnerships to develop a maritime cultural landscape study focused on the deeper knowledge of the sanctuary and its surrounding maritime heritage resources and related activities. Build off related work conducted by BOEM. Engage the public, tribes and Indigenous community partners, local and academic communities, and stakeholders.

Activity MH-3.2: Conduct research on maritime culture, including Chumash and Salinan practices, shipwrecks, shoreline structures (e.g., lighthouses), coastal and geological surveys, traditional recreational activities (e.g., surfing, fishing, diving), and stewardship. Develop maritime cultural landscape studies in collaboration with relevant experts.

Activity MH-3.3: Develop content for the sanctuary's maritime heritage [webpage](#). Potential themes may include tribes and Indigenous community partners and their connections to place, maritime heritage resources, living journals of shipwreck survivors, archaeological expedition surveys and updates, and the development of a shipwreck story map. Content should also enhance destination stewardship/sustainable tourism, tying tourism to maritime heritage.

Activity MH-3.4: Support efforts for existing partner exhibits related to sanctuary maritime heritage resources, and associated public lectures. Pursue these arrangements in partnership with visitor centers and learning centers including the MBNMS Coastal Discovery Center, Cambria Historical Museum, Santa Barbara Maritime Museum, Morro Bay Maritime Museum, California State Natural History Museum Morro Bay, Lompoc Valley Historical Society, Piedras Blancas Lighthouse Association, and The Nature Conservancy Dangermond Preserve.

Potential Partners

The following list reflects potential sanctuary partners, and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

Northern Chumash Tribal Council, Santa Ynez Band of Chumash Indians, Northern Chumash Tribal Council, yak tityu yak tilhini Northern Chumash Tribe and ytt Northern Chumash Nonprofit, Northern Chumash Bear Clan, Coastal Band of the Chumash Nation, Barbareño Band of Chumash Indians, Barbareño Chumash Tribal Council, Barbareño/Ventureño Band of Mission Indians, Chumash Heritage Foundation, Chumash Maritime Association, Wishtoyo

Foundation, Salinan Tribe of Monterey and San Luis Obispo Counties, and the Xolon Salinan Tribe.

Academic and affiliated associations

California State University Channel Islands, Cal Poly San Luis Obispo, California State University Long Beach, California State University Northridge, Marine Research and Exploration, Monterey Bay Aquarium Research Institute, Santa Barbara City College, University of California Santa Barbara, University of California Los Angeles, and the Ventura County Community College District.

Governmental agencies

Bureau of Ocean Energy Management, California Department of Parks and Recreation, California State Historic Preservation Office, California State Lands Commission, National Marine Fisheries Service, National Park Service Submerged Resources Center, NOAA Office of Coast Survey, Santa Barbara County Office of Education, U.S. Geological Survey, U.S. Coast Guard, and Ventura County Office of Education.

Nongovernmental organizations

Museums and historical centers, Cambria Historical Museum, Santa Barbara Maritime Museum, Morro Bay Maritime Museum, California State Natural History Museum Morro Bay, Lompoc Valley Historical Society, Piedras Blancas Lighthouse Association, and The Nature Conservancy Dangermond Preserve.

Offshore Energy Action Plan

Goal: Aid long-term management of sanctuary resources, ecosystem services, and cultural heritage by responsibly managing offshore energy activities, conducting necessary research and monitoring, and coordinating with other agencies and affected stakeholders.

Introduction

The coastal zone and offshore waters in San Luis Obispo and Santa Barbara counties have hosted a large and serially diverse energy production industry for over 100 years. As one technology begins to fade, a new technology develops. Over the next 10 years, the decommissioning and removal of offshore oil and gas infrastructure off the Santa Barbara County coast, and the possible decommissioning of a large nuclear power plant at Diablo Canyon in San Luis Obispo County is likely to unfold. Meanwhile other industrial development, namely offshore wind production, is likely to begin. The diversity of threats from coastal and offshore energy development was a principal driver for community leaders to propose a national marine sanctuary. As is true for other areas, NOAA may not be able to address all aspects of these threats facing the sanctuary at the time of designation, including offshore energy, but this action plan will establish a mechanism and process to consider potential threats, study them, communicate to the public and affected stakeholders, and to participate in interagency processes to find the best outcomes.

This action plan's goal is to aid long-term management of proposed sanctuary resources, ecosystem services, and cultural heritage by informing the management of offshore energy

activities occurring in or adjacent to the proposed sanctuary, conducting necessary research and monitoring, and coordinating with other agencies and affected stakeholders.

The portfolio of offshore energy (OE) projects, especially Wind Energy Areas, in or adjacent to CHNMS is large and complex. It will require time for sanctuary staff and management to fully understand the existing and proposed construction, operations, and abandonment/decommissioning plans for those offshore facilities. This should begin as soon as is practicable after the sanctuary is designated and operational.

Strategy OE-1: Expand knowledge and aid communications

Activity OE-1.1: Meet with agencies involved in permit review of coastal and offshore energy projects to discuss the regulatory requirements for CHNMS and goals expressed in the management plan, and understand the process steps, timelines, and goals of those other agencies. Conduct similar meetings with industry representatives for projects in or adjacent to CHNMS.

Activity OE-1.2: After the Sanctuary Advisory Council has been created and is operational, conduct workshops or other public meetings within the advisory council process to better understand the public awareness of offshore energy projects and the expectations and goals of these various groups regarding offshore energy in the sanctuary.

Strategy OE-2: Collaborate on scientific studies

Activity OE-2.1: Develop a research plan to inform permitting, new construction, and decommissioning. Working with science staff from the sanctuary, agencies, academia, and other partners, develop a research and monitoring plan that will aid decision making and compliance assessment of adverse (or beneficial) effects on sanctuary resources from offshore energy construction, operations, and abandonment/decommissioning activities. Some of this work may involve, to the extent practical, monitoring in advance of forthcoming industry activities while other steps may be designed to assess long-term impacts.

Activity OE-2.2: Create partnerships with academia and federal, state, and local agencies to understand potential impacts on sanctuary resources from offshore and coastal energy activities.

Activity OE-2.3: Organize and deploy sanctuary assets to aid data gathering. ONMS should assess what assets exist at adjacent sanctuaries that can help with field work and data analysis, including staff, vessels, and monitoring equipment. The plan should also identify any new assets that will be necessary to effectively carry out essential science missions.

Strategy OE-3: Support joint agency cooperation and review of new development and decommissioning

Activity OE-3.1: Participate in National Environmental Policy Act and California Environmental Quality Act joint agency review processes as available. Joint agency review is the best way to ensure effective communication and collaboration between agencies and enhance certainty to developers. While some environmental review and other planning processes for offshore energy facilities are going on at the same time as the designation process for CHNMS (e.g., a wind project in state waters off Vandenberg Space Force Base), other processes will likely occur after designation (e.g., Morro Bay Wind Energy Area construction and operation plans).

Sanctuary staff should strive to participate in as many joint agency review processes as possible to ensure sanctuary regulatory goals and needs are met.

Activity OE-3.2: Review and comment on agency actions. The process to make decisions and issue permits for development activities will require sanctuary staff involvement and attention. Moreover, once agency actions are issued, developers will be developing plans for construction and decommissioning that will require sanctuary staff involvement and review (see Strategy OE-4 below).

Activity OE-3.3: The CHNMS staff should work with the Sanctuary Advisory Council and Indigenous community to develop a mechanism to keep interested parties informed about how new offshore energy development and facility decommissioning may affect sanctuary resources and what actions the sanctuary is taking on permit requests. Within the Sanctuary Advisory Council process, collaborate with BOEM, the state, and interested and affected parties on the demand for new offshore wind energy development in state and federal waters of the sanctuary.

Strategy OE-4: Support monitoring and mitigation review

Activity OE-4.1: Large and complex industrial projects require effective monitoring and mitigation programs for expected impacts from construction, operation, and abandonment/decommissioning. NOAA will develop plan(s) in collaboration with tribal governments and local, state, and federal agencies, to monitor development activities within or adjacent to the sanctuary. This may include close collaboration with staff and contractors hired by developers to ensure effective data collection.

Activity OE-4.2: Contribute via fieldwork to monitor activities as appropriate. The research and monitoring activities described in Activity OE-2 will also identify how NOAA will participate in and contribute to monitoring activities. Wrapping the scientific element into the on-water monitoring activities will ensure the highest likelihood that data gathering will effectively aid compliance assessments of industry proposals and agency requirements.

Potential Partners

The following list reflects potential sanctuary partners, and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

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Academic and affiliated institutions

Cal Poly San Luis Obispo and the University of California Santa Barbara.

