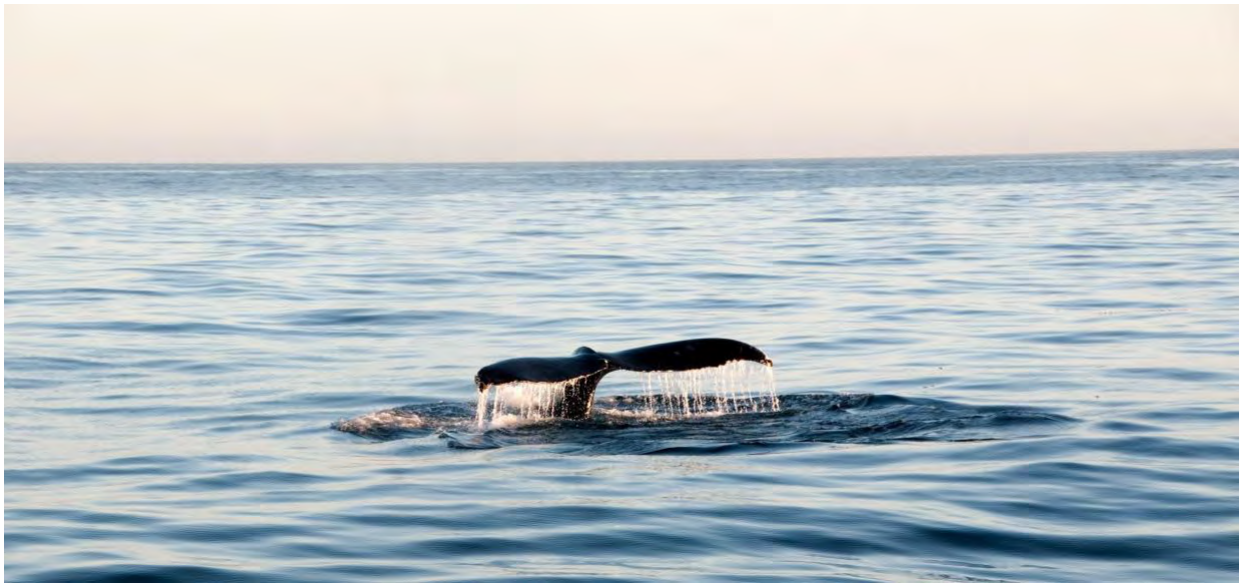
Office of National Marine Sanctuaries
National Oceanic and Atmospheric Administration

Channel Islands National Marine Sanctuary

Draft Management Plan

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Schooling fish over eelgrass, northside of Santa Cruz Island; kelp forest with California sheephead at Gull Island off Santa Cruz Island; research vessel *Shearwater*, southside of Santa Cruz Island; humpback whale fluke off southeast San Miguel Island; sailboats at anchor in Pelican Bay, Santa Cruz Island; Northern elephant seal at Simonton Cove, San Miguel Island; Chumash tomol paddlers at sunrise heading to Limuw (Santa Cruz Island). Photos: Robert Schwemmer/NOAA

In accordance with the National Marine Sanctuaries Act (NMSA; 16 U.S.C. 1431 *et seq*.), the management plan for Channel Islands National Marine Sanctuary (CINMS or sanctuary) has been updated. The issue areas and programs addressed in this document were built with guidance from the general public, ONMS, agency representatives, experts in the field, and the Sanctuary Advisory Council.

For readers wanting to learn more about the management plan, sanctuary policies and community-based management processes, we encourage you to visit the sanctuary's website . Readers who do not have internet access may call the sanctuary office at (805) 893-6437 to request relevant documents or further information.

The National Oceanic and Atmospheric Administration's (NOAA's) Office of National Marine Sanctuaries (ONMS) seeks to protect treasured places in the ocean and Great Lakes. Today, the program manages 15 national marine sanctuaries and two marine national monuments, encompassing more than 620,000 square miles of America's ocean and Great Lakes natural and cultural resources.

NOAA's National Ocean Service is the umbrella organization for ONMS and is dedicated to exploring, understanding, conserving and restoring the nation's coasts and oceans and works to balance environmental protection with economic prosperity in its mission, promoting safe navigation, supporting coastal communities, sustaining coastal habitats and mitigating coastal hazards.

NOAA, an agency of the U.S. Department of Commerce, is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and providing environmental stewardship of our nation's coastal and marine resources.

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Executive Summary

Channel Islands National Marine Sanctuary (CINMS or sanctuary) is one of 15 national marine sanctuaries administered by the National Oceanic and Atmospheric Administration (NOAA), an agency within the United States Department of Commerce. The sanctuary surrounds five of the eight Channel Islands: San Miguel, Santa Rosa, Santa Cruz, Anacapa, and Santa Barbara off the coast of California. The sanctuary encompasses 1,470 square miles (3,807 square kilometers) of ocean extending an average distance of 6 nautical miles (11.1 kilometers) from island shorelines, and at its deepest point, reaches 5,597 feet (1,706 meters). The sanctuary is home to numerous species of mammals, seabirds, fishes, invertebrates, and algae in a remarkably productive coastal environment. Within its boundary is a rich array of habitats, from rugged rocky shores and lush kelp forests to deep canyons and seagrass beds. The islands and surrounding sanctuary waters have been, and remain, sacred to Indigenous Chumash people. In addition, while the offshore location of the sanctuary limits human presence, the area is significant for a variety of human uses, such as recreation, tourism, commercial fishing, research, and education.

This management plan revises the 2009 management plan,[1] and focuses on how best over the next five to ten years to understand and protect the sanctuary's resources by addressing critical and emerging threats, and effectively implementing and sustaining core programs that support the vision and the mission. In preparing this management plan, ONMS spent considerable time reviewing past actions, looking closely at the condition of and threats to the sanctuary's resources, learning from Chumash community members,[2] listening to and reviewing public input, and engaging in thoughtful discussions with the Sanctuary Advisory Council.[3] This process helped ONMS identify the top priorities to be addressed in the action plans, each presenting future-oriented strategies and activities. The management plan includes ten action plans covering issue- and program-based themes that are intended to guide ONMS over the coming five to ten years. Across these action plans, four important cross-cutting themes and approaches are emphasized: addressing climate change, fostering diversity and inclusion, relying on partnerships and collaborations, and supporting community-based engagement.

Action Plans

- ***Climate Change:*** Sanctuary waters, as well as surrounding coastal areas and communities, are experiencing climate-related stressors (e.g., ocean acidification, thermal stress, and hypoxia) that will increase in frequency and intensity over the coming decades. This action plan outlines strategies to better understand and mitigate the effects of climate change on sanctuary resources through capacity building and collaborative partnerships.
- ***Marine Debris:*** This action plan prioritizes the assessment of marine debris within CINMS and development of a better understanding of how marine debris affects

[1] https://channelislands.noaa.gov/management/manplan/cinms_fmp_2009.pdf
[2] https://sanctuaries.noaa.gov/media/docs/2016-condition-report-channel-islands-nms.pdf#page=187
[3] The Channel Islands National Marine Sanctuary Advisory Council is a 21-seat body of public stakeholder participants and partnering government agency representatives that meets six times per year to provide advice on management of the sanctuary. For more information, see Strategy OA-3 in this plan, or visit https://channelislands.noaa.gov/sac/.

sanctuary resources. Strategies include sustaining and expanding island shoreline cleanup efforts, pursuing collaborative efforts with the local fishing community, and implementing education and outreach initiatives with partners.

- ***Vessel Traffic:*** A wide array of public and private vessels carry visitors and cargo while transiting through the sanctuary year-round. This action plan outlines strategies to facilitate vessel activity while protecting sanctuary resources. Some strategies include engaging boaters and the shipping industry, tracking and monitoring vessel traffic, and enacting policies to foster safe navigation and protect sanctuary resources in coordination with other agencies and partners.
- ***Zone Management:*** This action plan focuses on implementing effective management and enforcement strategies of existing protective zones established within the sanctuary, including the Channel Islands network of marine reserves and conservation areas designated by NOAA and the state of California.
- ***Introduced Species*:** Introduced species are an increasingly common global threat, and the rate of invasion of introduced species continues to accelerate. The strategies in this action plan outline efforts to reduce the introduction, spread, and establishment of introduced species, and to track, study, and where possible, control populations of introduced species already established in the sanctuary.
- ***Education and Outreach***: This action plan seeks to increase appreciation and stewardship of sanctuary resources by building greater public understanding, engagement, and awareness throughout our diverse coastal communities. This action plan also focuses on support for sanctuary recreational activities and tourism.
- ***Research and Monitoring:*** To expand our understanding of the sanctuary ecosystems, this action plan outlines five strategies for research and monitoring that are responsive to existing resource protection and management concerns, yet are also forward-looking to support ecosystem-based management decision making, resource protection initiatives, and education and outreach programs.
- ***Resource Protection:*** This action plan identifies five strategies to reduce human impacts to marine wildlife and other sanctuary resources. Through collaborative management with local stakeholders and in partnership and consultation with relevant local, state, and federal government agencies, this action plan seeks to protect the biological, historical, and cultural resources in the sanctuary from known, emerging, and future unknown threats.
- ***Cultural Resources and Maritime Heritage***: To identify, protect, and raise awareness of the maritime cultural, historical, and archeological resources within the sanctuary, this action plan proposes to improve the sanctuary's collaborative partnership with members of the Chumash community, as well as inventory and monitor historic shipwreck and aircraft wreck sites.
- ***Operations and Administration:*** This action plan addresses the necessary operational and administrative activities required for implementing an effective program, including staffing, infrastructure needs, and operational improvements.

Section 1:
Introduction

Common dolphins in Channel Islands National Marine Sanctuary. Photo: Robert Schwemmer/NOAA

- Background
- Sanctuary Setting and Condition
- Developing and Implementing this Management Plan

Background

Channel Islands National Marine Sanctuary (CINMS or sanctuary), located off the coast of Santa Barbara and Ventura counties in California, encompasses 1,470 square miles of water offshore of Anacapa, Santa Barbara, Santa Cruz, San Miguel, and Santa Rosa islands. The sanctuary contains remarkable biodiversity, productive ecosystems, sensitive species and habitats, shipwrecks, and other maritime heritage artifacts. The islands and surrounding waters are sacred to the Indigenous Chumash people. Many valuable commercial and recreational activities, such as fishing, shipping, and tourism, occur in the sanctuary.[4]

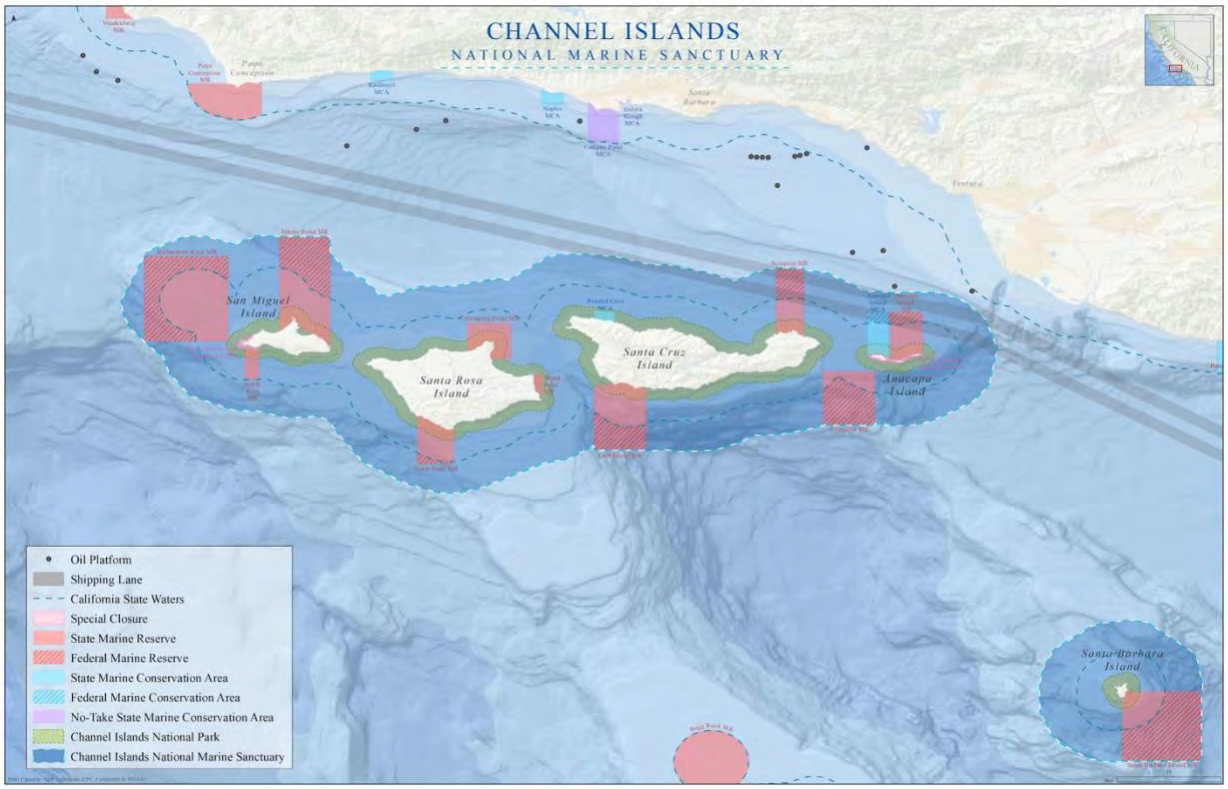

Figure 1. Sanctuary boundaries, including marine reserves and conservation areas zones. Source: NOAA

[4] Detailed descriptions of the sanctuary's environment can be found in the CINMS condition report (available online at https://sanctuaries.noaa.gov/science/condition/cinms/) as well as the draft environmental assessment for this management plan update process (available online at https://channelislands.noaa.gov/manage/plan/revision.html).

A comprehensive ecosystem-based management approach is used to promote long-term conservation of sanctuary waters, wildlife, habitats, and cultural resources, while allowing compatible human uses. Among the zones established within the sanctuary, a state/federal network of 11 no-take marine reserves and two marine conservation areas (only limited fishing allowed) helps provide additional resource protection[5] (Figure 1).