Governmental agencies

National Marine Fisheries Service Southwest Fisheries Science Center, National Center for Coastal and Ocean Studies, Bureau of Ocean Energy Management (BOEM), Bureau of Safety and Environmental Enforcement, U.S. Army Corps of Engineers, Ocean Protection Council, California Coastal Commission, State Lands Commission, California Department of Fish and Wildlife, California Energy Commission, Public Utilities Commission, the County of San Luis Obispo, and the County of Santa Barbara.

Nongovernmental organizations

Offshore wind developers and their trade associations and commercial fishermen.

Water Quality Action Plan

Goal: Ensure water quality in the sanctuary and adjoining watersheds can support aquatic life and human health while accommodating many diverse uses.

Introduction

This Water Quality (WQ) action plan focuses on understanding water quality conditions in CHNMS and its watersheds and working with partners to protect and restore it. By increasing knowledge of the watersheds and characterizing water quality, NOAA will be better able to identify water quality threats to sanctuary resources and mitigate those threats through education, implementation of best practices, research, and other actions by partners. The main water quality threats in this region include urban runoff, commercial shipping, drilling for hydrocarbons (and natural seeps), agriculture and other focused land uses, and the military.

There are several cities along this stretch of coast including, from north to south, Morro Bay (pop. 10,578), Pismo Beach (pop. 8,180), and Grover Beach (pop. 13,535). Santa Maria, in northern Santa Barbara County, is the largest city near the sanctuary with a population of approximately 106,000 located about 12 miles inland. Several small cities and unincorporated towns lie adjacent or close to the sanctuary, including Cayucos, Avila Beach, Oceano, and Guadalupe. Most of the coast is isolated by sand dunes and mountainous regions with a military installation and nuclear power plant tucked in between.

The three largest water bodies flowing to the coast are Chorro Creek flowing into Morro Bay, Santa Maria River, and Santa Ynez River, listed from north to south. Other creeks and tributaries run in between. Typical contaminants in these freshwater systems include sediment, nutrients, bacteria, pesticides, and other common urban pollutants. Within CHNMS watersheds, water bodies have been determined¹⁴ by the Central Coast Regional Water Quality Control Board to be impaired under sections 303(d) and 305(b) of the Clean Water Act.

In the 2018 Integrated Report¹⁵ there are 29 water bodies that flow to CHNMS that do not attain their designated beneficial uses because of frequently high concentrations of specific contaminants. Of those 29 waterbodies, 12 have established Total Maximum Daily Loads. The

¹⁴ https://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/303d_list.html#New_link

¹⁵ https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html

most common pollutants across the stretch of coast are fecal indicator bacteria and sediment. Other common listings include water temperature (too warm), dissolved oxygen (too low), nitrate, and turbidity. The most polluted freshwater bodies include Oso Flaco Creek, Santa Maria River, Orcutt Creek and its tributary, and Green Valley Creek. These water bodies are listed for high concentrations of diazinon, chlorpyrifos, dieldrin, malathion, dichloro-diphenyl-trichloroethane (DDT), polychlorinated biphenyls (PCBs), and toxicity. Several coastal beaches, including Avila, Pismo State Beach, Guadalupe Dunes, and Ocean Beach have been listed for exceedances of fecal indicator bacteria. Port San Luis Bay is on the list for exceedances of arsenic, polycyclic aromatic hydrocarbons, dieldrin, and PCBs.

This action plan includes strategies and activities related to increasing knowledge of water quality conditions, coordination with government and nongovernmental organizations, promoting public engagement and stewardship, increasing research and best practices to mitigate contaminants, and finally developing a program to assess and prevent debris, particularly plastic debris, from entering the sanctuary.

Strategy WQ-1: Improve understanding of water quality conditions in adjoining watersheds to better identify and prioritize improvement efforts

A crucial step in carrying out collaborative efforts to improve water quality in the watersheds that drain to CHNMS will be to foster relationships and collaborate on compiling existing knowledge from partners and stakeholders.

Activity WQ-1.1: Develop a Water Quality Needs Assessment to understand the water quality issues, sources, and impacts similar to the one done for CINMS (see CINMS document *A Water Quality Needs Assessment for CINMS Vol 1 Appendix E of CINMS Management Plan*).

Activity WQ-1.2: Complete a Water Quality Characterization report to determine baseline conditions and prioritize water quality threats.

Activity WQ-1.3: Promote investigations into the effects of pollutants on marine ecosystems, and support current and future studies through active participation, helping to seek funding, providing technical guidance, or engaging in peer review.

Strategy WQ-2: Coordinate with federal, state, and local agencies; local tribes and Indigenous communities; and interest groups with a mandate or interest to protect water quality

Water quality knows no boundaries. There are many layers of regulation and jurisdictions with authority over water. The emphasis will be to bring organizations together to share information, promote success, and leverage resources to improve water quality.

Activity WQ-2.1: Conduct an inventory of water quality organizations and monitoring programs, including information on jurisdictional water quality authorities, roles, and responsibilities. Determine if a coordinating committee is needed for sharing information and developing strategies.

Activity WQ-2.2: Develop partnerships with organizations working on sector-specific water quality issues related to agriculture, stormwater, beach water quality, boating, and other areas.

Activity WQ-2.3: Review, evaluate, and comment on ordinances, regulations, and permits with the potential to affect water quality in CHNMS, and ensure sanctuary resources are considered.

Activity WQ-2.4: Identify existing activities that would require a sanctuary permit under CHNMS regulations specific to discharge (see Activity RP-2.2).

Activity WQ-2.5: Determine if an agency MOA is needed related to roles and responsibilities of federal, state, and local government agencies with oversight of water quality regulations. Develop a MOA if needed. Use the existing MOA at MBNMS as an example.

Activity WQ-2.6: Collaborate with harbors to expand and ensure widespread usage of pump-out facilities, and to ensure ongoing maintenance to enhance long-term reliability.

Strategy WQ-3: Promote public engagement and stewardship of watersheds and water flowing to CHNMS

Creating a sense of ownership and responsibility to protect our natural world has been a highly successful means of improving water quality at other national marine sanctuaries. Focusing on solutions and not just problems empowers the community to action. Through education and engagement, citizens will be informed about water quality conditions and the actions they can take.

Activity WQ-3.1: Coordinate with existing volunteer monitoring programs and support their efforts while expanding sanctuary messaging. Consider establishing a citizen science water quality monitoring program if needed.

Activity WQ-3.2: Participate in partner-sponsored outreach events including water quality monitoring and beach cleanups.

Activity WQ-3.3: Increase the public's understanding of effects of pollutants on marine ecosystems by contributing knowledge of water quality conditions to other CHNMS outreach materials and social media (see Education and Outreach Action Plan).

Activity WQ-3.4: Organize a water quality symposium within the first two years with partners to gather water quality information, share local research, and build relationships to increase the understanding of water quality conditions and identify information gaps.

Strategy WQ-4: Collaborate on solution-focused watershed activities in urban, agricultural, and rural landscapes to promote healthy conditions for humans and aquatic resources

Industry experts in agriculture or municipalities are key partners in identifying solutions to most challenges they face. They can provide access to research, knowledge of their systems, and ability to leverage monetary and in-kind resources.

Activity WQ-4.1: Work with industry experts to promote examples of successful, innovative, and effective practices, technologies, and systematic approaches to reduce pollutant loads.

Activity WQ-4.2: Collect and assimilate pertinent data to better respond to CHNMS condition report questions related to water quality (see Activity RM-4.1).

Activity WQ-4.3: Consider establishing a program like expanding/extending the Agriculture Water Quality Alliance in MBNMS to establish a voluntary program to protect water quality and maintain productivity of farmlands in watersheds draining to CHNMS.

Strategy WQ-5: Assess and reduce debris, particularly plastic, in or entering CHNMS

An estimated eight million metric tons of plastic waste enters the world's ocean each year with approximately one to two million metric tons entering from the United States. A report from the National Academies Press titled *Reckoning with the U.S. Role in Global Ocean Plastic Waste* (2021)¹⁶ provides a comprehensive briefing on the magnitude of the problem along with recommendations.

Activity WQ-5.1: Complete an assessment of ongoing current marine debris preventative actions and programs and data collection efforts within CHNMS.

Activity WQ-5.2: Support efforts of partners to reduce sources of plastic entering CHNMS.

Activity WQ-5.3: Develop and conduct general and targeted outreach programs about reducing plastic debris with partners and stakeholders, especially on-the-water businesses (see Education and Outreach Action Plan).

Potential Partners

The following list reflects potential sanctuary partners, and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

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Academic and affiliated institutions

Cal Poly San Luis Obispo, University of California Santa Barbara, and University of California Cooperative Extension.

Governmental agencies

U.S. Environmental Protection Agency Region 9, California State Water Resources Control Board, and the Central Coast Regional Water Quality Control Board.

¹⁶ https://nap.nationalacademies.org/resource/26132/Ocean_Plastic_Waste_Highlights_2021.pdf

Nongovernmental organizations

California Marine Sanctuary Foundation, Central Coast Ambient Monitoring Program, Central Coast Water Quality Preservation, Inc., Central Coast Wetlands Group, Creek Lands Conservation, Morro Bay National Estuary Program, CHNMS Research Activities Panel, Natural Resources Conservation Services, Coastal San Luis Resource Conservation District, Environmental Defense Center, Santa Barbara Channel Keeper, and Surfrider.

Industry partners

Grower-Shipper Association of Santa Barbara and San Luis Obispo Counties, and San Luis Obispo County Farm Bureau, and Santa Barbara County Farm Bureau.

Blue Economy Action Plan

Goal: To contribute to the region’s Blue Economy, while protecting sanctuary resources and supporting the broader community.

Introduction

The Blue Economy spans a diversity of sectors including seafood production, marine research and technology development, marine transportation, ocean exploration, coastal resilience, and tourism and recreation. NOAA’s data, tools, and services that support coastal economies and their contribution to the national economy touch all aspects of American life. In 2018, the American Blue Economy, including goods and services, contributed about \$373 billion to the nation’s gross domestic product, supporting 2.3 million jobs, and grew faster than the nation’s economy in its entirety.¹⁷

In the initial period after sanctuary designation, tourism and recreation will be the primary Blue Economy focus for CHNMS, which aligns with the U.S. Department of Commerce’s National Travel and Tourism Strategy.¹⁸ This approach uses a whole-of-government strategy to accelerate full recovery and employment in the travel and tourism sector. Goals include restoring U.S. competitiveness in the sector by encouraging travel to the U.S., spreading the economic benefits of travel and tourism across the U.S. (especially in underserved communities and populations), and preparing the sector for the effects of climate change.

Tourism is a major contributor to San Luis Obispo County’s economy. In 2017, 7.2 million visitors spent nearly \$1.69 billion (Tourism Economics, 2018). In Santa Barbara County, key findings from a survey between September 2016 and August 2017 showed that total direct visitor-related spending contributed \$1.9 billion to the local economy (Destination Analysts, 2017). A major destination of this tourism is to beaches and nearshore waters. Common activities include whale watching, kayaking, sailing, surfing/paddle boarding, beach walking, and tide pooling.

¹⁷ <https://oceanservice.noaa.gov/economy/blue-economy-strategy/>

¹⁸ <https://www.commerce.gov/news/fact-sheets/2022/06/fact-sheet-2022-national-travel-and-tourism-strategy>

Marine related research and technology can also benefit from the presence of a national marine sanctuary since ocean science and exploration are key elements of sanctuary management. Sanctuary science needs can help drive investments in research and technology associated jobs.

ONMS, as a place-based organization, is uniquely positioned to use a destination stewardship approach to work collaboratively with communities to promote sustainable tourism and contribute to local economies, while also protecting sensitive marine wildlife and habitats.

This Blue Economy (BE) action plan is intended to address tourism and recreational uses, aimed at supporting a viable economy while protecting sanctuary resources and supporting the broader community.

Note that ***sustainable tourism*** is defined by the United Nations World Tourism Organization as “tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities.”

Strategy BE-1: Evaluate the need for and interest in a sustainable tourism and recreation program

The many recreational and tourism offerings and new opportunities, along with the Indigenous heritage significance of this coast, could create a need for and interest in developing sustainable recreation and tourism programs for CHNMS. This strategy addresses the need to assess through the Sanctuary Advisory Council how recreation and tourism fits into a future sanctuary.

Activity BE-1.1: In coordination with the Sanctuary Advisory Council, develop a sustainable tourism and recreation working group of the Sanctuary Advisory Council to conduct research on visitor information and sanctuary awareness. This will include evaluating the need for additional tourism programs or for additional messaging regarding sustainable practices during recreation and tourism activities.

Activity BE-1.2: Work with the sustainable tourism and recreation working group to create and grow online sanctuary-related content for partners, including a periodic newsletter that highlights local recreation and tourism opportunities and special events.

Activity BE-1.3: If recommended by the Sanctuary Advisory Council, work with local and regional organizations to promote sanctuary sustainable and equitable tourism, activities, and events. Groups like Central Coast Tourism Council; Visit San Luis Obispo, California (SLOCAL); Visit Santa Barbara; as well as local, regional, and state chambers of commerce and business groups will be key potential partners. Also, work with ONMS Headquarters Business Advisory Council to explore opportunities.

Strategy BE-2: Cultivate a generation of travelers who are also ocean stewards

It is critical that NOAA and tourism vendors work together in raising public awareness of tourism and recreation’s impacts on the ocean. By educating visitors to make informed and responsible decisions regarding ocean health, national marine sanctuaries aim to cultivate a generation of travelers who are also ocean stewards. A better-informed travel industry will enhance NOAA’s ability to manage and protect sanctuary resources and ensure a better visitor experience through a destination stewardship approach.

Activity BE-2.1: Work with tribes, local and state parks, museums, visitor centers, aquaria, and others to foster awareness of ocean health and sustainable tourism practices and develop outreach materials that include Indigenous heritage as part of the sanctuary messaging.

Activity BE-2.2: Identify opportunities for partnership on public events (like ocean-themed fairs, “Get Into Your Sanctuary”) and stewardship activities (like creek and beach cleanups). Cultivate a shared message from these opportunities and entice the public into participating in these events regularly. Ensure there is a tribal and Indigenous community component of these events where appropriate.

Activity BE-2.3: Work with local on-the-water recreation vendors (e.g., kayak, paddle board, surfboard, etc. rental companies) to identify opportunities for marketing and sanctuary messaging, including wildlife viewing guidelines.

Activity BE-2.4: Utilize the ONMS human use and visitation monitoring program. This survey-based, system-wide monitoring and research program will enable NOAA to understand the value of, impacts on, and contributions to local and regional economies.

Strategy BE-3: Support utilization and advancement of the marine technology sector

The marine technology sector of the Blue Economy is a dynamic and growing part of our national economy, critically important to advancing products and services for maritime industry and research. Ocean measurements, mapping, observations, and modeling and forecasting all contribute to sustaining important activities such as shipping and navigation, fishing and aquaculture, coastal protections, etc.

Activity BE-3.1: Characterize the marine technology sector in the CHNMS region.

Activity BE-3.2: Reach out to industry, academia, and public agencies to identify elements of the marine technology sector that connect with CHNMS goals and investigate their utility in assisting the sanctuary. The offshore wind energy projects in the area, and possibly the diverse decommissioning projects, may create opportunities to help develop technologies and techniques for sustainably conducting these kinds of projects in a sensitive marine area like CHNMS.

Activity BE-3.3: Explore opportunities to facilitate and support specific science related to climate change. This area of coast and ocean offers a unique opportunity to study climate change given its transition zone between cooler northern waters and the warmer southern California current. CHNMS could become a sentinel site for studying the effects of climate on the marine ecosystem.

Potential Partners

The following list reflects potential sanctuary partners, and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

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Academic and affiliated institutions

University of California Santa Barbara and Cal Poly San Luis Obispo.

Governmental agencies and community organizations

Chambers of Commerce, Visit SLOCAL, Central Coast Tourism Council, San Luis Obispo County Business Improvement District, Regional Economic Action Coalition, local and state parks, museums, visitor centers, aquaria, and visitor-serving organizations.

Wildlife Disturbance Action Plan

Goal: Assess and mitigate disturbance of wildlife within sanctuary boundaries.

Introduction

Viewing marine animals in their natural habitat can be an exciting and educational experience. More and more people are visiting shorelines and coastal waters to view and photograph wildlife or recreate in these habitats. Although it can be tempting to try to get close to marine animals, it's always best to view them from a safe and respectful distance. Often, people are unaware that their proximity or activity can be harmful to the wildlife itself, which is why education and outreach are major themes of this action plan. In addition, understanding the scope and extent of wildlife disturbance in the sanctuary can help direct efforts where there may be recurring or ongoing disturbance.