This updated management plan revises the 2009 plan and continues to focus on understanding and protecting the resources of CINMS. In preparing this updated plan, ONMS spent considerable time reviewing past actions, looking closely at the condition of and threats to the sanctuary's resources, learning from Chumash community members, listening to and reviewing public input, and engaging in thoughtful discussions with the Sanctuary Advisory Council.

Many marine resource management issues confront the sanctuary. The action plans within this management plan provide strategies to understand the issues and protect the marine environments of the sanctuary. The action plans address these issues through education and outreach, research and monitoring, zone management, collaborative planning and management efforts, and enforcement of existing regulations. The majority of actions described within this management plan will be addressed in partnership with local, state, and other federal agencies, interested tribal governments and bands, as well as numerous stakeholders and nonprofit organizations.

This management plan is comprised of ten action plans guiding ONMS for the next five to 10 years. The action plans are grouped into two main management themes: issue- and program-based. The issue-based action plans address priority issues (i.e., climate change, marine debris, introduced species, and vessel traffic) identified through the public scoping and Sanctuary Advisory Council input processes. The programmatic action plans address the procedural requirements needed to implement the management plan and meet the National Marine Sanctuaries Act (NMSA) mandates of resource protection, research, and education. Each action plan defines goals, describes strategies and planned activities, and describes mechanisms to evaluate implementation progress.

This introductory section provides background information about the Office of National Marine Sanctuaries (ONMS), the setting and conditions at CINMS, and the sanctuary management plan review process.

Overview of ONMS

The Office of National Marine Sanctuaries (ONMS) serves as the trustee for a network of underwater parks encompassing more than 620,000 square miles of marine and Great Lakes waters nationwide. As part of the Department of Commerce and managed by the National Ocean Service (NOS) in the National Oceanic and Atmospheric Administration (NOAA), ONMS provides oversight and coordination among 15 national marine sanctuaries and two marine national monuments. Since 1972, ONMS has worked cooperatively with the public and federal,

[5] In 2019, the network of Channel Islands Marine Reserves and Conservation Areas was recognized with a platinum-level Blue Parks Award, indicating achievement of the highest science-based standards for marine life protection and management, and recognizing outstanding efforts by managers and local stakeholders to effectively protect marine ecosystems now and into the future.

state, tribal, and local officials to promote conservation while allowing compatible commercial and recreational activities. Increasing public awareness and protection of the marine environment and its natural and cultural resources is accomplished through site management, scientific research, monitoring, exploration, engagement, and educational programs, fulfilling our mission to the American people.

ONMS manages these protected areas by setting priorities for addressing resource management issues and directing program and policy development. ONMS is responsible for ensuring each sanctuary has an updated management plan consistent with the NMSA, which includes management strategies to address current and emerging threats. On an annual basis, ONMS reviews and adjusts funding priorities and requirements to reflect resource management needs across the system. ONMS also monitors the effectiveness of sanctuary management plans, makes recommendations to promulgate regulatory changes where necessary, and monitors intra- and inter-agency agreements.

The National Marine Sanctuaries Act

The National Marine Sanctuaries Act (NMSA), as amended (16 U.S.C. §§ 1431 *et seq*.), is the law creating and guiding management of the sanctuary system. The NMSA authorizes the Secretary of Commerce to designate areas of the marine environment or Great Lakes with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational or aesthetic qualities as national marine sanctuaries. The primary objective of the NMSA is to protect sanctuary resources. The NMSA also directs facilitation of all public and private uses of those resources compatible with the primary objective of resource protection. The NMSA is available from the ONMS website.

Ecosystem-Based Management in ONMS

The purpose and policy of the NMSA is to maintain natural resources and their ecological function through comprehensive conservation and management. The National Marine Sanctuary System and its units subscribe to a broad and comprehensive management approach in keeping with the NMSA's primary objective of resource protection. This approach differs from the various laws directed at managing single or limited numbers of species or specific human activities within the ocean. Ecosystem-based management serves as a framework for addressing long-term protection of a wide range of living and non-living marine resources, while allowing multiple uses within the sanctuary deemed compatible with resource protection. The ecosystems managed by ONMS span diverse geographic, administrative, political and economic boundaries. Therefore, strong partnerships among resource agencies, non-governmental interests, members of the public and scientific community, user groups, and conservationists are essential.

CINMS Designation and Regulations

The sanctuary was federally designated in recognition of its national significance as an area of exceptional natural beauty and resources, and due to heightened concerns following the 1969 oil spill in the Santa Barbara Channel. In March of 1980, San Miguel, Santa Rosa, Santa Cruz, Anacapa, and Santa Barbara islands, and the waters within one nautical mile of each island, were designated as Channel Islands National Park, the nation’s 40th national park. That same

year, on October 2, 1980, NOAA designated the ocean waters extending from mean high tide to six nautical miles offshore from those five islands, as well as the waters surrounding Richardson Rock, and Castle Rock, as Channel Islands National Marine Sanctuary (Figure 1). In 2003, the state of California implemented a network of marine reserves and conservation areas within a portion of the sanctuary's state waters. In 2006 and 2007, the network was augmented and complemented by NOAA, extending the network into federal waters and resulting in a total of 11 marine reserves and two marine conservation areas established to provide greater resource protection within the sanctuary.

All activities (e.g., fishing, boating, diving, research, and education) may be conducted within the sanctuary unless prohibited or otherwise regulated by CINMS or other jurisdictional authorities. All activities are subject to liability for destruction, loss or injury to sanctuary resources under Section 312 of the NMSA, as amended. The full regulatory text of CINMS regulations is presented in Appendix D.1 and is published in the Code of Federal Regulations at 15 CFR §§ 922.70 – 922.74.

Mission and Goals

The sanctuary's mission is to understand and protect the marine ecosystem and cultural resources of CINMS for current and future generations, using cutting edge marine science, fostering public awareness and stewardship, and supporting access and responsible use.

The sanctuary's program goals, per the NMSA, are to:

A. Enhance resource protection through comprehensive and coordinated conservation and management tailored to the specific resources that complements existing regulatory authorities;
B. Support, promote and coordinate scientific research on and monitoring of the sanctuary's marine resources to improve management decision-making;
C. Enhance public awareness, understanding, and wise use of the marine environment through education, outreach, and community involvement programs;
D. Facilitate, to the extent compatible with the primary objective of resource protection, multiple uses of the sanctuary not prohibited pursuant to other authorities; and
E. Maintain five primary program areas supporting the administration of CINMS: research and monitoring, resource protection, education and outreach, maritime heritage, and program operations.

Sanctuary Management Approaches

ONMS provides marine resource protection that is place-based, long-term, and ecosystem-focused. ONMS employs a multi-disciplinary strategy for conservation programming. This includes implementing education and outreach programming to raise public awareness and understanding about the sanctuary, and to inspire conservation and stewardship. ONMS also addresses management needs through applied research and monitoring, including conservation science, social science, and historical studies. Further, staff seek to engage with the community in tending to the needs of the sanctuary, supporting meaningful roles for volunteers and important interactions with advisory council members and various maritime stakeholders.

Another important aspect of the sanctuary's management approach is rooted in the NMSA, which establishes one of the purposes of national marine sanctuaries as facilitating public uses that are compatible with the primary objective of resource protection (16 U.S.C. § 1431(b)(6)). ONMS works to support coastal economies by promoting and protecting healthy resources accessible to human uses that do not interfere with sustaining long-term ecosystem protection. Finally, recognizing that the task of managing the sanctuary is complex and vast, all of these approaches are conducted through a wide variety of partnerships and other collaborative arrangements.

Relationships with Other Agencies, Authorities, Tribes, and Chumash Community

Consistent with the NMSA (16 U.S.C. § 1431(b)(2)), NOAA seeks to provide comprehensive and coordinated sanctuary management in ways that complement existing regulatory authorities. Management actions are made more effective and efficient through the sharing of resources and expertise among government agencies that play various roles related to the marine ecosystems and human activities of the sanctuary. Addressing the full extent of responsibilities and challenges within sanctuary waters exceeds the jurisdiction, resources, and ability of any one agency or entity. Consequently, NOAA regularly works with other federal and state agencies in order to optimize collective efforts applied to sanctuary resource protection, research and monitoring, enforcement, emergency response, education and outreach, place-based management, and more.

In addition to coordination with federal, state, and local jurisdictions, NOAA also has an important responsibility and opportunity to work with Indigenous communities to better understand and recognize their rights, responsibilities, knowledge, and connections to places that are a part of national marine sanctuaries. At CINMS, this pertains to the Chumash community. The connection to the waters of the sanctuary and adjacent islands is central to the identities and cultures of Chumash people.[6] Recognizing and valuing these relationships is essential to NOAA's mission to protect the sanctuary for current and future generations. Developing and sustaining appropriate engagement with the Chumash community involves building trust and respect through long-term relationships (see Box 2 in the Cultural Resources and Maritime Heritage Action Plan). ONMS will respectfully work with interested Chumash bands, tribal governments, and organizations, and as appropriate engage in legally-required government-to-government consultations with the federally-recognized Santa Ynez Band of Chumash Indians.

Sanctuary Setting and Condition

The sanctuary's oceanographic, biological, social, and cultural setting is nationally significant and unique. The sanctuary wraps around five offshore Channel Islands that are managed as a National Park and, for 76% of Santa Cruz Island, a Nature Conservancy preserve. Its waters are steeped in Chumash history and enduring sacred value. The sanctuary's marine ecosystems, rich diversity of life, and maritime heritage resources support a varied mix of important human uses and values. Information about the sanctuary setting can be found in the sanctuary's 2019

[6] https://sanctuaries.noaa.gov/media/docs/2016-condition-report-channel-islands-nms.pdf#page=187

condition report,[7] and in the "Affected Environment" chapter of the draft environmental assessment.[8]

Condition Report

In 2019, NOAA published a revised CINMS condition report, providing an extensive analysis of the status and trends of sanctuary resources and its ecosystem services. The report was prepared with the input and review of more than 80 scientists, many of whom participated in workshops to identify ecosystem indicators and determine the status and trends for the sanctuary's water quality, habitat, living resources, and maritime archaeological resources. Evaluations of status and trends were based on the interpretation of quantitative data and, when necessary, qualitative assessments, together with the observations of scientists and resource managers. Since publication of the report in 2019, ONMS developed a Sanctuary Ecosystem Trends online tool to help interpret and update many of the datasets used in the condition report.[9]

The report also assessed sanctuary ecosystem services provided to a variety of human uses and values, including a notable contribution from Chumash authors describing the value of sanctuary waters to their Indigenous community from their own perspective. Overall, the condition report helped to highlight several issues of concern that were subsequently also raised during public scoping meetings as areas of interest for possible sanctuary management attention. Highlighted issues included vessel traffic, introduced species, ocean noise, marine debris, harmful algal blooms, and climate-driven changes to ocean conditions, as well as information about the value of the sanctuary environment to Chumash people.[10] The action plans within this management plan have been well informed by the condition report, and are responsive to the report's findings.

Developing and Implementing this Management Plan

Management Plan Review

The NMSA requires the review of management plans to be conducted by all national marine sanctuaries (16 U.S.C. §1434(e)) to ensure each site properly conserves and protects its living and cultural resources. Management plans present goals, strategies, and actions to guide the development and prioritization of future budgets and management activities.

The current Channel Islands National Marine Sanctuary Management Plan was published in 2009 (U.S. DOC 2009).[11] Implementation of the plan was tracked over time, and in 2017, NOAA conducted a management plan review pursuant to NMSA section 304(e). This rapid and internal review found that significant progress had been made conducting planned activities, and called for revisions of the management plan to occur following completion of the sanctuary's next

[7] https://sanctuaries.noaa.gov/science/condition/cinms/welcome.html
[8] The draft environmental assessment is available online at https://channelislands.noaa.gov/manage/plan/revision.html
[9] https://noaa-onms.github.io/cinms/
[10] https://sanctuaries.noaa.gov/science/condition/cinms/welcome.html
[11] Channel Islands National Marine Sanctuary Management Plan/Final Environmental Impact Statement available online at: https://nmschannelislands.blob.core.windows.net/channelislands-prod/media/archive/management/manplan/cinms_fmp_2009.pdf

condition report.[12] Based upon the findings of the condition report,[13] and in consideration of changing conditions and circumstances over time, it became clear that an update to the 2009 management plan was needed to address recent scientific discoveries, advancements in managing marine resources, and new resource management issues.

The management plan revision process was based on four fundamental steps:

1. completion of the site's condition report;
2. a public comment period including public scoping meetings;
3. the prioritization of issues and development of action plans; and
4. the preparation of draft and final management plans and the relevant National Environmental Protection Act (NEPA) documentation, such as an environmental assessment.

Condition Report

ONMS condition reports draw on the best available science, most recent data, and expert input to assess the status of various parts of the sanctuary ecosystem. The CINMS condition report, published in 2019 using data through 2016, helps inform ONMS, partners and the public of current and emerging issues that may require management attention and served as a critical source of information to support the development of this updated sanctuary management plan.