As coastal recreation and tourism continue to grow, and advancements in technology are made (e.g., drones and other motorized craft), wildlife disturbance has increased at other west coast sanctuaries and is anticipated (and observed at some places) in CHNMS. Climate change, too, is increasing stress in many species, likely making wildlife less resilient to disturbance. In most incidents, people unknowingly disturb wildlife because they are unaware that such disturbances can cause impacts on food resources, proper rest, protection from predators, and offspring survival. Categories of wildlife disturbance include shoreside disturbance, on-the-water disturbances from recreational or commercial users, and disruptions from low-flying aircraft. These disturbances cause several negative events associated with marine mammals and birds: disruption of haul-out behavior in seals and sea lions, disturbing resting or grooming animals, and flushing nesting birds from their nests. Additionally, boaters and kayakers may approach migrating whales, often mother-calf pairs, altering their feeding or migration activities. Studies by wildlife protection agencies have found education efforts that enhance awareness and sensitivity to be highly effective in reducing disturbances, while regular monitoring in sensitive

areas helps reduce violations of wildlife disturbance laws. Educating people about wildlife and how to avoid disturbance is critical to minimizing this type of harm.

Several areas that have experienced incidences of wildlife disturbance (WD) include Shell Beach, particularly the offshore rocks and cliffs near Dinosaur Caves Park and Margo Dodd Park, Estero Bluffs State Park, Montaña de Oro, Surf Beach, and Gaviota Pier.

Strategy WD-1: Evaluate wildlife disturbance by visitors and recreational users

Activity WD-1.1: Conduct a general assessment of the overall level of wildlife disturbance by all users within or adjacent to the boundaries of the sanctuary. This assessment may use direct observations by staff, volunteers, agency partners, and reporting by the public. The intent of this assessment is to better understand levels of disturbance and places where these disturbances tend to occur.

Activity WD-1.2: Conduct a specific assessment, in partnership with agency partners and users, as well as the Sanctuary Advisory Council, to determine the need for regulatory and/or non-regulatory actions to address actual or potential wildlife disturbance caused by motorized personal water craft, and related emerging technologies.

Activity WD-1.3: Assess the level of wildlife disturbance caused by shipping—specifically, strikes on whales by large marine vessels within the boundaries of the sanctuary. This should include considering mitigation methods similar to those NOAA has used for Channel Islands, Greater Farallones, and Cordell Bank national marine sanctuaries, such as recommending slower vessel speeds when whales are present, adjusting shipping lanes where appropriate, and education and outreach efforts to industry.

Activity WD-1.4: Work with partners to establish wildlife disturbance educational materials and programming using the ONMS Wildlife Viewing Guidelines¹⁹ and collaborate with partners on the most effective means to distribute and deliver these materials.

Activity WD-1.5: Monitor white shark activity and potential disturbance. This effort can help better understand the white shark population, areas frequented by white sharks, and if disturbance is happening.

Strategy WD-2: Evaluate wildlife disturbance via aircraft

Activity WD-2.1: Work with partners such as the Seabird Protection Network, Point Blue Conservation Science, and California State Parks to educate small aircraft aviators from nearby airports to avoid sensitive breeding and nesting areas. Education and outreach could include developing and distributing one-pagers or brochures, and presentations to aviator clubs.

Activity WD-2.2: Work with partners and environmental staff at military bases to identify and document sensitive breeding and nesting areas to be avoided and/or mitigated for disturbances.

Activity WD-2.3: Conduct a specific assessment, in partnership with agency partners and users, as well as the Sanctuary Advisory Council, to determine the level of use, location,

¹⁹ <https://sanctuaries.noaa.gov/wildlife-viewing/>

potential impact of, and need for regulatory and/or nonregulatory actions regarding potential wildlife disturbance caused by low-flying aircraft. NOAA should evaluate the success of other strategies on the west coast to minimize impact, including use of zones, height of flight restrictions, area avoidance, seasonal restrictions, and education and outreach.

Strategy WD-3: Evaluate potential wildlife disturbance from offshore commercial wind energy development and operation

With the anticipated development of the Morro Bay Wind Energy Area, NOAA should ensure any related infrastructure (turbines, platforms, cables, substations, and associated mooring lines), minimizes threats to wildlife in the sanctuary. Evaluations will help inform resource protection efforts focused on avoiding, minimizing, and mitigating negative impacts. Specific research and monitoring actions would be identified in plans necessary for Strategy OE-2.

Strategy WD-4: Identify and establish partner relationships to address wildlife disturbance

Activity WD-4.1: Document reports of wildlife disturbance from the public and partners to evaluate the need for additional dedicated enforcement staff.

Activity WD-4.2: Consider establishing a Law Enforcement Technical Advisory Committee to assist in coordinating with other law enforcement partners on wildlife disturbance issues and hot spots.

Activity WD-4.3: Consider the need to support whale disentanglement teams in the region (see also Strategy OA-4).

Strategy WD-5: Develop education and outreach materials and programs to teach the public about wildlife behavior, needs, and ways to avoid and minimize disturbance.

Education and outreach to the general public, as well as to recreational users, will help inform them about marine wildlife and prevent disturbance. Staff will work with partners to develop materials and means of reaching the public through printed materials, web content, signage (with QR codes), videos, etc. Coordinate with staff developing educational programming and messaging to address resource threats in Strategy EO-3.

Potential Partners

The following list reflects potential sanctuary partners, and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

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Governmental agencies

California State Parks, California Department of Fish and Wildlife, NOAA Office of Law Enforcement, Central California State Parks Association. National Marine Fisheries Service and Office of Protected Resources, NOAA Sea Grant, and BOEM.

Nongovernmental organizations

California Marine Protected Area Collaborative Network, Community Active Wildlife Stewards, Point Blue Conservation Science, Seabird Protection Network, Sea Otter Savvy, Pacific Wildlife Center, Marine Mammal Center, Morro Bay National Estuary Program. Recreate Responsibly, Surfrider, Respect Wildlife (California-based), and local government.

Education and Outreach Action Plan

Goal: Promote and encourage appreciation and stewardship of cultural and natural resources by enhancing greater public understanding of sanctuary resources. The plan outlines a strategy to develop an education and outreach program and grow sanctuary awareness through collaboration with partners.

Introduction

There are many opportunities for engagement with visitors and the community to raise awareness about the sanctuary, build public support for its conservation, address threats to sanctuary resources, and increase compliance with regulations. Actions include creating education and outreach (EO) materials, promoting the sanctuary through social media outreach, physical outreach tools such as installing coastal signage or adding exhibits at partner visitor centers and museums, and building educational partnerships in general.

Education partners should include formal education programs, schools, informal education programs, Indigenous communities, docent and volunteer programs, and nonprofit organizations. Outreach opportunities and partnerships may be developed through media outreach, including publications that provide information about the area, chambers of commerce and local businesses, and regional tourism organizations.

Strategy EO-1: Identify, establish, and enhance relationships with partners

Activity EO-1.1: Conduct a comprehensive survey of government agencies, as well as formal and informal education provider programs in the region, to identify what environmental education programs already exist and what their key messaging and methods are. The survey should also assess the potential for partnership relationships. Potential partners could include federal, state, and county agencies; school districts, colleges, and universities; tribes; and organizations that provide science-based education about the cultural and natural history of the area, such as museums, botanical gardens, aquaria, and outdoor environmental education facilities.

Activity EO-1.2: In conjunction with the Sanctuary Advisory Council, consider creating an Education and Outreach Activities Working Group of the SAC. Identified local expert partners would be invited to participate and make recommendations to the SAC regarding program and

curriculum development and other materials, outreach activities and events, and assessing success of these efforts. Members of this panel would include formal education providers, informal education providers (such as nonprofit organizations and after-school programs), cultural and Indigenous tribal representatives, and ONMS staff.

Activity EO-1.3: Reference the Sanctuary-U.S. Forest Service partnership initiated in 2016 between ONMS West Coast Region and U.S. Forest Service Region 5, with similar missions and compelling opportunities for collaboration. Efforts will be made to develop joint messaging and destination stewardship programs, as well as project descriptions for outreach and restoration activities primarily with the Los Padres National Forest.

Strategy EO-2: Conduct a needs assessment and a detailed communication/education/outreach plan

Work products from Strategy EO-1 and the SAC panel can be used to develop a needs assessment for comprehensive education and outreach program development. The outcome of the assessment will be a task list forming the foundation of a detailed communication, education, and outreach plan.

Activity EO-2.1: Develop a needs assessment built off the survey of existing programs in Activity EO-1.1. Included in the needs assessment would be consideration of constructing a new visitor center and/or developing exhibits and signage for existing visitor centers and museums, developing outreach materials and messaging for tourism organizations, conducting public outreach campaigns and programs, then developing education programs for both formal school programs and informal after-school programs or clubs and environmental education programs. A trained docent corps that can provide accurate information through a variety of community outlets may be established with its own in-depth training. Information should be shared with local environmental nonprofit organizations.