Public Scoping

Following release of the condition report, ONMS examines current sanctuary issues, threats and opportunities by using community-based processes and providing opportunities for public input. On October 1, 2019, NOAA published a notice of public scoping for the review of the CINMS management plan (84 FR 52053). This notice informed the public of the proposed action, announced public scoping meetings, and solicited public comments. NOAA conducted two public scoping meetings on October 22 and 23, 2019, and received over 230 written and oral comments from sixty-five different individuals, organizations and agencies. ONMS prepared a summary scoping report in January 2020.[14]

Identification and Prioritization of Issues

In 2020, the Sanctuary Advisory Council reviewed a detailed summary of public scoping comments and provided advice to the sanctuary superintendent in the form of prioritization ratings. Council member ratings, further supported by their written and oral comments, provided an overview of stakeholder preferences regarding inclusion or exclusion of a variety of issues within the sanctuary management plan.[15] With due consideration of public scoping comments and input from the Sanctuary Advisory Council, ONMS developed a more focused set

[12] Implementation progress for the 2009 CINMS management plan is summarized in this May 2018 public presentation to the Sanctuary Advisory Council: https://channelislands.noaa.gov/media/docs/20180515-cinms-management-plan-internal-review.pdf
[13] https://sanctuaries.noaa.gov/science/condition/cinms/welcome.html
[14] Public scoping comment summary available online at: https://nmschannelislands.blob.core.windows.net/channelislands-prod/media/docs/20200124-cinms-mpr-scoping-comments-summary.pdf
[15] https://channelislands.noaa.gov/media/docs/20200319-cinms-mpr-scoping-comment-worksheet-scores.pdf

of priority issues to be included in this management plan. An initial list of priority issues was presented to and discussed with the advisory council in May 2020. A more developed list was then presented to the council in September 2020, reflecting the planned structure for 10 proposed action plans to be developed within this management plan. Throughout the process, ONMS discussed various management plan issues with the advisory council, learning about select topics from expert presenters and receiving additional council input and advice on a range of issues.

Action Plan Development

The management plan is comprised of ten action plans developed by ONMS. The action plans were informed by condition report findings, with ONMS also drawing on public scoping comment suggestions and utilizing input from the Sanctuary Advisory Council and external experts. Each action plan provides specific strategies, activities, and performance measures to address key issues and sustain core sanctuary programs.

Action Plan Components

Action plans are the means by which ONMS has identified and organized priority management issues and core functions. Action plans are designed to provide forward-looking strategic guidance to ONMS over the next five to 10 years. Each action plan begins with an overarching goal and an introduction to the issue or programmatic function. The core of each action plan is a series of strategies articulating ***what*** NOAA (or ONMS) intends to achieve with the strategy. Following the strategy are one or more activities that explain specific steps regarding ***how*** the strategy will be achieved. Given the integrated nature of sanctuary programs and issues, each action plan also provides a cross referenced list to other related strategies within the management plan. A list of existing and potential partners is also included for each action plan, as well as a table of identified performance measures that ONMS will use to evaluate progress.

Multidisciplinary Implementation

Each action plan is intended to be a discrete plan addressing a priority issue or carrying out a core sanctuary program. However, all issues require the common tools of research, monitoring, education, outreach, enforcement, administrative and operational support, agency coordination, and partnership development. ONMS will seek to maximize the synergy between action plans by exploring mutual research and monitoring needs for the various action plans and combining education and outreach needs to common audiences. Each of the action plans requires support from core sanctuary program areas to ensure success.

Cross-Cutting Themes

In preparing this management plan, ONMS spent considerable time reviewing past actions, looking closely at the condition of and threats to the sanctuary's resources, learning from Chumash community members, listening to public input, and engaging in thoughtful discussions with the Sanctuary Advisory Council. This process helped ONMS identify the top priorities to be addressed in 10 action plans, each presenting future-oriented strategies and activities. Cutting across the many action plans are a few recurring themes that stand out:

- Addressing climate change

- Diversity and inclusion
- Partnerships and collaborations
- Community-based engagement

Climate Change

As the sanctuary's condition report revealed,[16] and follow-on climate impacts work made even more clear,[17] the climate-driven effects of a changing ocean have brought significant challenges to sustaining marine ecosystem functions as we have known them, and in turn are bringing changes to the way in which humans interact with and enjoy the local marine environment. Concerns about climate change were the most commonly raised category of public scoping comment received, and this was in turn amplified by wide support from advisory council members. Thus, a Climate Change Action Plan is included within this management plan. Moreover, a climate change focus is relevant to and part of most of the other nine action plans as well, with related activities found in the action plans for research and monitoring, education and outreach, introduced species, and more. As a priority concern, climate change effects loom large, and ONMS intends to position CINMS to help us better understand, adapt to, educate, and inspire actions to help address this substantial threat.

Diversity and Inclusion

Whether within a natural ecosystem or a human community, diversity creates strength and resilience. ONMS values the remarkable diversity of knowledge, perspectives, and experience found throughout sanctuary communities. Across all of the strategies described in this management plan, ONMS will seek to invite and include a broader diversity of individuals to participate in activities or gain access to the benefits provided by sanctuary programming.

Partnerships and Collaborations

ONMS understands that management success is contingent upon developing and maintaining a variety of productive partnerships and collaborative arrangements. The sanctuary's large offshore ocean area combined with the broad scope of issues and activities to be managed necessitates the involvement of more organizations than just ONMS. Thankfully, a host of state and federal agencies we work with play active roles around the Channel Islands, including marine enforcement, emergency response, environmental monitoring, fisheries management, the management of Channel Islands National Park, and more. Additionally, ONMS collaborates with a variety of research, educational, Chumash, and non-profit organizations, and businesses that collectively help support various aspects of the sanctuary's mission. In order to be successful, we need to work with a variety of partners, both existing and yet to be developed. Thus, collaboration is a recurrent theme in most of the strategies and activities of the ten action plans.

Community-Based Engagement

In addition to a strong reliance upon partnerships and collaborative arrangements, sanctuary programs are typically rooted within the local community. Two examples of this include the

[16] https://sanctuaries.noaa.gov/science/condition/cinms/welcome.html
[17] https://nmschannelislands.blob.core.windows.net/channelislands-prod/media/docs/20200511-cinms-climate-change-impacts-report.pdf

Sanctuary Advisory Council, which draws on extensive local experience and builds a sense of community stewardship for the sanctuary, and the Channel Islands Naturalist Corps, whose more than 150 fully engaged volunteers come from the local community. Many of the programs and projects described within the ten action plans involve an element of working within local communities to invite active participation and foster the development of community pride and stewardship for the sanctuary.

Performance Evaluation

Success will be evaluated through performance measures identified in each of the action plans. As we implement each of the action plans, we will work cooperatively with our partners and the Sanctuary Advisory Council, receiving ongoing feedback and input on the implementation of management plan strategies. In addition, when the next sanctuary condition report is developed, the report will serve as an updated comprehensive assessment of the status and trends of the sanctuary's biological, ecological, and maritime heritage resources.

Section 2:
Action Plans

(Top) Humpback whale breaches within the sanctuary; (bottom left) a NOAA diver swims at Anacapa Island; (bottom right) tomol paddlers head to Limuw (Santa Cruz Island). Photos: Robert Schwemmer/NOAA

- Climate Change Action Plan
- Marine Debris Action Plan
- Vessel Traffic Action Plan
- Introduced Species Action Plan
- Zone Management Action Plan
- Education and Outreach Action Plan
- Research and Monitoring Action Plan
- Resource Protection Action Plan
- Cultural Resources and Maritime Heritage Action Plan
- Operations and Administration Action Plan

Climate Change Action Plan

Goal: Address ecosystem resilience, ecosystem services, climate adaptation, and ocean acidification through research and monitoring, capacity building, collaborative partnerships, and public education and outreach.

Introduction

The impacts of climate change are intensifying both globally and locally, threatening physical, social, economic, and environmental well-being. Sanctuary waters are also experiencing the effects of climate-related stressors, including ocean acidification, increasing water temperatures, deoxygenation, and changing oceanographic processes. These stressors are expected to worsen over the coming decades, which in turn is expected to impact, and likely reduce, the ecosystem services the sanctuary provides. Confronting and addressing the effects of climate change on national marine sanctuaries is a high priority for NOAA's Office of National Marine Sanctuaries (ONMS). The 2021-2023 ONMS Climate Resilience Plan[18] commits the organization 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. This has included developing an Ocean Acidification Action Plan for National Marine Sanctuaries of the West Coast (2011),[19] numerous climate-related findings within the CINMS condition report (ONMS, 2019),[20] a CINMS Climate Impacts Profile (2020),[21] and participating in a climate change rapid vulnerability assessment (2016).

To support the health and viability of the sanctuary's natural resources, this action plan focuses on five strategies to help understand, predict, communicate, and address climate impact issues. While actions are primarily focused on a relatively small area (i.e., within CINMS), they are intended to contribute information and to inspire broader response efforts on larger scales. Furthermore, addressing the impacts of climate change is cross-cutting in nature, consequently, many of the other nine action plans contain some climate-relevant activities. As community concern over the impacts of climate change on sanctuary resources was strongly expressed during public scoping and Sanctuary Advisory Council meetings, the development of the climate change action plan was strengthened by the input and assistance from the climate change subcommittee of the Sanctuary Advisory Council.

Strategy CC-1: Address climate resilience and adaptation planning

To address vulnerabilities of sanctuary resources to climate change effects, ONMS will conduct expert workshops to assess future conditions, risks, and potential tipping points. The identification and development of ocean climate indicators will be used to focus research and monitoring efforts, and inform the development of a climate adaptation plan. Management

[18] https://sanctuaries.noaa.gov/management/climate/
[19] https://nmssanctuaries.blob.core.windows.net/sanctuaries-prod/media/archive/about/pdfs/wc_onms_plan.pdf
[20] https://sanctuaries.noaa.gov/science/condition/cinms/
[21] https://nmschannelislands.blob.core.windows.net/channelislands-prod/media/docs/20200511-cinms-climate-change-impacts-report.pdf

actions will be identified to help address specific threats, support the adaptive capacity of sanctuary stakeholders, and increase the sanctuary's resilience to climate change effects.

Activity 1.1: Conduct an ecosystem-focused climate vulnerability assessment stakeholder workshop to identify how and why focal resources (habitats, species) and ecosystem services across the sanctuary's ocean region may be affected by future climate and ocean conditions, including, 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 list of species, habitats, and ecosystem services that are most vulnerable to projected climate change impacts and that will aid future adaptation planning.

Activity 1.2: Collect baseline information about the adaptive capacity and awareness of sanctuary stakeholders to climate change impacts. Using existing data and selective interviews, evaluate the adaptive capacity for stakeholders to make changes when faced with climate-related environmental changes, and seek to understand stakeholder perceptions of related risk. ONMS will also evaluate where users obtain information about climate change.

Activity 1.3: Develop an ocean climate vulnerability assessment report. Informed by a vulnerability assessment stakeholder workshop (Activity 1.1), the report will provide expert-driven, scientifically sound assessments to enable marine resource managers to respond to, plan for, and manage for the impacts of climate change to habitats, species, and ecosystem services within the region. The report will also incorporate findings from a 2017 Santa Barbara Coastal Vulnerability Assessment,[22] a 2016 CINMS Rapid Vulnerability Assessment, and the 2016 CINMS condition report.[23]

Activity 1.4: Develop a climate adaptation plan. Based on results from the climate vulnerability assessment workshop and report (activities 1.1 and 1.3), the plan will identify actions to address specific climate change vulnerabilities, build adaptive capacity of the sanctuary's stakeholders, and lay a foundation for implementing management actions to achieve a healthier sanctuary that is more resilient to climate change effects (For an ONMS report example, see the climate adaptation plan for Greater Farallones National Marine Sanctuary[24]).

Strategy CC-2: Reduce greenhouse gas emissions

ONMS strives to reduce green gas emissions from sanctuary offices, vehicles, vessels, and other transportation. ONMS will measure emissions levels for CINMS activities compared annually to baseline levels, and support vessel speed reduction programs, which reduce greenhouse gas emissions by slowing ships transiting past the Channel Islands.

Activity 2.1: Complete a baseline emissions inventory for sanctuary facilities and operations. The emissions inventory will establish a baseline of the sanctuary's use of cars, boats, and travel;

[22] https://caseagrant.ucsd.edu/project/santa-barbara-area-coastal-ecosystem-vulnerability-assessment-sba-ceva
[23] https://sanctuaries.noaa.gov/science/condition/cinms/
[24] https://farallones.noaa.gov/manage/climate/adaptation.html

use of energy in offices and other facilities; generation of waste and recycling or composting; and use of water.

Activity 2.2: Develop, implement, and evaluate a Green Operations Plan. Building on data from the emissions inventory (Activity 2.1), the plan will emphasize areas for improvement. Staff will be encouraged to address, where feasible, transportation management, energy efficiency, waste management, water management, and education and outreach, with the goal of significantly reducing the carbon footprint of sanctuary operations.

Activity 2.3: Continue to support the incentivized Vessel Speed Reduction Program (see Strategy VT-1).

Activity 2.4: Develop and promote new and existing guidelines for best practices to help lower emissions from motorized boats that come to the sanctuary. Work to draw attention to the importance of boats reducing carbon emissions, and highlight sanctuary boaters who are reducing emissions.

Strategy CC-3: Public engagement and communication on ocean-climate impacts and solutions

To interpret the effects of climate change on the ocean, ONMS will develop educational resources for schools and informal education providers to reach a diversity of individuals and organizations concerned about or impacted by climate change. Staff will work with relevant partners to encourage actions to reduce impacts.

Activity 3.1: Create local ocean acidification and climate data resources for use in K-16 education,[25] by informal education providers, and in public outreach materials for sanctuary users, volunteer training, visitor center exhibits, and signage. Consider the needs and interests of the diverse and often underserved communities that may not typically be reached with this type of information, but may nonetheless be even more severely impacted by the effects of climate change and ocean acidification. In developing these materials, work with the sanctuary's education and research departments as well as regional academic and informal education partners (e.g., zoos, aquariums, natural history museums).

Activity 3.2: Work with partners, including Bay Watershed Education and Training (B-WET) grantees, to incorporate NOAA-developed and local climate/ocean acidification resources into K-16 classroom and informal education provider settings by offering data tools and professional development opportunities for educators.

Activity 3.3: 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, including ocean acidification impacts and the effects of marine reserves.

[25] K-16 refers to Kindergarten through undergraduate college level education.

Strategy CC-4*:* Support, track, and share ocean climate and acidification monitoring and research

ONMS will pursue and develop collaborative research and monitoring partnerships to advance understanding and support the long-term tracking of climate-relevant ocean conditions. This will include ocean acidification, climate change buffer zones, carbon budget and sequestration in the sanctuary ecosystem, and improving understanding of susceptible human uses. Support for collaborating partners may include vessel operations, input from the Sanctuary Advisory Council's Research Activities Panel, and the coordinated pursuit of resources from NOAA offices and other institutions. This strategy is cross-cutting with Research and Monitoring Action Plan strategies RM-1, RM-2, and Strategy CC-1.