Activity EO-2.2: Develop a five-year plan for physical outreach tools and social media strategies. Include coastal signage, new exhibits in existing visitor centers, a new visitor center if needed, and social media campaign tactical plans.

Strategy EO-3: Establish core programs and messaging

NOAA will need to develop the core educational concepts and messaging for different issues and different audiences. These core educational concepts must be aligned with national science, ocean, and climate literacy standards; other relevant education standards; and ONMS educational goals. Input from Indigenous representatives is essential for accurate and consistent representation of regional cultural and natural history. Core messages would also be developed for media outreach and for tourism organizations and businesses promoting the sanctuary, its resources, and public engagement with those resources. The goals of this strategy are to ensure timely delivery of education messaging to address key resource threats and protect key habitats, while also ensuring accurate and consistent messaging through all venues.

Activity EO-3.1: Develop key messages and story maps for special habitats. Core messages should also be developed to highlight distinctive features of the sanctuary, like the Rodriguez Seamount, Arguello Canyon, the sanctuary's ecological transition zone, kelp forests, beaches,

and rocky intertidal areas. These messages will be used to create materials such as posters and story maps.

Activity EO-3.2: Develop key messages and education programs for resource threats; for example, climate change, wildlife disturbance, and water quality.

Activity EO-3.3: Develop key messages related to support of sustainable fisheries (as defined by state and federal fishery managers) as compatible with sanctuary management.

Strategy EO-4: Develop a business and public affairs engagement plan

Effective and comprehensive outreach should include targeted efforts to business organizations (chambers of commerce, special districts, etc.) and government forums (city councils, councils of government, county boards of supervisors, and other government agencies). An implementation plan will be developed that identifies opportunities for regular briefings, participation in committees, and other groups.

Activity EO-4.1: Develop a list of coastal businesses with ties or proximity to the sanctuary for inclusion in an outreach plan. Special emphasis will be on businesses related to recreation and tourism to maximize sanctuary connection, opportunities for partnership, and marketing destination stewardship.

Activity EO-4.2: Develop a list of government agencies that should receive regular briefings on sanctuary matters and consider opportunities for sanctuary participation in various forums. Staff should develop an annual calendar of scheduled briefings and regular local government meetings to track any coastal issues in these forums.

Strategy EO-5: Assess program effectiveness

Regular assessment of education and outreach program effectiveness (through standardized measures such as number of individuals reached by demographic) can help guide and improve efforts. Understanding the effectiveness of messaging, as identified by voluntary public feedback, volunteers and docents, and staff can also help development and placement of products such as signage, exhibits, and kiosks. Qualitative assessment would include assessing community awareness and attitudes toward sanctuary natural and cultural resources.

Potential Partners

The following list reflects potential sanctuary partners, and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

Santa Ynez Band of Chumash Indians, Northern Chumash Tribal Council, yak tityu tityu yak tilhini Northern Chumash Tribe and ytt Northern Chumash Nonprofit, Northern Chumash Bear Clan, Coastal Band of the Chumash Nation, Barbareño Band of Chumash Indians, Barbareño Chumash Tribal Council, Barbareño/Ventureño Band of Mission Indians, Chumash Heritage Foundation, Chumash Maritime Association, Wishtoyo Foundation, Salinan Tribe of Monterey and San Luis Obispo Counties, and the Xolon Salinan Tribe.

Academic and affiliated institutions

Cal Poly San Luis Obispo, Cal State Channel Islands, University of California Santa Barbara, Antioch University, Community Colleges serving the area, Cabrillo High School Aquarium Program, extended education and community education programs, and private educational institutions.

Governmental agencies

ONMS Education and Outreach staff, U.S. Forest Service, National Park Service, National Estuary Program, Morro Bay National Estuary Program, San Luis Obispo County, NOAA National Centers for Coastal and Ocean Science, NOAA Climate Education Program, National Marine Fisheries Service, California Department of Parks and Recreation, California State Historic Preservation Office, NOAA Bay Watershed Education and Training Program, National Marine Fisheries Service Restoration Center, NOAA Integrated Ecosystem Assessment Program, San Luis Obispo and Santa Barbara County Offices of Education, and California Regional Environmental Education Community Network, and NOAA Sea Grant.

Nongovernmental organizations

Museums, and historical centers include the Multicultural Education for Resources Issues Threatening Oceans (MERITO) Academy, Central Coast State Parks Association, Guadalupe Business Association, Lompoc Valley Historical Society, Port San Luis Lighthouse Association, The Nature Conservancy Dangermond Preserve, San Luis Obispo Botanical Garden, Santa Barbara Museum of Natural History and Santa Barbara Botanical Garden, Environmental Center of San Luis Obispo, and Surfrider.

Business and tourism partners

Regional tourism marketing organizations and businesses that provide informal education and outreach to visitors and customers include Visit SLOCAL, South Coast Chambers of Commerce, San Luis Obispo County Business Improvement District, other local and regional chambers of commerce, and local on-the-water businesses.

Resource Protection Action Plan

Goal: Maintain and improve the sanctuary's natural biological and ecological processes and Indigenous and maritime resources by evaluating and addressing adverse impacts from human activities and applying traditional ecological knowledge and perspectives.

Introduction

The general approach of the resource protection program is to collaborate on management efforts with local stakeholders and agency partners to identify impacts to wildlife and other protected resources. Then, through improved scientific understanding, reduce impacts and strengthen protection of sanctuary resources.

This action plan aims to establish a resource protection program and to conduct activities addressing site-specific issues based on NOAA's collective experience in other sanctuaries, other agencies' knowledge, and experience. Activity planning uses as its lens local and traditional ecological knowledge and Indigenous perspectives. Resource protection (RP) issues will be

addressed through both a proactive and emergency response approach, including enforcement of sanctuary regulations, issuing permits with conditions to minimize impacts, and reviewing/commenting on coastal development projects and permit application procedures. This action plan also includes strategies and activities in the areas of collaborative planning and management, marine policy, resource protection-based outreach and interpretation, and the incorporation of tribal approaches.

Strategy RP-1: Establish a Resource Protection Program through partnerships to protect sanctuary wildlife, habitats, qualities, and cultural resources

A new sanctuary of this size and scope, with an ecosystem-wide approach to resource protection, will require an initial period of development to build capacity, to understand the issues and threats more fully, and to establish collaborative partnerships allowing it to be both effective and sustainable.

Activity RP-1.1: Identify the needed partnerships and collaborations among local, state, and federal agencies; user groups; NGOs; and tribes to effectively address resource threats. Begin to work with partners on effective programs that address threats.

Activity RP-1.2: Expand upon existing sanctuary volunteer programs like citizen science water quality monitoring, and interpretive enforcement programs such as Team OCEAN (on-the-water kayak or small boat-based) and Bay Net (shore-based) which interact with the public about the importance of the sanctuary, stewardship, and avoiding wildlife disturbances. Experience has shown these volunteer programs work best in partnership with other organizations and/or a nonprofit partner.

Activity RP-1.3: Evaluate the effectiveness of protections for the Rodriguez Seamount and, if needed, consider additional conservation measures to address changing threats from physical, oceanographic, biologic, or anthropogenic sources.

Strategy RP-2: Establish and implement a permitting and environmental review program

The NOAA/ONMS permit program provides a mechanism to review requests to conduct certain otherwise prohibited activities, such as altering the submerged lands or discharging within the sanctuary. Where appropriate, NOAA will permit or authorize these activities with specific terms and conditions focused on reducing and/or mitigating impacts to sanctuary resources. Types of permits include research, education, tribal cultural and ceremonial activities and Special Use Permits.

Activity RP-2.1: Develop a permit program for CHNMS that is adaptive to the changing demands for regulatory review in the new sanctuary (e.g., certifications in the first 120 days or ONMS authorizations in collaboration with partner permitting agencies).

Activity RP-2.2: Track and review (and comment when needed) on projects, plans, and proposed actions of other agencies that may affect sanctuary resources and provide information to federal, state, and local agencies regarding sanctuary policies and regulations. This would include agencies like National Marine Fisheries Service, BOEM, U.S. Environmental Protection

Agency, U.S. Coast Guard, California Coastal Commission, California State Lands Commission, Regional Water Quality Control Board, California Resources Agency, and local government.

Activity RP-2.3: Given the number of construction projects in or adjacent to the sanctuary, develop a mechanism to monitor compliance with any sanctuary-issued permits. In addition, develop a mechanism to monitor compliance for large construction projects (including decommissioning, removal, and restoration activities) impacting the sanctuary area.

Activity RP-2.4: Create a mechanism for sharing with the IPC permit application requests and develop a process to receive timely feedback prior to finalizing any decisions on individual permit requests.

Strategy RP-3: Establish an enforcement presence and build enforcement partnerships

Effective surveillance and enforcement capabilities are critical to ensuring protection of sanctuary resources. This includes the visibility of enforcement through an officer in the field, deputized state enforcement partners who carry out activities through a joint enforcement agreement, and other enforcement partners who can report incidents and provide important information.

Activity RP-3.1: Build partnerships and support interagency coordination of enforcement, as appropriate, through NOAA Office of Law Enforcement and with California state wardens and rangers to address potential and actual sanctuary violations in the field.

Activity RP-3.2: Facilitate communication among law enforcement entities through coordination of a dedicated Law Enforcement Technical Advisory Committee. In other sanctuaries, these committees meet regularly to provide updates on issues, training, and enhanced coordination and communications.

Activity RP-3.3: Track and report incidents within and affecting CHNMS consistent with the region-wide tracking system. This would likely involve potential sanctuary regulatory violations, permit violations, and vessel incidents like groundings and sinkings.

Strategy RP-4: Interpret and distribute resource protection information

NOAA will provide information to the SAC, volunteers, interns, and the public on issues of concern. Outreach will be delivered through reports, products, and presentations. Key areas to consider initially include protecting water quality and wildlife disturbance, and the importance of tribal knowledge to specific resource protection.

Activity RP-4.1: Consider convening a Conservation Working Group of the SAC to serve as a forum for discussing conservation issues and identifying potential actions to address resource protection needs and threats. Working Group members could include resource agencies, NGOs, tribal and Indigenous community members, and user groups.

Activity RP-4.2: Provide content for technical reports and information appropriate for social media, websites, presentations, and requests from the public. The content would be focused on threats and ways to address and mitigate those threats, and the various public agencies to contact for more information.

Strategy RP-5: Respond to emergencies that threaten sanctuary resources

Activity RP-5.1: Coordinate with USCG and other emergency response organizations through the local Area Contingency Planning process for response to oil and other hazardous spills. Sanctuary staff would participate in Area Contingency Planning and ensure sanctuary resources (and staff expertise) are considered.

Activity RP-5.2: Ensure the California Office of Emergency Services and the U.S. Coast Guard notifies CHNMS of any discharges, sinking, or grounding of vessels within CHNMS, and staff are trained and available to respond as needed.

Strategy RP-6: Track and monitor vessel traffic compliance

The International Maritime Organization is the United Nations' specialized agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships. The recommended tracks, adopted by the International Maritime Organization, were established in 2000 to reduce threats of spills by vessel traffic such as container ships, bulk carriers, and oil tankers. Compliance with these tracks is important to protecting sanctuary resources.

Activity RP-6.1: Track and monitor container ships, bulk freighters, and vessels carrying hazardous materials for compliance with International Maritime Organization recommended tracks.

Activity RP-6.2: Coordinate with the U.S. Coast Guard on contact and notifications for vessels deviating from tracks. USCG has jurisdictions for all mariners and can contact a vessel directly while underway and request that they resume use of the recommended tracks.

Activity RP-6.3: Coordinate at a regional level on reducing the number of whale ship strikes in national marine sanctuaries in California. NOAA has implemented voluntary vessel speed reduction programs for Channel Islands, Greater Farallones, Cordell Bank, and Monterey Bay national marine sanctuaries in the San Francisco and Santa Barbara traffic separation schemes to protect whales.

Strategy RP-7: Consider expanded conservation in Morro Bay Estuary

NOAA should collaborate with the Morro Bay National Estuary Program to consider how conservation of that important estuary can be expanded and complemented by CHNMS management. Further areas of study could include:

- Improve understanding of the historical Indigenous uses of the estuary and its importance to both Salinan and Chumash peoples, including where possible village sites were located.
- Evaluate how sanctuary programs could complement the Morro Bay National Estuary Program, and how to build on the program's collaborations with partners to focus its efforts on monitoring, research, restoration, conservation, education, and outreach.
- Identify what additional protections would be achieved if the estuary were included as part of the sanctuary.

Potential Partners

The following list reflects potential sanctuary partners and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

Santa Ynez Band of Chumash Indians, Northern Chumash Tribal Council, yak tityu tityu yak tilhini Northern Chumash Tribe and ytt Northern Chumash Nonprofit, Northern Chumash Bear Clan, Coastal Band of the Chumash Nation, Barbareño Band of Chumash Indians, Barbareño Chumash Tribal Council, Barbareño/Ventureño Band of Mission Indians, Chumash Heritage Foundation, Chumash Maritime Association, Wishtoyo Foundation, Salinan Tribe of Monterey and San Luis Obispo Counties, and the Xolon Salinan Tribe.

Academic and affiliated institutions

University of California Santa Barbara and Cal Poly San Luis Obispo.

Governmental agencies

USCG, California Department of Fish and Wildlife, National Marine Fisheries Service, Pacific Fisheries Management Council, NOAA Office of Law Enforcement, California State Parks. NOAA Sea Grant, California Coastal Commission, City of Morro Bay, and Baywood-Los Osos unincorporated community.

Nongovernmental organizations

Morro Bay National Estuary Program.

Research and Monitoring Action Plan

Goal: Ensure the best available science is accessible to address current and projected needs of sanctuary management, resource protection, and education/outreach.

Introduction

An essential management obligation NOAA has to a national marine sanctuary is to conduct and coordinate research and monitoring (RM). This is to ensure the agency understands the natural ecological and oceanographic processes and human uses affecting the sanctuary. Research and monitoring activities must be responsive to both existing resource protection and management concerns and must improve understanding of the ecosystem services provided by the sanctuary to local communities, local tribes, and the nation. Such research activities enable CHNMS to identify issues of emerging concern, and to provide ONMS with the information fundamental to sound decision making. NOAA will use field-based and analytical social and ecological research to address the diverse issues the sanctuary ecosystem faces and disseminate information to aid sanctuary management.

Most critically for this proposed sanctuary, research and monitoring will rely on a blend of Indigenous and western perspectives to guide scientific planning. The strategies in this action plan highlight a mix of directed, NOAA-led research and partnerships to achieve a balanced portfolio. The action plan also outlines a strategic approach to using research findings and

traditional knowledge to inform management decisions, including how knowledge is translated and interpreted from tribal and western perspectives. The strategies outlined below will equip sanctuary management with the best available science to conserve, protect, and enhance the natural and cultural resources found within sanctuaries.

As with other sites in the system, most research will be generated through partnership and coordination at the local, regional, and national levels. ONMS relies heavily on partners (e.g., federal and state agencies, academics, NGOs, and private sector companies) and engages with partners through announcement of funding opportunities, provision of letters of support, and in-kind contributions of field or analytical time and vessel support. To support partnership building, the CHNMS team could help advance research collaborations through establishment, in conjunction with the SAC, of a Research Activities Panel (RAP) of the SAC that aims to include Indigenous peoples, experts, and researchers, and brings together western and Indigenous knowledge. This dual perspective will be critical to serving the Indigenous communities that live in the area and supporting the intention of CHNMS' designation. Distilled information will be made available to ONMS education, outreach, and resource protection staff, and will be distributed via the Sanctuary Integrated Monitoring Network web portal (SIMoN),²⁰ presentations at conferences and workshops, and through the development of technical reports and peer-reviewed publications. Additionally, the CHNMS Research Team will participate in several mentoring opportunities, such as hosting fellows and interns to teach the next generation about the role of science in management and policy.

Strategy RM-1: Develop new research partnerships and infrastructure

ONMS relies heavily on partnerships with local universities, the private sector, NGOs, other branches of NOAA, and other government agencies. ONMS uses research infrastructure like vessels, dive teams, remotely operated vehicles (ROVs), and other tools to support partners in conducting research to fulfill management needs.

Activity RM-1.1: In conjunction with the SAC, consider launching and supporting a RAP as a working group of the SAC. The RAP would be composed of representatives from regional research institutions and organizations. The RAP will have several key objectives:

- Advise staff on conservation science issues that will influence policy (e.g., address research questions in the CHNMS management plan [see RM-6.1]).
- Review research issues and documents for SAC and sanctuary staff.
- Facilitate the exchange of regional research information and create opportunities for project coordination.
- Convey regional research needs and opportunities to the SAC.

Activity RM-1.2: Develop and maintain partnerships with tribes and Indigenous communities and social scientists to document and understand traditional knowledge, culturally important species, and the threats these resources face due to climate change and other threats. Integrate these findings with the ongoing management and research efforts of CHNMS.