Activity 4.1: Collaborate with research partners to help develop and support long-term ocean acidification monitoring programs to track regional changes in pH and climate-relevant oceanographic conditions. These relevant climate and ocean acidification indicators will help ONMS understand spatial changes in environmental conditions, establish baseline information to support applied research, and quantify any ability of biogenic habitat to buffer changes to ambient local seascape conditions.[26]

Activity 4.2: Enact or support research efforts to understand sanctuary resource response to thermal extremes and acidifying water with special emphasis on susceptible fisheries, blue carbon initiatives, sensitive habitats, biological adaptability, climate change refugia, and restoration. Develop or direct research to understand management actions that can be taken to support resources and ecosystem services over the long term.

Strategy CC-5: Assess climate impacts to deep-sea corals and sponges

To assess climate impacts to deep-sea corals and sponges, vulnerable benthic habitats, particularly those with high biodiversity, first need to be identified via exploratory visual surveys. Then, target communities need to be characterized to establish present day health and condition baselines. Once established, these baselines can be used to evaluate future climate change impacts on deep water habitats. The activities below outline how to approach these knowledge gaps and address this climate change strategy, relying heavily on partnerships and participating in multi-agency campaigns to conduct research.

[26] "Blue carbon" is the term for carbon captured by the world's ocean and coastal ecosystems. Some marine habitats, such as kelp and seagrasses, are known to sequester carbon.

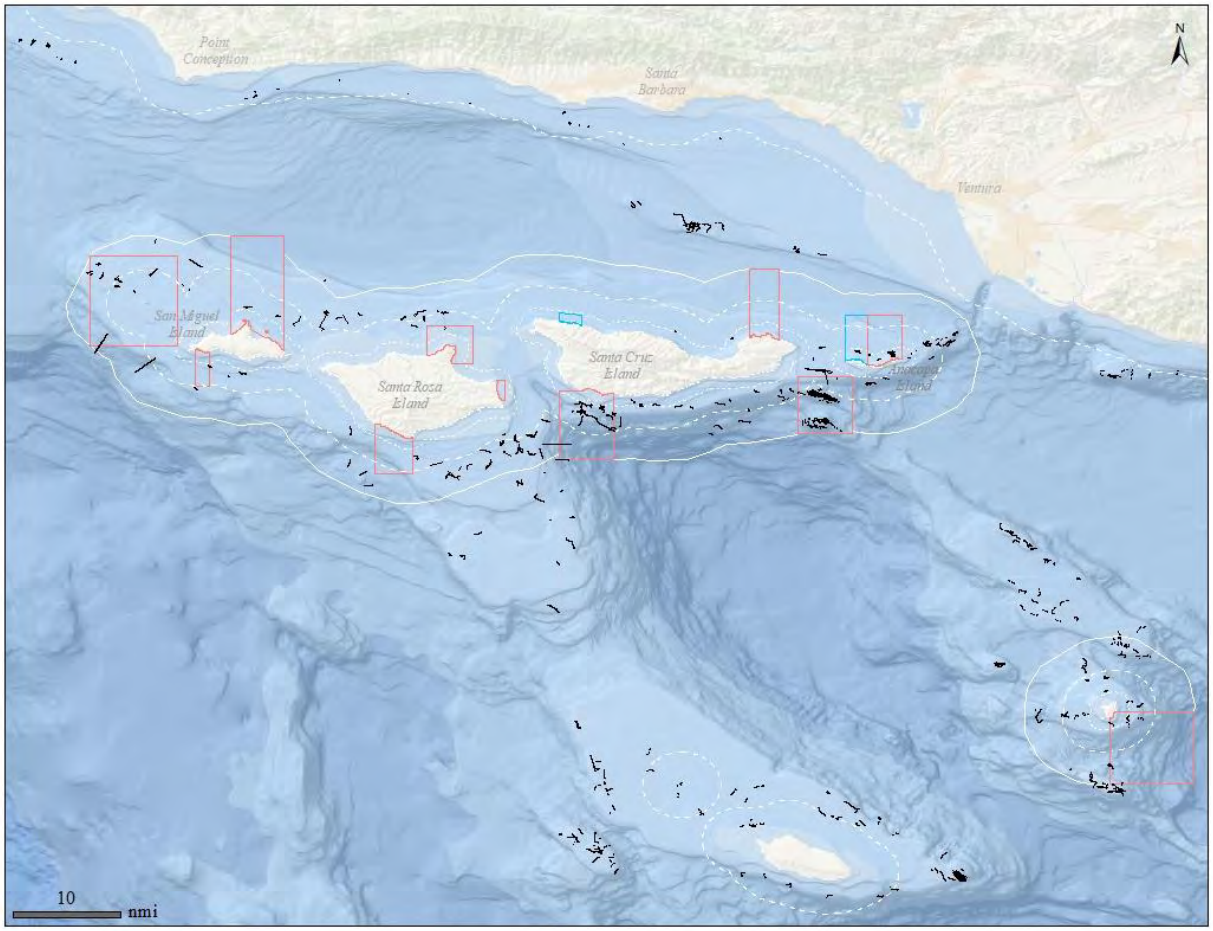

Figure 2. Seafloor sites within and adjacent to the sanctuary that have been explored with remotely operated vehicles to survey habitats, particularly deep-sea corals and sponges, between 2011-2017. Map source: NOAA

Activity 5.1: Collaborate with and support partners and regional initiatives to explore and characterize unsurveyed areas of the sanctuary's deep seafloor. Locate and assess the health and climate risk of deep-sea coral and sponge communities by conducting standardized, quantitative transects and recording oceanographic measurements alongside biological observations.

Activity 5.2: Collaborate with and support partners and regional initiatives to revisit and resurvey previously surveyed deep seafloor communities within the sanctuary (Figure 2). Use repeat surveys to monitor and track potential climate-driven changes to the condition and species composition of deep-sea coral and sponge communities, as well as understand how these communities respond to changing ocean conditions.

Activity 5.3: Increase digital storage capacity for deep seafloor images and data. Work with partners to analyze data and disseminate findings to target audiences. Create a library of representative imagery.

Strategy CC-6*:* Understand the role of Channel Islands and regional marine reserves as reference areas for studying climate change

To better understand the role of the Channel Islands and regional marine reserves as reference areas for climate change, ONMS will conduct and support research on how no-take marine reserves function in the face of a shifting climate. Staff will also conduct evaluations and forecasts of performance for the reserve system around the Channel Islands, and communicate findings to the general public.

Activity 6.1: Conduct or support research studies on ecological mechanisms modified by marine reserves including biodiversity preservation, resistance to the arrival or disruptive effects of non-native species, and protection of keystone and foundational species.

Activity 6.2: Investigate how marine reserves affect habitat utilization and species connectivity, and provide species movement corridors. Collaborate with partners in support of pursuing this research through joint proposal development, vessel support, and other science staff contributions.

Activity 6.3: In collaboration with agency and academic partners, complete forecast and vulnerability studies on marine reserve performance in maintaining ecosystem function over short (5-10 years), medium (10-50 years), and long term (50-100 year) time scales, and identify potential adaptive management strategies for maintaining marine reserve function. These marine reserve-focused assessments will be conducted, and adaptation strategies proposed, as part of the workshop and reporting processes described in Strategy CC-1 (Activities 1.3, 1.4, and 1.5).

Relevant strategies/activities located elsewhere within this management plan

- Vessel Traffic Action Plan, Strategy VT-1: Vessel Speed Reduction
- Zone Management Action Plan, Strategy ZM-1: Support management of the Channel Islands network of Marine Reserves and Marine Conservation Areas
- Education and Outreach Action Plan, Strategy EO-1: Advance K-16 education programming to support sanctuary stewardship and climate literacy
- Education and Outreach Action Plan, Strategy EO-4: Visitor centers, partner facilities, and signage
- Research and Monitoring Action Plan, Strategy RM-1: Characterize and monitor the biological and physical features and processes associated with the sanctuary
- Research and Monitoring Action Plan, Strategy RM-2: Characterize and monitor ecosystem services provided by the sanctuary
- Cultural Resources and Maritime Heritage Action Plan, Strategy CRMH-3: Manage and protect submerged maritime heritage resources
- Operations and Administration Action Plan, Strategy OA-3: Coordinate and support the Sanctuary Advisory Council

Existing and Potential Partners

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

Academic & affiliated associations:

California State University Channel Islands, California State University Long Beach, California State University Northridge, Marine Research and Exploration (MARE), Monterey Bay Aquarium Research Institute, Santa Barbara City College, University of California, Santa Barbara, Ventura County Community College District.

Chumash government and community organizations:

Santa Ynez Band of Chumash Indians, Wishtoyo Foundation, Barbareño Chumash Council, Coastal Band of the Chumash Nation, Barbareño/Ventureño Band of Mission Indians.

Government agencies:

Bureau of Ocean Energy Management, California Department of Parks and Recreation, California State Lands Commission, National Marine Fisheries Service, NOAA Bay Watershed Education and Training (B-WET) Program, National Park Service, NOAA Climate Program Office, NOAA Deep Sea Coral Research and Technology Program, NOAA Fisheries Restoration Center, NOAA Integrated Ecosystem Assessment Program, NOAA National Centers for Coastal and Ocean Science, NOAA Northwest and Southwest Fishery Science Centers, NOAA Ocean Acidification Program, NOAA Pacific Marine Environmental Laboratory, Pacific Fishery Management Council, Santa Barbara County Office of Education, U.S. Geological Survey, Ventura County Office of Education.

Non-governmental organizations:

Aquariums, museums and informal science centers, Aquarium of the Pacific, Association of Zoos and Aquariums, California Sea Grant, Community Environmental Council, MERITO Foundation, Monterey Bay Aquarium, Sierra Club.

Performance Measures

Strategy Title	Desired Outcomes (Objectives)	Output Measure	Who Measures	Timeline
Strategy CC-1: Address coastal resilience and adaptation planning	Identification of coastal and ocean resources and sanctuary users likely to be affected by future climate conditions Identification of climate adaptation measures to reduce vulnerabilities of resources and users.	Vulnerability assessment workshop	Climate Project Coordinator with support from CINMS staff	Year 2-3
		Assessment of stakeholder adaptive capacity and climate learning	Climate Project Coordinator with support from CINMS staff	Year 2-3
		Vulnerability assessment report completed	Climate Project Coordinator with Support from CINMS staff	Year 3
		Climate adaptation plan completed	Climate Project Coordinator with Support from CINMS staff	Year 4
Strategy CC-2: Reduce greenhouse gas emissions	Identify carbon footprint of sanctuary operations	Emissions inventory	Climate Project Coordinator, CINMS Operations Team	Year 3
		Green operations plan	Climate Project Coordinator, CINMS Operations Team	Year 4
	Implementation of plan to reduce emissions	Annual progress report	Climate Project Coordinator, CINMS Operations Team	Annually, after year 4
	Reduction in shipping vessel emissions through incentivized speed reduction	Tracked reduction levels of ship pollution	Air District Partners/ Resource Protection Coordinator	Annually
	Boater education and outreach for vessel emissions reduction	New or existing education & outreach materials developed or promoted	Education and Outreach Coordinator, Climate Project Coordinator	Year 2-3

Strategy Title	Desired Outcomes (Objectives)	Output Measure	Who Measures	Timeline
		Educational & outreach materials disseminated to sanctuary users and the Sanctuary Advisory Council	Education and Outreach Coordinator, Council Coordinator, Climate Project Coordinator	Year 4
Strategy CC-3: Public engagement and communication	Educate the public about climate change impacts to the sanctuary and local solutions	Educational materials and data resources developed to increase public awareness of ocean and coastal climate issues	Education and Outreach Team, Research Coordinator, Climate Project Coordinator	Year 2-3
		Data Resources and educational materials for K-16, disseminated to teachers, informal education centers, sanctuary users and the public	Education and Outreach Team, Research Coordinator, Climate Project Coordinator	Year 3-4
Strategy CC-4*:* Support, track and share ocean climate and acidification monitoring and research	Improve physical and digital infrastructure to improve availability for actionable climate and ocean acidification information	Internal knowledge of on-going climate and ocean acidification research and monitoring efforts built and maintained.	Climate Project Coordinator, Research Coordinator	Annually
		Existing data streams incorporated into webenized condition report	Climate Project Coordinator, Research Coordinator	Annually, after year 1
		New research partnerships developed to improve spatial and temporal climate and ocean acidification data coverage and understanding	Climate Project Coordinator	Annually, after year 1
Strategy CC-5: Assess climate impacts to deep-sea	Implement and support efforts to map distribution of deep-sea coral and	Conducted, participated in, or informed deep-sea exploration expeditions and data products	Research Coordinator, Climate Project Coordinator	Concurrent with site condition report.

Strategy Title	Desired Outcomes (Objectives)	Output Measure	Who Measures	Timeline
corals and sponges	sponge communities, and track changes to environmental conditions, species composition, and community health	Improved digital infrastructure for storage of data, analyses, and products	Research Coordinator, Climate Project Coordinator	Initial assessment: Year 1, Annual evaluation thereafter
		Critical findings communicated within and outside of ONMS	Research Coordinator, Education and Outreach Coordinator, Climate Project Coordinator	Annually
Strategy CC-6: Understand the role of Channel Islands and regional marine reserves as reference areas for studying climate change	Continue to support MPA monitoring	Continued vessel support for MPA monitoring	Research Coordinator	Annually, after year 1
	Develop methods of marine reserve assessment for climate driven impacts	Peer-reviewed publications and grants developed	Climate Project Coordinator	Year 1-3

Marine Debris Action Plan

Goal: Assess, reduce, and remove marine debris in the sanctuary using collaborative approaches supported by effective education and outreach programming.

Introduction

Marine debris, defined as any persistent, anthropogenic, solid material that is disposed of or abandoned in the ocean, threatens ecosystem function, human health, and safe navigation in the sanctuary. Although the offshore location of the sanctuary and undeveloped nature of the islands provides a buffer from some of the types of debris that are produced along the mainland coast, marine debris enters the sanctuary unintentionally (e.g., lost fishing gear) or from indirect sources that are hard to pinpoint (e.g., floating plastic debris). Furthermore, the distribution and type of marine debris across the sanctuary is not uniform; for example, marine debris along the shoreline of Santa Rosa Island consists mostly of lost fishing gear, whereas Santa Cruz Island marine debris is mostly miscellaneous plastics (Miller et al., 2018). Thus, removal and outreach efforts may need to be island-specific.

ONMS has addressed marine debris issues in the sanctuary through numerous initiatives. To address lost fishing gear, which can fatally entangle animals, ONMS partners with local lobster fishermen and others to remove lost fishing gear off of sanctuary shorelines and seafloor. Plastic pollution that may be fatal if ingested by animals is an increasing concern, and is becoming better understood through the efforts of local research partners (e.g., California State University

Channel Islands). In addition, the Sanctuary Advisory Council has helped to address marine debris by identifying marine debris as a top level priority for inclusion within this management plan, and provided input and advice. The council also adopted a written resolution in 2011 supporting federal and statewide legislative efforts and local ordinances by municipalities and counties to ban the use and distribution of single-use plastic bags.

Fostering partnerships with external organizations and agencies will leverage resources to address marine debris impacts. Important partners are expected to include the NOAA Marine Debris Program,[27] the National Marine Sanctuary Foundation, California State University Channel Islands, local commercial and recreational fishermen, and non-profit organizations that conduct research, outreach, and removal of debris. Sanctuary strategies and activities align with and benefit from California's Ocean Litter Strategy, a blueprint for statewide action on this issue developed by the Ocean Protection Council and NOAA's Marine Debris Program.[28]

Strategy MD-1: Assess the scope, scale, and sources of marine debris in the sanctuary

Working with sanctuary partners, ONMS will evaluate the sources and types of marine debris impacting sanctuary resources at varying temporal and spatial scales. The evaluation will improve our understanding of how marine debris impacts sanctuary resources by identifying the level of persistence of debris, how it enters the sanctuary, and documenting the effects of mitigation efforts within and beyond the sanctuary.

Activity 1.1: Support and promote regional research efforts to monitor and assess the extent and sources of marine debris in the sanctuary (Box 1). Provide assistance with monitoring programs, data analysis, testing of remote sensing tools, and vessel support. Potential partners may include: local community, university, or other existing research and monitoring programs (e.g., California State University Channel Islands, UC Santa Barbara, NOAA Marine Debris Monitoring and Assessment Project[29]).

Activity 1.2: Identify potential marine debris sources during coastal cleanup events (e.g., programs hosted by local grant recipients of NOAA's Bay Watershed Education and Training (B-WET) program, MERITO Foundation).

[27] https://marinedebris.noaa.gov/discover-issue
[28] https://opc.ca.gov/webmaster/_media_library/2018/06/2018_CA_OceanLitterStrategy.pdf
[29] https://marinedebris.noaa.gov/research/monitoring-toolbox

Box 1: Marine debris research questions to address with partners[30]

- What threats do marine debris pose to sanctuary resources? For example, from microplastics (<5mm), consumer plastics, lost fishing gear, and abandoned/lost vessels, and emergent threats.
- What are the spatial and temporal trends of marine debris accumulation throughout sanctuary waters?
- What are the predicted impacts to sanctuary resources over multiple time scales? For example, short (5-10 years), medium (10-50 years) and long (50-100 years) terms?
- What conservation and/or educational tools can be used to reduce marine debris impacts?
- What are the sources of marine debris inputs, and what are the barriers or opportunities to reducing new inputs?
- What human dimensions and ecosystem services are most at risk from marine debris, and how can the sanctuary increase resiliency?

Strategy MD-2: Remove marine debris and reduce new inputs

Working with partners, ONMS will remove marine debris from the sanctuary and reduce new inputs. Programs will focus on community shoreline cleanup events, fishing gear removal efforts, improved waste management efforts, and responding to vessel casualty incidents.

Activity 2.1: Plan and conduct periodic sanctuary-led community shoreline debris cleanup events on the islands, working in conjunction with a variety of participating and supporting partners. Bring greater awareness to the issue by linking the cleanups to popular annual events, such as the ONMS Get Into Your Sanctuary weekend, and California Coastal Cleanup Day.

Activity 2.2: Support fishing gear removal programs active within the sanctuary. This will include continued implementation of "*Goal: Clean Seas Channel Islands*,"[31] a partnership with the National Marine Sanctuary Foundation that engages commercial lobster fishers to remove lost traps, fishing gear, and trash from the sanctuary's shorelines. Additional partners include California State University Channel Islands, Island Packers, Santa Barbara Adventure Company, and Santa Barbara Channelkeeper.

Activity 2.3: Continue to coordinate with organizations that responsibly conduct submerged debris removal projects, including the Sea Doc Society's California Lost Fishing Gear Removal Project, and the Ocean Defenders Alliance. Consult on diving locations, address sanctuary permitting needs, and retrieve reporting data.

[30] Derived from 2021 ONMS Science Needs Assessment research questions for addressing CINMS priority management issues (in development), to be posted at: https://sanctuaries.noaa.gov/science/assessment/
[31] https://marinesanctuary.org/goal-clean-seas-channel-islands/

Activity 2.4: Respond to marine vessel casualty incidents and other discharge events to reduce the introduction of new debris. Use regulatory authority and coordinate with other authorities to effect prompt salvage and removal of debris from vessel grounding and sinking incidents.

Activity 2.5: Collaborate with state and federal governments on marine debris initiatives and regulations. Support state-wide efforts working on California's Ocean Litter strategy, including the Top Ten Recommendations to Address Plastic Pollution in California's Coastal and Marine Ecosystems[32] endorsed by the Ocean Protection Council.

Activity 2.6: Support waste management and recycling initiatives on the mainland, which will likely reduce new inputs of debris to the sanctuary caused by storm runoff.[33]

Strategy MD-3: Raise public awareness about marine debris

Use existing and new education and outreach programs to raise public awareness about how marine debris threatens sanctuary resources.

Activity 3.1: Develop and conduct general and targeted outreach, in collaboration with partners and stakeholders, to reduce new sources of debris. Outreach efforts will focus on local businesses and user groups who are on the water (e.g., fishing, tourism) with diverse outreach tools. Outreach tools include: shoreline cleanup events, event booths, signage, media stories, social media, videos, brochures, public presentations, visitor center displays, and interpretative programs.

Activity 3.2: Work with the fishing community to reduce fishing-related marine debris. Implement monofilament fishing line recycling collection sites, encourage the development and use of alternatives (e.g., biodegradable fishing line), and create new education programs focused on reducing monofilament line debris in the sanctuary. Outreach will focus on initiatives with charter fishing vessels, piers, harbors and marinas, and other mainland and island fishing sites.

Relevant strategies/activities located elsewhere within this management plan

- Education and Outreach Action Plan, Strategy EO-2: Enhance sanctuary interpretation, volunteer, and outreach programs
- Education and Outreach Action Plan, Strategy EO-3: Promote public engagement and stewardship through citizen science monitoring programs
- Education and Outreach Action Plan, Strategy EO-4: Visitor centers, partner facilities, and signage
- Education and Outreach Action Plan, Strategy EO-5: Foster and promote sustainable tourism and responsible use in support of the Blue Economy

[32] https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20210216/Item_4_Plastic_Pollution_Recommendations_Staff_Rec_Revised_and_Endorsed_FINAL_20210323.pdf

[33] https://nmssanctuaries.blob.core.windows.net/sanctuaries-prod/media/docs/20210520-wcr-climate-impacts-profile.pdf

- Research and Monitoring Action Plan, Strategy RM-3: Interpret and apply select technical science information to meet sanctuary needs
- Research and Monitoring Action Plan, Strategy RM-4: Support regional science priorities
- Resource Protection Action Plan, Strategy RP-3: Identify, evaluate, prioritize, and respond to current and emerging issues
- Resource Protection Action Plan, Strategy RP-4: Permit appropriate research, education, and management activities
- Operations and Administration Action Plan, Strategy OA-3: Coordinate and support the Sanctuary Advisory Council

Existing and Potential Partners

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

Government agencies:

California Coastal Commission, California Department of Fish and Wildlife Office of Spill Prevention and Response, California Division of Boating and Waterways, California Ocean Protection Council, California State Parks, Channel Islands National Park, NOAA Marine Debris Program, Santa Barbara County Parks, United States Coast Guard, Ventura County Parks.

Non-governmental organizations:

California Marine Sanctuary Foundation, California Whale Rescue, Island Packers, National Marine Sanctuary Foundation, Ocean Defenders Alliance, Santa Barbara Adventure Company, Santa Barbara Channel Keeper, Save Our Shores, Sea Doc Society's California Lost Fishing Gear Removal Project, Surfrider Foundation, The Nature Conservancy.

Academic & affiliated associations:

California Cooperative Oceanic Fisheries Investigations, California State University Channel Islands, Santa Rosa Island Research Station (Marine Debris Project Manager), University of California Santa Barbara Environmental Entrepreneur Program, University of California Santa Barbara Goleta Entrepreneurial Magnet), University of California Santa Barbara School of Mechanical Engineering.

Performance Measures

Strategy Title	Desired Outcomes (Objective)	Output Measure	Who Measures	Timeline
Strategy MD-1: Assess the scope, scale, and sources of marine debris in the sanctuary	Monitor and assess the types and sources of persistent marine debris in the sanctuary	Database and/or reports created on the amounts and locations of marine debris, including sources	Resource Protection and Research Teams	Year 1 and ongoing as needed
Strategy MD-2: Remove marine debris and reduce new inputs	Cleanup events conducted as part of *Goal: Clean Seas Channel Islands* Marine vessel landings and other discharge incidents are responded to and tracked.	Maintain records of cleanup events including amount of debris removed; emergency response efforts recorded	Resource Protection Team	Year 1 onward
Strategy MD-3: Raise public awareness about marine debris	Increase public knowledge and participation in marine debris reduction activities	Outreach programming	Education and Outreach Team	Year 1 onward

Vessel Traffic Action Plan

Goal: Ensure that vessel traffic in the sanctuary is compatible with protecting sanctuary resources.

Introduction

A wide array of public and private vessels operate within the sanctuary. Nearly 5,000 large transit ships pass through the sanctuary annually,[34] and thousands of additional smaller vessels (e.g., recreational, commercial, and research) visit the sanctuary from harbors in Los Angeles, Ventura, and Santa Barbara. As a result, the extensive vessel use affects sanctuary resources. For example:

1. collisions between ships and endangered marine mammals and sea turtles may lead to animal injuries and death;[35]
2. groundings and sinkings of vessels may release pollutants and debris into the water;
3. transiting vessels may generate underwater noise and introduce non-native species to the region; and
4. anchors disrupt sensitive species and habitats (e.g., eelgrass beds).

[34] Marine Exchange of Southern California 2018
[35] NOAA NMFS Large Whale Strandings Database and Rockwood et al. 2017

Therefore, tracking and monitoring all vessel activities will advance our goal to facilitate and manage sanctuary use while protecting sanctuary resources. To implement this action plan, ONMS will continue to partner with other agencies and other organizations within the region in an effort to reduce the risk of lethal ship strikes and noise levels to endangered and threatened marine animals. For over 10 years, the sanctuary has worked with the National Marine Fisheries Service and U.S. Coast Guard to slow ships down via seasonal voluntary and incentive based Vessel Speed Reduction (VSR) zones, and separate ships and whales via modified shipping lanes. ONMS will continue to engage boaters and the shipping industry, track and monitor vessel traffic, and enact policies to foster safe navigation in coordination with other agencies and partners following these approaches. The plan proposes to continue to enact sanctuary regulations and policies that prohibit illegal discharges and to create permanent and seasonal wildlife safety zones within 1 nautical mile of the islands and region-wide when endangered whales are present. Furthermore, ONMS will also utilize unique new methods, such as a corporate social responsibility campaign, to encourage corporations, retailers, and consumers to consider VSR in market purchases.

Strategy VT-1: Vessel Speed Reduction (VSR)

With partners, continue to promote VSR programs, which encourage vessels greater than 300 gross registered tons to reduce speeds to 10 knots or less in sanctuary and regional waters. Programs, which may be voluntary or incentive-based, offer positive public business recognition and financial rewards to container and car carrier companies transiting slowly through the Santa Barbara Channel region. Shipping industry participation in VSR programs in our region has increased modestly from <10% in 2014 to around 50% in 2020, despite the challenges faced by lack of sustained funding. Our goal is to boost cooperation to over 90%.

Activity 1.1: Support whale monitoring and detection efforts to inform the annual establishment of the seasonal voluntary VSR whale advisory zone. Partners may include: the Benioff Ocean Initiative's WhaleSafe team (Whale Safe Web Portal[36]), Point Blue Conservation Science, and The Nature Conservancy.

Activity 1.2: Conduct outreach to the shipping industry to explain the voluntary VSR program. Outreach may include: broadcasting voluntary VSR notices from May through November using NOAA Weather radio and U.S. Coast Guard (USCG) Local Notice to Mariners; attending and organizing industry meetings; and coordinating with the USCG to contact vessels not cooperating with VSR and Area To Be Avoided (ATBA) zones.

Activity 1.3: Promote and recognize volunteer compliance within the shipping industry. Engage the shipping industry with email, an award ceremony, and advertising. Work with ONMS and NOAA communications teams to generate positive media reporting on levels of cooperation.

Activity 1.4: Continue to support the incentive-based partnership program, "Protecting Blue Whales and Blue Skies." This will involve staff time to coordinate with partners, and to plan for, launch, monitor, and report-out on incentive-based VSR program participation.