²⁰ <https://sanctuariesimon.org/>

Activity RM-1.3: Identify equipment needs for CHNMS including vessel requirements (e.g., size, berthing requirements, equipment needs, and harbor slip location), necessary field training for staff and partners, required field operations equipment, and storage. These needs should be defined in accordance with the mission requirements of CHNMS based on priority conservation issues and information/science needs, maritime heritage, emergency response, damage assessment, enforcement, equipment deployment/maintenance, partner needs, etc. After the identification of needs, work with ONMS headquarters and local partners to procure needed equipment and training.

Activity RM-1.4: Develop and maintain partnerships with various entities, including federal and state government agencies, academics, NGOs, tribes, the private sector, and foundations. ONMS will integrate with existing networks, including use of the RAP and research consortia.

Strategy RM-2: Characterize and monitor the sociological trends, human dynamics, and tribal cultural landscapes associated with the sanctuary

Given the tribal role in this sanctuary's nomination, understanding and supporting tribal values, cultural landscapes, Indigenous knowledge, and cultural practices will be an important part of this sanctuary. The sanctuary supports several ecosystem services, which represent the benefits people gain from ecosystem functions (e.g., provisioning ecosystem services such as swordfish used for both food and ceremonial objects, and non-material cultural ecosystem services such as connection and responsibility of tribal people to ocean stewardship). Documenting and supporting the ecosystem services that encompass Indigenous cultures, values, and ways of knowing is vital for successful sanctuary management. Indigenous perspectives can, and should, be integrated with their western science counterparts equally. This dual perspective on management will be key to supporting tribal interests, and those of adjacent central California communities. Furthermore, this integrated perspective will be valuable for assessing and supporting the adaptability of communities and tribes to forecasted ecosystem change.

Activity RM-2.1: Identify relevant social-ecological indicators important to tribes and Indigenous communities to incorporate into CHNMS management. NOAA will work with tribal partners to document contemporary and traditional tribal knowledge (also see Activity ICH-2.3) and values used to track sanctuary status and trends.

Activity RM-2.2: Work with tribal partners to conduct cultural landscape studies of the communities on and near the waters of CHNMS to enhance the focus on tribal culture and values unique to this sanctuary. By utilizing the framework presented in the Guidance Document for Characterizing Tribal Cultural Landscapes (Ball et al., 2015) and coordinating with BOEM and partners that have also been offering cultural landscape assessment assistance to local area tribes, this activity will support development of a tribal knowledge base through ethnographic and oral history inquiries, use of noninvasive and culturally sensitive methods, and following tribe-specific protocols regarding any disposition of culturally sensitive information. This activity corresponds to and supports the Indigenous and Cultural Heritage Action Plan, specifically Activity ICH-2.5.

Activity RM-2.3: Work with tribes, as appropriate, to develop individual information collection requests (ICRs/surveys) from the NOAA Compendium of Questions to survey

communities on the central California coast and assess the needs and desires of local tribes and other community members. This directed survey will allow CHNMS to better understand and cater to the variety of needs people have on the central California coast.

Strategy RM-3: Characterize and monitor the biological and physical features and processes associated with the sanctuary

Identifying, tracking, and researching the biophysical environment is fundamental to understanding sanctuary management challenges. ONMS will address information gaps and continue to collect critical long-term monitoring data with partners. Examples of areas of focus are habitat mapping, climate change, oceanographic conditions and drivers, acoustic monitoring, ecosystem connectivity, and ocean acidification.

Activity RM-3.1: Leverage and support ongoing characterization and monitoring of the region through partners' activities. Work with partners to ingest current and ongoing monitoring in the sanctuary boundary and develop new protocols to address sanctuary needs and improve inclusivity and access to information for tribal communities.

Activity RM-3.2: Engage Indigenous communities in identifying research priorities and projects, including opportunities for tribally led citizen science programs, like Beach COMBERS,²¹ and youth programs. (Beach COMBERS incorporates an acronym for Coastal Ocean Mammal and Bird Education and Research Surveys).

Activity RM-3.3: Conduct gap analysis to understand biophysical research and exploration needs for CHNMS, with special care to include resources of value to local tribal and Indigenous communities. This gap analysis should cover the range of biophysical and socioeconomic data types deemed relevant by local stakeholders, including development of foundational data layers like seafloor and habitat maps. This activity could be the initial task of the RAP.

Activity RM-3.4: Characterize and monitor the biology, ecology, geology, and ecosystem services and functions with a special focus on two areas: deep-sea ecosystems and nearshore biological communities. Nearshore work should include utilizing existing, standardized programs and methods (for example, PISCO – The Partnership for Interdisciplinary Studies of Coastal Oceans). Explore developing new technologies to improve monitoring in hard-to-reach locations and conditions. New technologies include environmental DNA, passive acoustic monitoring, satellite observations, and acoustic telemetry. Develop research proposals that seek funding from NOAA and external partners in support of projects related to top sanctuary ecosystem service science needs. Direct this work to better understand human use within CHNMS and the benefits people derive from the interacting sanctuary resources.

Activity RM-3.5: Characterize and monitor the biology, ecology, geology, and ecosystem functions of the Rodriguez Seamount as an underwater feature within CHNMS that has special ecological and scientific national significance (see also RP-9.1).

²¹ <https://montereybay.noaa.gov/getinvolved/volunteer/bchmon.html>

Activity RM-3.6: Assess and consider using or establishing citizen science programs underway in adjacent sanctuaries and state marine protected areas. The specific citizen science will be tailored to and focused on the particular science needs of CHNMS.

Strategy RM-4: Interpret and apply scientific information and traditional knowledge to meet sanctuary needs

Timely interpretation of the best available science, which includes traditional knowledge, is critical to support sanctuary decision making and to prevent further impact on resources. ONMS will convene groups of external researchers to provide timely analysis and synthesis that meet management, resource protection, and education/outreach needs.

Activity RM-4.1: Serve as scientific experts on a wide array of topics in support of management, resource protection, and education/outreach needs. This can include the development of white papers, responses to internal agency requests and public inquiries, and the creation of media, including stories, articles, videos, exhibits, signs, and interactive technologies.

Activity RM-4.2: Develop relevant monitoring and research partnerships (e.g., Cal Poly San Luis Obispo, Cascadia, United States Geological Survey (USGS), BOEM, California Cooperative Oceanic Fisheries Investigations (CalCOFI)) to understand impacts of wind farm implementation on biological resources, including soundscape monitoring. Resource monitoring protocols and programs will be developed for the wind farm area study period, installation, operation, and decommissioning.

Activity RM-4.3: Establish and maintain the online SIMoN¹⁶ database and web portal of existing and historic monitoring programs and current marine events. SIMoN has an online database of monitoring-related projects that will be kept up-to-date if they are active or designated as historical if they are not.

Strategy RM-5: Develop research and monitoring projects to support issue-based action plans and emerging needs

Activity RM-5.1: Develop project ideas and write ecosystem monitoring and research proposals for internal (including NOAA Vessel Time) and external funding to address resource protection and management needs at site, regional, and national levels. Proposals will support projects related to site, regional, and national top science needs; topics related to issue-based action plans; and emerging priorities.

Activity RM-5.2: Provide letters of support for appropriate applied research proposals. Many grant funding agencies require an applied-use component to their grants, or some indication of the societal benefits of the proposed research. ONMS will continue writing letters of support for scientists proposing research addressing priority ecosystem service science needs and emerging issues.

Strategy RM-6: Support science needs and expertise

As a national network of protected areas, sanctuaries can benefit from national collaborations that inform issues affecting sites around the system. By focusing on cohesive ways to track and

report on issues that broadly impact multiple sanctuaries, the research team can advance ocean conservation nationally and internationally and share ideas from a broad range of researchers.

Activity RM-6.1: Contribute sanctuary-related science needs assessments¹⁷ to the ONMS website for reference by interested scientists. Science needs assessments will be targeted to the specific needs for CHNMS and developed from the results of the gap analysis mentioned in this Action Plan (Activity RM-3.3).

Activity RM-6.2: Share research expertise across national marine sanctuary sites. Research staff will regularly share information and resources with other sanctuary sites, especially within the west coast region, focused on areas of expertise such as condition report development, ocean noise, telemetry, deep-sea exploration, human dimensions, maritime heritage, ecosystem services, climate change, and seafloor characterization.

Activity RM-6.3: Build upon ONMS' Diversity and Inclusion by encouraging opportunities for local tribal and Indigenous peoples to gain paid experience and employment in marine research and conservation.