[36] https://whalesafe.com/

Activity 1.5: Increase whale ship strike and VSR program awareness within NOAA, the U.S Congress, corporations, and the general public. Conduct briefings and meetings, and implement a public relations campaign.

Activity 1.6: Develop and support a whale safe corporate social responsibility campaign. Work with academic, non-profit, and private sector partners to research and develop a campaign focused on inspiring corporate retailers to adopt policies and practices aligning with consumer-supported values (i.e., the protection of whales, including whale-safe product shipment).

Activity 1.7: Inform further actions to adequately address the ship strike issue, including consideration of management actions to reduce vessel strikes to levels that ensure species survival and recovery.

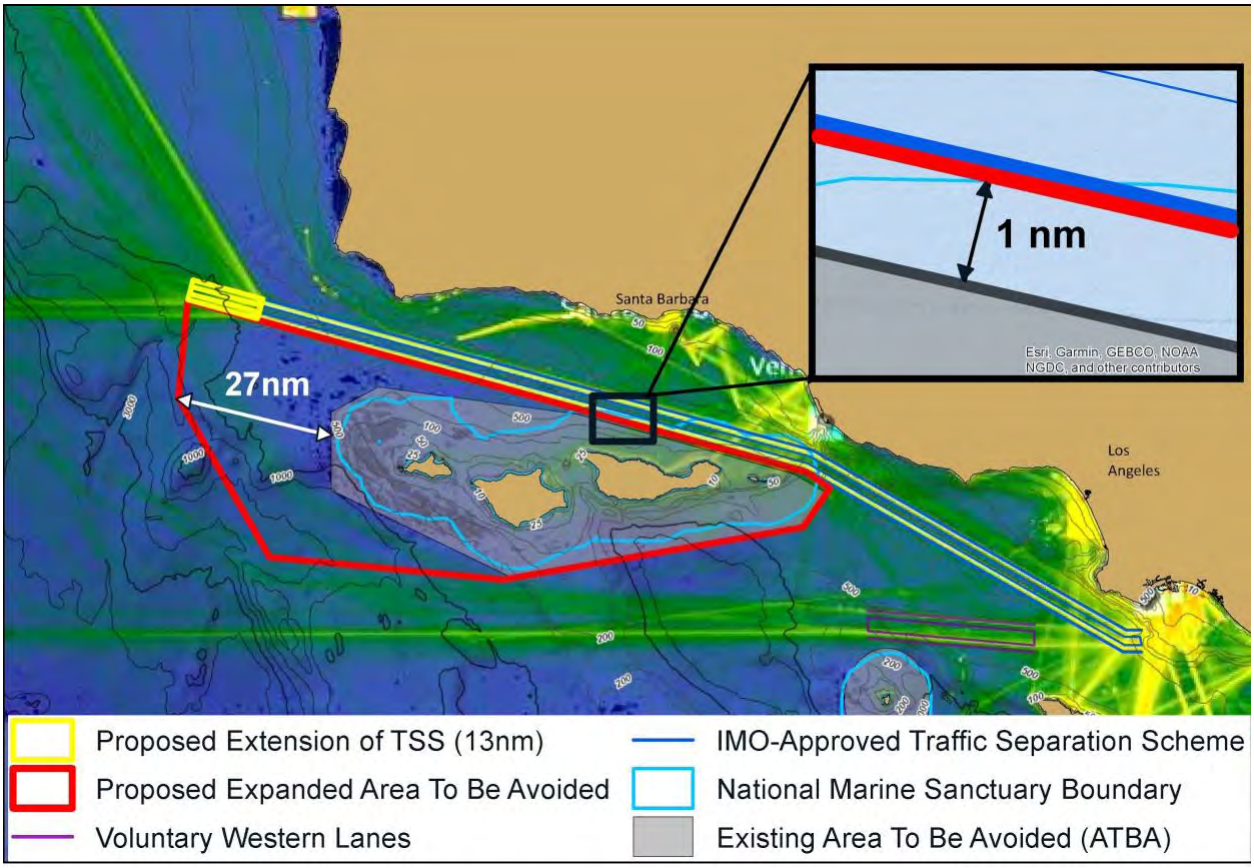

Figure 3. Proposed traffic separation scheme (TSS) extension and ATBA modification. Source: NOAA

Strategy VT-2: Manage vessels spatially

Separating ships and whales is one of the most effective ways to reduce ship strike risk. This can be accomplished by extending shipping lanes, changing the configuration of lanes, and expanding navigational Areas to Be Avoided (ATBA).

Activity 2.1: Track compliance via analysis of AIS ship tracks pending adoption of the International Maritime Organization expansion proposal on the western end of the Santa Barbara Channel (expected 2022), and incorporate the Traffic Separation Scheme extension and navigational ATBA expansion in outreach programs to the shipping industry (Figure 3).

Activity 2.2: ONMS will engage in regional ocean management issues and projects that may affect ship traffic within and around the sanctuary by attending working group meetings, working with the Sanctuary Advisory Council, and communicating with regional studies (e.g., USCG Pacific Port Access Route Study,[37] offshore energy development).

Strategy VT-3: Track and monitor vessel activity

To better understand how people use the sanctuary, ONMS will track and monitor vessel activity. Tracking and monitoring all vessel activities for all vessel sizes will advance our goal to facilitate and manage sanctuary use while protecting sanctuary resources.

Activity 3.1: Secure access to Automated Identification System (AIS) data, which is a navigational safety system primarily used for large vessels that transmits high frequency radio signals from each vessel several times a minute. Work with National Marine Fisheries Service (NMFS) to establish a long-term partnership to support AIS data delivery and analysis.

Activity 3.2: Advance the research, development and application of surveillance technologies to assist with understanding all sanctuary vessel traffic, while ensuring compliance with all applicable laws and policies. ONMS will work with partners to evaluate, prioritize, and test a wide variety of marine domain awareness surveillance technologies (e.g., shore-based radar, satellite, uncrewed ocean surface systems, aerial surveys, and Vessel Monitoring Systems).

Activity 3.3: Develop a spatially-explicit time series of vessel use in and around the sanctuary over time.

Relevant strategies/activities located elsewhere within this management plan

- Education and Outreach Action Plan, Strategy EO-3: Promote public engagement and stewardship through citizen science monitoring programs
- Zone Management Action Plan, Strategy ZM-1: Support management of the Channel Islands network of Marine Reserves and Marine Conservation Areas
- Research and Monitoring Action Plan, Strategy RM-1: Characterize and monitor the biological and physical features and processes associated with the sanctuary
- Research and Monitoring Action Plan, Strategy RM-2: Characterize and monitor ecosystem services provided by the sanctuary
- Operations and Administration Action Plan, Strategy OA-3: Coordinate and support the Sanctuary Advisory Council

Existing and Potential Partners

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

[37] https://www.federalregister.gov/documents/2021/07/29/2021-15923/port-access-route-study-the-pacific-coast-from-washington-to-california

Academic & affiliated associations:

Scripps Institute of Oceanography, UCSB Bren School of Environmental Science and Management, University of California Santa Barbara,

Chumash government and community organizations:

Santa Ynez Band of Chumash Indians, Wishtoyo Foundation, Barbareño Chumash Council, Coastal Band of the Chumash Nation, Barbareño/Ventureño Band of Mission Indians.

Government agencies:

California Air Resources Board, Cordell Bank National Marine Sanctuary, Greater Farallones National Marine Sanctuary, National Marine Fisheries Service, Santa Barbara County Air Pollution Control District, San Francisco Bay Area Air Quality Management District, U.S. Coast Guard, U.S. Environmental Protection Agency, U.S. Navy, Ventura County Air Pollution Control District.

Non-governmental organizations:

Benioff Ocean Institute, California Marine Sanctuary Foundation, Environmental Defense Center, Greater Farallones Association, The Nature Conservancy, Star Crest Consulting, Point Blue Conservation Science, Volgenau Foundation.

Performance Measures

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
Strategy VT-1: Vessel Speed Reduction	Reduced risk in VSR zones (reduced levels of ship strikes), reduced noise and air emissions	Monitoring AIS to determine adherence; analyze reduced ocean noise and air emissions; increased cooperation. Reducing trend in levels of ship strikes occurring within CINMS VSR zone by tracking ship strikes through NMFS Stranding Network database, and estimated strikes by Pt. Blue modelers.	Resource Protection Coordinator and Air District partners	Year 1 onward
Strategy VT-2: Manage Vessels Spatially	IMO Adoption of ATBA expansion and TSS extension (expected 2022) Safer Whales	Monitoring AIS data to determine adherence to IMO actions Reduced ship strikes in those areas	Resource Protection Coordinator	Year 1-2 for establishment, Years 2-5 implementation and monitoring
Strategy VT-3: Track and Monitor Vessel Activity	Better understanding of temporal and spatial use; R&D on technologies	# of sanctuary users via vessel counts	Resource Protection Coordinator	Year 1 onward

Introduced Species Action Plan

Goal: Prevent the introduction, spread, and establishment of new introduced species and control and/or eradicate existing introduced species.

Introduction

Introduced species (also commonly referred to as "non-native" or "non-indigenous" species) are plants and animals living outside their native geographical range due to human activities introducing them to an ecosystem or aiding their survivorship. Some introduced species may be benign; however, some become invasive by causing ecological or economic harm in their newly inhabited environment. For example, invasive species may cause declines, extirpations, or extinctions of native marine life, reduce biodiversity by competing with native organisms for limited resources, and alter habitats.

Although federal regulations prohibit the introduction of introduced species into the sanctuary (15 CFR § 922.72(a)(12)), these species have been found in sanctuary waters. The spread of invasive algal species within the sanctuary, particularly devil weed (*Sargassum horneri*) and more recently Japanese kelp (*Undaria pinnatifida*), has the potential to cause adverse ecological and economic impacts (Diaz et al., 2018). In addition, the Asian red alga (*Caulacanthus ustulatus*) has been observed at one site at Anacapa Island, and the invasive bryozoan *Watersipora* spp. has been observed on numerous oil platforms in the southeast Santa Barbara Channel as well as natural reefs and pier pilings in the sanctuary (Page et al., 2018).

Preventing and controlling marine introduced species is a ONMS priority. These species may be introduced and spread unintentionally from the hulls, lines, propellers, or ballast water of large, oceangoing ships, as well as from smaller private and commercial boats. Vessel traffic associated with increasing levels of international trade is the primary vector for the introduction of non-indigenous species in California marine waters. After initially being introduced by large, oceangoing ships, local small boats may accelerate the spread of introduced species across the sanctuary. Strategies to contain, control, and slow the spread of introduced species are prioritized, as well as preventative measures to avoid future invasions. Additionally, ONMS is prioritizing research to develop a completed inventory cataloging known marine species within the sanctuary, both native and introduced (see Strategy RM-4, Activity 4.4).

The strategies in this action plan focus on: 1) research, detection, and monitoring efforts within the Santa Barbara Channel, 2) the management of invasion vectors and prevention promotion, and 3) coordination of response plans for current and future introduced species. Among all action plans, partnerships are essential to tackle the challenges of marine introduced species. Thus, ONMS will continue to work within NOAA and the Biosecurity Management Group to bring in additional partners, resources, relevant expertise, scientific understanding, and management guidance.

Strategy IS-1: Support research, detection, and monitoring efforts

This first strategy strives to improve knowledge of existing and potential introduced species within the sanctuary. With partners, ONMS will assess the potential and observed levels of

ecosystem change and disturbance, and support efforts to detect, track, monitor, and genetically trace introduced species.

Activity 1.1: Support research efforts on introduced species of brown algae to assess their impacts to sanctuary marine ecosystems, preferred habitats, species, or ecosystem services such as commercial and recreational fishing. Synthesize and distill information regarding marine introduced species for the resource protection and management teams. Distribute information regarding funding opportunities through research partners and the Research Activities Panel. Prioritize vessel time requests related to introduced species.

Activity 1.2: Collaborate with programs that track, detect and monitor the spread of introduced species. Support may include: promoting citizen science, sampling for environmental DNA to detect source populations, vessel and diving support. Partners include: Channel Islands Biosecurity Management Group, Channel Islands National Park, Partnership for Interdisciplinary Studies of Coastal Oceans, Reef Check California, and the UCSB Marine Biodiversity Observation Network.

Activity 1.3: Promote and attract external research attention on identified marine debris scientific gaps and needs that will support sanctuary resource protection and management. Knowledge gaps will be identified in the ONMS Science Needs Assessments[38] and by engaging with the Research Activities Panel.

Strategy IS-2: Manage invasion vectors and promote prevention through education and outreach

It is critical for ONMS and other resource managers to promote the prevention of introduced species through education and outreach on best practices. Introduced species can become established very quickly, and once established, their control and eradication becomes complex, costly, and is usually unsuccessful.

Activity 2.1: Modify ONMS field operations to apply best management practices focused on controlling pathways and vectors of transmission. Best management practices are well established (Diaz et al., 2018), and include:

- Thoroughly clean before and after every use gear such as diving equipment, fishing traps, anchors, and marine research equipment that may be in the water for an extended period of time;
- Conduct inspections of gear and vessels to check for fouling;
- Hulls should be regularly cleaned and inspected, and/or have antifouling coatings on them. Also, conduct hull de-fouling before, and not during, a visit to the sanctuary; and
- Continually monitor potential vectors in partnership with the U.S. Coast Guard.

Activity 2.2: Coordinate with multiple agencies and entities to collectively address introduced species issues, promoting increased attention to marine species. Collaborate with involved

[38] https://sanctuaries.noaa.gov/science/assessment/

partners to identify and pursue funding opportunities, and develop education and outreach initiatives focused on increasing public awareness and promoting precautionary practices.[39]

Activity 2.3 Provide public education on marine introduced species of concern, the dangers of transporting these species, practices necessary to reduce transport risks prior to visiting the sanctuary, and how to report sightings. This will involve coordinating and providing resources to support local training workshops, and focus on local boaters, harbor communities, and other sanctuary visitors. Encourage sanctuary visitors to report sightings of invasive species at marineinvasives.org or via the iNaturalist.org app.

Activity 2.4: Inform state and federal legislative, regulatory and policy approaches, permitting, and interpretive and regulatory enforcement. For example, Marine Invasive Species Program (MISP) within the California Department of Fish and Wildlife's (CDFW) Office of Spill Prevention and Response posts monitoring data on the internet, updates the data on an annual basis, and submits a report to the Legislature detailing the results of the monitoring. It also coordinates with the California State Lands Commission to control the release of introduced species from the ballast of ocean-going vessels.

Strategy IS-3: Coordinate response plans with partners

If and when introductions do occur, ONMS will quickly assess the threat and respond with unified eradication or control efforts in coordination with regional and state partners. Eradication (i.e., the removal or destruction of the entire population of introduced species) is desirable, if feasible, and will be considered first through timely consultation with relevant partners and experts. If eradication is not feasible due to the extent of species establishment and other factors such as eradication costs, a team will determine if control measures are appropriate (i.e., containing, suppressing, or reducing populations) and if long-term management is necessary. Timely response by ONMS will also require advance planning for securing any necessary permits that may be required to conduct in-water activities.

Activity 3.1: Assess the potential threat level of a newly discovered introduced species within or near to the sanctuary. This would involve assessing the situation with the Channel Islands Biosecurity Management Group and research partners to determine appropriate initial responses to pursue, following general introduced species response protocols (Figure 4). Eradication is a preferred outcome, but if not feasible then control measures will be assessed.

Activity 3.2: Form an emergency response team to execute the response plan quickly, following outlined objectives and protocols in the response plan, and document response efforts.

[39] A key partner will be the Channel Islands Biosecurity Management Group. Led by the National Park Service (Channel Islands National Park), this group of agencies and other entities focuses collectively on biosecurity protection of the Channel Islands (terrestrial environment, and more recently marine environment) to prevent new invasions of introduced species via all major vectors, supporting early detection of invasives with monitoring protocols, rapid response strategies, and the creation and dissemination of education programs.

Activity 3.3: To the extent practicable and in collaboration with partners, support the restoration of natural habitats if deemed feasible and warranted (i.e., whether habitats and local ecological communities can be restored given the current extent of invasion).

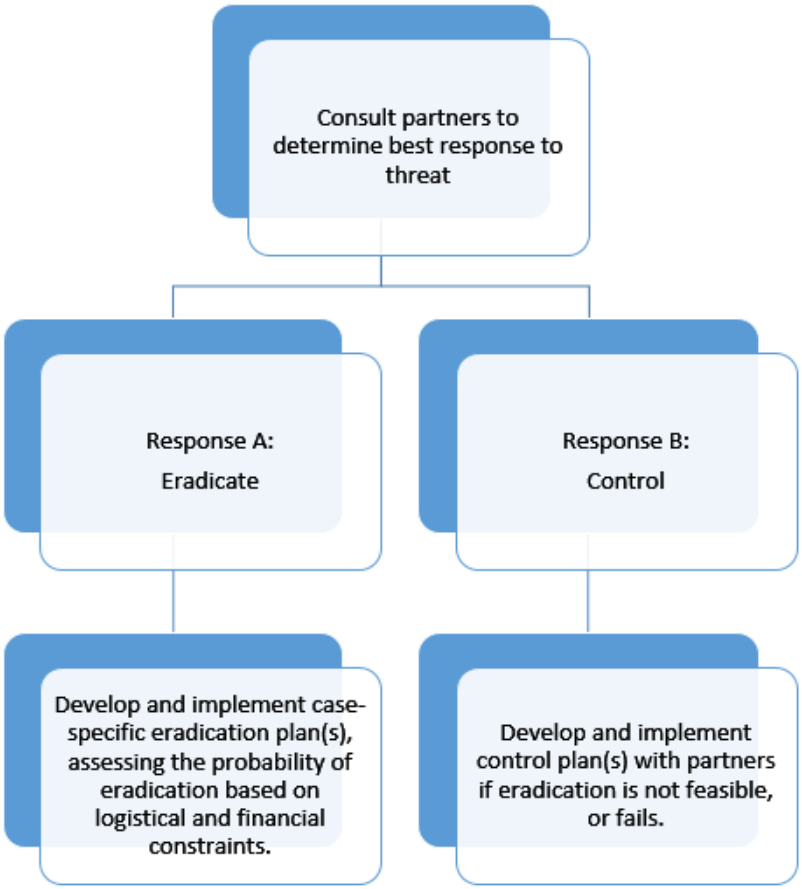

Figure 4. Introduced Species Response Protocol. Source: NOAA

Relevant strategies/activities located elsewhere within this management plan

- Climate Change Action Plan, Strategy CC-6: Understand the role of Channel Islands and regional marine reserves as reference areas for studying climate change
- Education & Outreach Plan, Strategy EO-2: Enhance sanctuary interpretation, volunteer and outreach programs
- Education & Outreach Plan, Strategy EO-5: Foster and promote sustainable tourism and responsible use in support of the blue economy
- Research & Monitoring Plan, Strategy RM-1: Characterize and monitor the biological and physical features and processes associated with the sanctuary
- Research & Monitoring Plan, Strategy RM-3: Interpret and apply select technical science information to meet sanctuary needs
- Resource Protection Plan, Strategy RP-3: Respond to current and emerging issues

- Resource Protection Plan, Strategy RP-4: Permit appropriate research, education, and management activities
- Operations and Administration Action Plan, Strategy OA-4: Maintain safe field operation platforms and applied technologies

Existing and Potential Partners

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

Academic & affiliated associations:

California State University Channel Islands Santa Rosa Island Research Station, Partnership for Interdisciplinary Studies of Coastal Oceans, Reef Check California, University of California Natural Reserve System, University of California Sea Grant California Sea Grant Extension Program.

Chumash government and community organizations:

Santa Ynez Band of Chumash Indians, Wishtoyo Foundation, Barbareño Chumash Council, Coastal Band of the Chumash Nation, Barbareño/Ventureño Band of Mission Indians.

Government agencies:

Aquatic Invasive Species Program, California Agencies Aquatic Invasive Species team, California Coastal Commission, California Department of Fish and Wildlife (Marine Region), California Division of Boating and Waterways, California Invasive Species Advisory Committee, California Ocean Protection Council, California State Lands Commission, California State Water Resources Control Board, Invasive Species Council of California, National Invasive Species Council, Naval Base Ventura County, Reef Environment Education Foundation, NOAA Invasive Species Program, Port of Hueneme, Sanctuary Advisory Council, U.S. Navy (San Clemente Island), San Nicolas Island Naval operations, U.S. Fish and Wildlife Service, United States Coast Guard, United States Coast Guard Auxiliary, Ventura Harbor District.

Non-governmental organizations:

Biosecurity Management Group (led by the Channel Islands National Park), Catalina Island Conservancy, Channel Islands Harbor Department, Local divers and boaters, Nature Conservancy (California Chapter), Santa Barbara Harbor.

Performance Measures

Strategy Title	Desired Outcome	Output Measure	Who Measures	Timeline
Strategy IS-1: Support research, detection, and monitoring efforts	Improved understanding of introduced species risks to CINMS native species and habitats. Knowledge and tracking of introduced species detections/arrivals within CINMS over time.	Research reports and papers. Database of known introduced species in CINMS	Research Team	Year 1, ongoing
Strategy IS-2: Manage invasion vectors and promote prevention through education and outreach	Boaters and harbor officials are informed and taking precautionary steps to reduce risk of transporting introduced species to the sanctuary.	Outreach products created and delivered to priority audiences	Resource Protection Coordinator, Education and Outreach Team	Year 1, ongoing
Strategy IS-3: Coordinate response plans with partners	A coordinated response group applies best available expertise, response protocols and strategies and agency jurisdictions to respond effectively in a timely manner.	Documented response efforts	Resource Protection Coordinator, Education and Outreach Team	As needed when/if there is a new introduction

Zone Management Action Plan

Goal: Manage the sanctuary's protective zones via monitoring, outreach, enforcement, and cooperative administration. Work with partners to evaluate zone performance to inform future adaptive management.

Introduction

To separate conflicting human uses and protect sensitive marine species, habitats, and cultural sites, several zoning schemes exist within CINMS boundaries, including:

- A joint state/NOAA network of marine reserves and marine conservation areas that prohibit all or some forms of extraction while allowing non-consumptive activities;
- An internationally designated Channel Islands Biosphere Region with CINMS at its core and including the nearby coastal communities that depend on a healthy, thriving Santa Barbara Channel; and
- A 1 nautical mile buffer around the five islands of the Channel Islands National Park islands to protect marine mammals, seabirds, and sensitive habitats from large vessel traffic, low flying motorized aircraft, and motorized personal watercraft.

This action plan focuses on the following strategies:

1. Support management of the Channel Islands network of 11 state and federal marine reserves and two marine conservation areas;
2. Manage zones and sensitive areas to minimize disturbance to sanctuary resources; and
3. Participate in the Channel Islands Biosphere Reserve system.

Strategy ZM-1: Support management of the Channel Islands network of marine reserves and marine conservation areas

Support management, monitoring, education, enforcement, and review of the network of Channel Islands marine reserves and marine conservation areas. Partner with implementing state and federal agencies, involved research institutions, the Santa Barbara Channel Marine Protected Area Collaborative,[40] and others. Consider possible future adaptations of the Channel Islands network of marine reserves and conservation areas.

Activity 1.1: Engage the Sanctuary Advisory Council with periodic updates on administration and performance of the Channel Islands network of marine reserves and conservation areas. Solicit council discussion, feedback and advice on sustaining and improving all aspects of managing these zones.

Activity 1.2: Support the state of California's MPA Decadal Review process,[41] planned for completion in December 2022. Encourage and promote participation in the review process by local sanctuary stakeholders. Provide updates and respond to information requests from MPA partners, such as the California Fish and Game Commission and CDFW, as needed. To help inform the review, provide CDFW with information related to the status of managing of the Channel Islands network, including monitoring, enforcement and outreach data.

Activity 1.3: Following the MPA Decadal Review Process, evaluate the need for any adaptations in federal waters portions of the joint state/NOAA network of Channel Islands marine reserves and conservation areas in close consultation with CDFW. Engage local stakeholders through the Sanctuary Advisory Council and its working groups. Approach the Pacific Fishery Management Council as needed. If future regulatory changes are necessary, NOAA would do so through a rulemaking process pursuant to NMSA procedures, NEPA environmental compliance requirements, agency and tribal consultations, and public input.

Activity 1.4: Continue support for outreach and education. To improve awareness of and compliance with Channel Islands marine reserves and conservation areas, ONMS will continue to collaborate with the state of California in the development of interpretive outreach products (e.g., printed materials, digital resources) and signs that target priority user groups.

[40] https://www.mpacollaborative.org/santabarbara/
[41] https://wildlife.ca.gov/Conservation/Marine/MPAs/Management/Decadal-Review#56638606-learn-more

Activity 1.5: Engage the Santa Barbara Channel Marine Protected Area Collaborative.[42] Support enhanced public understanding of and compliance of the marine reserves and conservation areas within the region. Pursue grants, create new outreach products, assess compliance, and work with a variety of stakeholders, including the fishing community.

Activity 1.6: Support continued long-term ecological and socio-economic monitoring of the Channel Islands marine reserves and conservation areas. Provide support to research partners, including sanctuary research vessel use, pursuing joint proposals for relevant studies, and providing assistance with data analyses. Develop digital infrastructure to incorporate monitoring data into data products that assess zone efficacy and performance.

Activity 1.7: Encourage and promote targeted research efforts with partners focused on understanding and predicting the performance of Channel Islands marine reserves and conservation areas in the face of climate-driven changes.

Activity 1.8: Support targeted and effective cooperative enforcement of Channel Islands marine reserves and conservation areas. Continue to cooperate with and support CDFW, National Park Service, U.S. Coast Guard and NOAA's Office of Law Enforcement through the provision of mobile applications (i.e., electronic Fisheries Information Network System (eFINS), shore based radar systems, and other enforcement data collection and tracking tools). Continue to actively support and participate with the Island Sentinel cooperative enforcement group.

Strategy ZM-2: Manage zones and sensitive areas

To minimize disturbance to sensitive animals and habitats and protect sanctuary resources, ONMS will manage sanctuary zones and sensitive areas with monitoring, collaborate with partner agencies, and conduct education and outreach to the public.

Activity 2.1: Track and monitor vessel and aircraft traffic. As noted in the Vessel Traffic Action Plan, ONMS will continue to monitor AIS, shore-based radar, and other vessel tracking technology to track large and small vessel traffic within CINMS and ensure compliance with all sanctuary regulations. If and when unauthorized incursions occur, ONMS will work with law enforcement partners to respond.

Activity 2.2: Raise awareness of sanctuary zones. Providing education and outreach to all sanctuary users and visitors (boat-based or air-based, including pilots and drone-owners) will be a constant endeavor to help ensure CINMS resources are protected while facilitating compatible uses. For example, ONMS will continue to reach out to aircraft pilot associations concerning the location of the CINMS overflight restricted zone, explaining the zone's purpose of minimizing disturbance to nesting and roosting seabirds and pinnipeds hauled out on island beaches.

Activity 2.3: Through sanctuary permitting conditions applied to research, education, or management activities, protect discrete areas from avoidable disturbance to sensitive habitats,

[42] MPA Collaboratives are community-level groups that are an important part of the California Ocean Protection Council's guiding principles for governing California's statewide MPA network. These groups support meaningful partnerships at the local, regional, and national levels to leverage resources and ensure transparency. For more information about the Santa Barbara Channel MPA collaborative: https://www.mpacollaborative.org/santabarbara/.

species, maritime cultural sites, and other ocean uses. For example, users may be required to avoid known shipwreck sites and deep-sea corals when conducting research activities that may disturb the seabed.