Activity RM-6.4: Seek opportunities to expand or, if feasible, support national, regional, and cross-site science initiatives that enhance understanding of CHNMS and its resources, such as soundscape monitoring,²² U.S. Geological Survey's EXPRESS Campaign²³ (e.g., seafloor mapping and characterization), and NOAA Sentinel Site²⁴ development. These opportunities will be particularly valuable in the early years of the sanctuary when its full array of science staff will still be in development.

Potential Partners

The following list reflects potential sanctuary partners, and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

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Academic and affiliated institutions

California State University Long Beach, University of California Santa Barbara, California State University Channel Islands, University of California Santa Cruz, and Cal Poly San Luis Obispo.

²² <https://sanctuaries.noaa.gov/science/monitoring/sound/>

²³ <https://www.usgs.gov/centers/pcmssc/science/express-expanding-pacific-research-and-exploration-submerged-systems>

²⁴ <https://oceanservice.noaa.gov/sentinelsites/sea-level.html>

Governmental agencies

NOAA's Deep-Sea Coral and Research Technology Program, BOEM, National Centers for Coastal Ocean Science (NCCOS), U.S. Integrated Ocean Observing System Program, NOAA Southwest Fisheries Science Center, and NOAA NCCOS.

Nongovernmental organizations

Morro Bay National Estuary, CalCOFI long-term monitoring, Santa Barbara Channel Long Term Ecological Research, and Partnership for Interdisciplinary Studies of Coastal Oceans.

Operations and Administration Action Plan

Goal: Create sanctuary infrastructure, staffing, and program support to ensure effective and efficient implementation of the management plan.

Introduction

CHNMS is established to preserve and protect the region's unique and irreplaceable natural and cultural resources. Protecting these resources requires appropriate facilities, staff, vessels, trained personnel and volunteers, funding and partnerships, and specialized equipment. Developing an effective and sustainable infrastructure will be a major focus in the first few years of operations. See Appendix B: Estimated Operating Budget.

The highest priority for the Operations and Administration (OA) action plan is the establishment of a Sanctuary Advisory Council. It is an essential component of ensuring public participation in sanctuary management. SAC members will represent the community's different interests, and may include local government, education, maritime history and interpretation, user groups, business groups, tribal representatives, and the community-at-large. SAC members serve as liaisons between their constituents and the sanctuary leadership, keeping sanctuary staff informed of issues and concerns and performing outreach to their respective constituents on the sanctuary's behalf.

Finally, the sanctuary will benefit greatly from partnerships within NOAA and NGOs; private businesses; education and cultural institutions; community groups; private citizens; and local, state, and federal agencies. Establishing a NOAA presence within sanctuary communities will be imperative to strengthening the pool of partners and collaborators. The sanctuary will develop these partnerships to create or improve several essential capacities, including research vessels and equipment, administrative space, law enforcement, and education and outreach.

Strategy OA-1: Establish and support a Sanctuary Advisory Council

Activity OA-1.1: Acknowledging the geographical expanse and multiple communities of the sanctuary, develop an appropriate Sanctuary Advisory Council structure in accordance with the NMSA and ONMS Advisory Council Implementation Handbook. Include mechanisms and structure for tribal and Indigenous community participation (see "Framework for Indigenous Collaborative Management" in Section 1.0). Consider forming a local working group to help identify key seats on the Advisory Council and help recruit potential advisory council members.

Activity OA-1.2: Develop initial steps for the SAC, including setting the number of meetings to be held per year and establishing, in collaboration with the SAC, a work plan for the activities and issues to address.

Strategy OA-2: Develop a “NOAA presence”

Activity OA-2.1: Conduct an evaluation of infrastructure and operations requirements. In cooperation with sanctuary communities, develop a strategic plan for creating a “NOAA presence” in each community, to include offices, infrastructure, research, education, outreach, exhibits and signage, and marketing/branding considerations. Coordinate this work with Strategy EO-2.

Activity OA-2.2: Work with partner agencies and stakeholders to evaluate the need and opportunities for an administrative office.

Strategy OA-3: Identify and acquire staff needed to support sanctuary operations, resource protection, education and outreach, and research programs

Activity OA-3.1: Identify appropriate staffing requirements for the sanctuary based on this plan.

Activity OA-3.2: Supplement staff by entering into cooperative agreements and partnerships with other agencies, institutions, and stakeholders to further the sanctuary’s mission.

Strategy OA-4: Develop infrastructure for research vessels, small boats, equipment, and field operations

Activity OA-4.1: Meet the sanctuary’s initial small boat and research vessel and research equipment needs through existing NOAA assets in the region.

Activity OA-4.2: Conduct a needs assessment for CHNMS field operations requirements including research vessels, research equipment, diving, staffing, and maintenance requirements. This assessment should consider the availability of existing NOAA assets in the region.

Activity OA-4.3: Once the needs assessment in Activity OA-4.2 is complete, explore how partners in academia or NGOs can help supplement CHNMS needs for field operations, including vessels, equipment, dock/pier space, or related facilities.

Activity OA-4.4: Once the needs assessment in Activity OA-4.2 is complete, if a small new boat is required, develop a plan to acquire that vessel(s) subject to the availability of funding.

Strategy OA-5: Seek development partnerships and opportunities that support the sanctuary’s mission

Activity OA-5.1: Partner with an existing local nonprofit group(s) and/or or explore working with the National Marine Sanctuary Foundation to establish a chapter of the national foundation to support the sanctuary’s mission, including research, education, community engagement, and operations. Explore reliance on Joint Project Authority to share in the costs and benefits of various critical sanctuary initiatives.

Activity OA-5.2: Consider cooperative agreements with other nonprofits for support for tribal and Indigenous programs.

Strategy OA-6: Establish sanctuary support infrastructure that enhances sanctuary programs

Activity OA-6.1: Attract, train, use, recognize, and retain volunteers to support and enhance sanctuary programs.

Activity OA-6.2: Attract, train, and use paid interns to support and enhance sanctuary programs. Target local universities, community colleges, and underserved and diverse populations including tribal members.

Strategy OA-7: Establish a process for evaluating and reporting on CHNMS program effectiveness and management plan implementation

It is important for NOAA to track management plan implementation and effectiveness to facilitate adaptive measures and informed review when it is time to update the management plan. A system of annual assessment should be developed to keep ongoing evaluation current.

Potential Partners

The following list reflects potential sanctuary partners, and is expected to change over time as opportunities, conditions, and entities evolve.

Chumash and Salinan Tribes, bands, clans, associations, and organizations

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Academic and affiliated institutions

Sanctuary Advisory Council and subgroups, California Department of Fish and Wildlife, California State Parks, California Marine Sanctuary Foundation, Cal Poly San Luis Obispo, University of California Santa Barbara, U.S. Coast Guard, Vandenberg Space Force Base, City of Morro Bay Harbor Department, Port San Luis Harbor District, Morro Bay National Estuary, BOEM, and Department of Defense.

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Appendix A: Terms of Designation and Proposed Regulations

The Terms of Designation can be found in the Proposed Rule.

Refer to the Chumash Heritage [webpage](#) for a link to the Federal Register Notice to review and comment on the proposed Terms of Designation and Proposed Regulations. Should the sanctuary designation be finalized, the final Terms of Designation and a link to the regulations will be added here.

Appendix B: Estimated Operating Budget

Costs

The National Marine Sanctuaries Act requires NOAA to include “*an estimate of the annual cost to the Federal Government of the proposed designation, including costs of personnel, equipment and facilities, enforcement, research, and public education*” (16 U.S.C. § 1434(a)(2)(C)(v)). NOAA estimates these annual costs to be between \$400,000 and \$2,000,000 depending on the availability of funding.

Management of the proposed sanctuary is envisioned to be funded by a mix of federal appropriations and external funding, from collaborations with other agencies and organizations and in-kind/volunteers and supplies. The federal budget for the proposed sanctuary will be contingent on several factors, including the annual Congressional appropriations levels and spending priorities determined by NOAA leadership. Collaboration with partners, including other NOAA programs, other federal agencies, universities, private for-profit companies, and non-profit organizations, is also anticipated to help implement key programs and activities. The activities NOAA would focus on after designation would include:

- hiring a sanctuary superintendent;
- establishing an administrative office;
- supporting the creation and operation of a Sanctuary Advisory Council;
- staff support for sanctuary administration and operation;
- staff support for resource protection needs including permitting, review and certification of existing permitted activities, and reviewing planned projects in the sanctuary;
- tribal cultural liaison to work closely with numerous tribal partners;
- creating a NOAA presence with exhibits and signage;
- mapping, characterization, archaeological documentation, and other activities described in the Maritime Heritage Action Plan;
- designing, building, and initial operation of a dedicated research vessel,
- implementing volunteer citizen science programs, a water quality protection program; and
- implementing sustainable recreation and tourism activities.



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