Strategy ZM-3: Participate in the Channel Islands Biosphere Reserve system

ONMS cooperates with global programs in support of the conservation of marine resources, which is one of the stated purposes for national marine sanctuaries listed in the NMSA (16 U.S.C. § 1431(b)(9)). CINMS and Channel Islands National Park will continue to act as principal management agencies for the Channel Islands Biosphere Reserve (designated in 1976 as a Biosphere Reserve by the Man and Biosphere (MAB) Programme[43] of the United Nations Educational, Scientific and Cultural Organization (UNESCO)[44]) and coordinate with local, state, and federal jurisdictions, to promote conservation of biodiversity and sustainable human use.

Activity 3.1: Coordinate with relevant local, state, and federal jurisdictions in the Channel Islands Biosphere Region to promote awareness and integration of the Biosphere Programme tenets of conservation and sustainable economic use.

Activity 3.2: Participate in United States Biosphere Network working groups to learn and share lessons learned on effective governance of the Channel Islands Biosphere Region.

Activity 3.3: Integrate the Man and the Biosphere program into sanctuary education/outreach to raise awareness of the public living and thriving in the Channel Islands Biosphere Region.

Relevant strategies/activities located elsewhere within this management plan

- Climate Change Action Plan, Strategy CC-6: Understand the role of Channel Islands and regional marine reserves as reference areas for studying climate change
- Marine Debris Action Plan, Strategy MD-2: Remove marine debris and reduce new inputs
- Vessel Traffic Action Plan, Strategy VT-2: Manage vessels spatially
- Introduced Species Action Plan, Strategy IS-2: Manage invasion vectors and promote prevention through education and outreach
- Research and Monitoring Action Plan, Strategy RM-1: Characterize and monitor the biological and physical features and processes associated with the sanctuary
- Research and Monitoring Action Plan, Strategy RM-2: Characterize and monitor ecosystem services provided by the sanctuary
- Research and Monitoring Action Plan, Strategy RM-3: Interpret and apply select technical science information to meet sanctuary needs
- Education and Outreach Action Plan, Strategy EO-6: Increase awareness of the sanctuary and engagement through effective media and communication tools

[43] Man and the Biosphere Program: https://en.unesco.org/mab
[44] http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/europe-north-america/united-states-of-america/channel-islands/

- Resource Protection Action Plan, Strategy RP-2: Enforce regulations to protect sanctuary resources
- Resource Protection Action Plan, Strategy RP-5: Review and provide policy guidance on activities of other agencies
- Operations and Administration Action Plan, Strategy OA-3: Coordinate and Support Sanctuary Advisory Council

Existing and Potential Partners

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

Academic & affiliated associations:

California State University Channel Islands, California State University Long Beach, California State University Northridge, Marine Research and Exploration (MARE), Monterey Bay Aquarium Research Institute, Santa Barbara City College, University of California, Santa Barbara, Ventura County Community College District.

Chumash government and community organizations:

Santa Ynez Band of Chumash Indians, Wishtoyo Foundation, Barbareño Chumash Council, Coastal Band of the Chumash Nation, Barbareño/Ventureño Band of Mission Indians.

Government agencies:

California Department of Fish and Wildlife, California Ocean Protection Council, National Marine Fisheries Service, National Park Service, NOAA Office of Law Enforcement, Pacific Fishery Management Council, Sanctuary Advisory Council, U.S Coast Guard.

Non-governmental organizations:

California Marine Sanctuary Foundation, Man and Biosphere (MAB) Programme of the United Nations Educational, Scientific and Cultural Organization (UNESCO), Protected Seas, Santa Barbara Channel Marine Protected Area Collaborative.

Performance Measures

Strategy Title	Desired Outcome	Output Measure	Who Measures	Timeline
Strategy ZM-1: Marine Reserves and Marine Conservation Areas	Protection, deeper scientific and educational understanding of sanctuary resources	Status and trends of sanctuary resources inside/outside reserves/conservation areas, i.e., documented in decadal review results	Resource Protection Coordinator, Research and Education Departments	Ongoing
Strategy ZM-2: Management of Zones and Sensitive Areas	Prevent or minimize disturbance to sanctuary resources	Minimal to mitigatable short term adverse impacts	Resource Protection Coordinator	Ongoing
Strategy ZM-3: Channel Islands Biosphere Region	Broad public and government awareness of Biosphere	Integration of Biosphere tenets into regional management	Resource Protection Coordinator	Ongoing

Education and Outreach Action Plan

Goal: Inspire ocean literacy, climate literacy, stewardship, and conservation of the sanctuary through education and outreach. Enhance outreach and engagement to support sustainable tourism and responsible recreational enjoyment of the sanctuary. Create an ocean-literate public capable of making informed environmental decisions.

Introduction

CINMS serves as a world-class living laboratory and outdoor classroom, providing outstanding opportunities for hands-on education and lifelong learning. Its proximity to Los Angeles, one of the largest and most culturally diverse metropolitan areas in the country, requires building meaningful and culturally-aware connections with communities. ONMS will continue to explore emerging technologies to reach different sanctuary audiences, foster their connection to the sanctuary, and communicate the innovative science and management used to protect sanctuary marine resources. The remote, offshore location of the sanctuary limits access to visitors aboard private boats, charter cruises, and Channel Islands National Park concession vessels. Therefore, the sanctuary relies on partnerships throughout the tri-county region (Santa Barbara, Ventura, and Los Angeles) to provide interpretive and virtual opportunities for people who may not actually visit the sanctuary, as well as support for sustainable tourism and recreation.

In this action plan, six strategies highlight how ONMS will meet its goals to engage with the support of partnerships. Strategies and activities include:

1. advancing K-16 education programs to support improved sanctuary stewardship and ocean and climate literacy;
2. enhancing sanctuary interpretation, volunteer, and outreach programs;
3. sustaining volunteering and citizen science opportunities;

4. promoting interpretation of the sanctuary's maritime heritage, cultural significance, and natural resources;
5. fostering and promoting responsible recreational and sustainable tourism use of the sanctuary in support of the Blue Economy;[45] and
6. increasing awareness of the sanctuary and engagement through media and communication tools.

Strategy EO-1: Advance K-16 education programming to support sanctuary stewardship and climate literacy

Develop and promote engagement with curricula, activities, professional development, and meaningful field experiences to support K-16 with a focus on increasing ocean and climate literacy and stewardship among a diversity of students and teachers, including from underserved communities. Base programs on sanctuary ecosystems and resource protection issues, assuring relevance to academic standards for various educational settings. Increase teacher and student knowledge of ocean issues and inspire active stewardship of the sanctuary.

Activity 1.1: Continue to develop and deliver hands-on and virtual K-16 student and teacher curricula and activities focused on sanctuary resources, research, stewardship, and ecosystem protection issues. Focus expanding outreach to previously underserved communities in the region.

Activity 1.2: Promote NOAA-developed curriculum resources for use with a diversity of K-16 students to address the impacts of emerging ocean issues (e.g., marine debris and climate change) on ocean and coastal ecosystems.

Activity 1.3: Support teacher professional development, meaningful in-person field experiences, and use of virtual tools (see Activity 2.5). For example, CINMS researchers will mentor teachers aboard the research vessel *Shearwater* via the NOAA Teacher at Sea[46] program to highlight career pathways for students.

Strategy EO-2: Enhance sanctuary interpretation, volunteer, and outreach programs

Develop community support and partnerships for ocean conservation through targeted outreach and interpretation efforts reaching a widely diverse audience. Focus on engaging the public in specific resource protection issues.

Activity 2.1: Implement guided learning experiences at sanctuary partner visitor centers, museums, aquariums, and tourism providers to build awareness and increase understanding of sanctuary resources, research, and ecosystem protection issues. For example, this can include partner lecture series, Channel Islands Boating Center summer programs, Santa Barbara Museum of History Sea Center, Santa Barbara Maritime Museum docent training, and Channel

[45] https://oceanservice.noaa.gov/economy/blue-economy-strategy/
[46] https://teacheratsea.noaa.gov/#/home/

Islands Naturalist Corps-led tours. Promote participation in these learning experiences that is inviting to and inclusive of a diversity of community members.

Activity 2.2: Support fishing-related education projects and outreach tools that promote sustainable fishing practices to youth, families and other recreational fishers in collaboration with local partners from the recreational fishing community. Focal topics can include fisheries science, natural history, recreational fishing techniques, and the socioeconomics of fishing in the sanctuary.

Activity 2.3: Host and participate in local, regional, and national outreach events to increase sanctuary awareness and public engagement and promote volunteer stewardship opportunities (e.g., Celebration of the Whales at Channel Islands Harbor, Get Into Your Sanctuary Weekend,[47] Earth Day festivals).

Activity 2.4: Assess opportunities, develop outreach plans, and implement interpretative experiences using new responsive technology tools for diverse audiences. This may include distance learning programs, telepresence, live video streaming, and expanded use of virtual reality and immersive experiences (e.g., Explore the Blue: 360° Sea Lion Encounter video and lesson plan).

Activity 2.5: Maintain, develop, and seek out opportunities to build upon the existing catalogue of print and digital products and address emerging resource protection needs. Products may include brochures, posters, videos, and guides to provide basic sanctuary information (e.g., sanctuary regulations and maps).

Strategy EO-3: Promote public engagement and stewardship through citizen science monitoring programs

Create stewards of the sanctuary by engaging youth and adults in long-term citizen science monitoring programs.

Activity 3.1: Build capacity of Channel Islands Naturalist Corps volunteers to monitor marine mammals using the Ocean Alert[48] and Spotter Pro[49] mobile applications, and support ongoing whale photo-ID monitoring efforts.

Activity 3.2: Continue to work with partners to develop and maintain innovative citizen science tools, create public facing data visualization tools, and engage volunteers and the public in use of mobile apps. These tools help efficiently collect sightings information on whales and other marine mammals in support CINMS research and monitoring priorities (e.g., Spotter Pro, Ocean Alert, and Whale Alert[50] apps).

[47] https://sanctuaries.noaa.gov/visit/giys.html
[48] https://www.boem.gov/boem-and-citizen-science#tabs-1293
[49] http://conserve.io/spotter
[50] http://www.whalealert.org/

Activity 3.3: Support and build capacity for the Long Term Monitoring Program and Experiential Training for Students[51] (LiMPETS) network, which monitors rocky intertidal and sandy beach communities throughout coastal California and the Channel Islands.

Activity 3.4: Develop additional citizen science monitoring programs and tools to engage students, partner organizations, volunteers and non-traditional audiences, using NOAA-designed protocols to address emerging resource protection issues.[52] For example, encourage volunteers to use NOAA's Marine Debris Tracker application,[53] and encourage scuba divers to report sightings of endangered white abalone through the CINMS White Abalone Wanted Alive Initiative.

Strategy EO-4: Maintain and develop exhibits and signs

Maintain and develop sanctuary-wide exhibits and interpretive signage at existing and planned marine and natural resource-based visitor centers, as well as other key locations in the region, to maximize the sanctuary's regional public exposure.

Activity 4.1: Update the sanctuary's 2015 Long Range Interpretive Plan, developing revised themes and target audiences to guide the refresh of interpretive exhibits. Exhibit updates and designs for new installations will highlight priority themes and messages emerging from new scientific information (e.g., condition report results) as well as issues represented in this management plan (e.g., climate change, marine debris, introduced species, Chumash connections, and more).

Activity 4.2: Maintain and update existing sanctuary interpretive sign inventory, and add new sanctuary-related interpretative signage at strategic locations. For example, coastal locations of interest for new signs include Ventura Pier and boardwalk, Port Hueneme fishing pier, and many other potential local mainland locations (e.g., beaches, overlooks, piers, trails) previously suggested by the Sanctuary Advisory Council.[54]

Activity 4.3: Review, manage, and improve sanctuary visitor center-based exhibits. In consultation with education program partners and the Sanctuary Advisory Council, ONMS will periodically evaluate existing and potential new and emerging visitor center facilities to assess updates needed, new opportunities, and resource requirements.

Activity 4.4: Develop and manage use of mobile exhibits and interactive technology tools for increased exposure of sanctuary messages to wide-ranging audiences. ONMS will pursue opportunities to collaborate with partners to pursue necessary funding and develop programming for these emerging technologies.

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[51] https://limpets.org/
[52] NOAA Citizen Science Strategy https://sciencecouncil.noaa.gov/Portals/0/Citizen%20Science%20Strategy%20_final.pdf?ver=2021-01-15-103436-693
[53] https://marinedebris.noaa.gov/partnerships/marine-debris-tracker
[54] Advisory council input was provided on January 22, 2021; a meeting summary is available from https://nmschannelislands.blob.core.windows.net/channelislands-prod/media/docs/20210122-sac-notes.pdf.

Strategy EO-5: Foster and promote sustainable tourism and responsible use in support of the Blue Economy

Increase awareness about the socioeconomic value of the sanctuary for sustainable tourism and recreation and promote responsible human uses and quality visitor experiences for a diversity of community members. Support implementation of the ONMS West Coast Blue Economy plan, the NOAA Blue Economy Strategic Plan,[55] the ONMS Tourism Strategic Plan and Recreation Action Plan (in development), and collaborate with related state efforts.[56]

Activity 5.1: Encourage awareness about sustainable tourism and recreation opportunities within the sanctuary through collaborative partnerships with local businesses and the tourism industry, such as visitor bureaus, to develop sanctuary brand recognition, strengthen and broaden community of support for CINMS goals, and promote value-added benefits of the sanctuary to local economies.

Activity 5.2: Promote responsible human uses within the sanctuary, quality visitor experiences, and enhanced access to a diversity of audiences. Conduct outreach on responsible recreational activities, using visitor access point signage (see EO 4, Activity 4.2), interpretive programs (e.g., Channel Islands Naturalist Corps), and social media campaigns (e.g., *Get Into Your Sanctuary*[57]).

Activity 5.3: Enhance and continue collaboration between the sanctuary, tourism purveyors, and recreation vendors. Provide interpretation on local marine excursion vessels, and establish a promotional sanctuary business recognition program for local recreational fishing and dive tour operators. Involve local business owners in the design of recognition programs.

Activity 5.4: Collaborate with recreational fishing community members to improve understanding of the sanctuary and explore ways to promote sanctuary enjoyment by this community. Work together with interested parties to define activities, messages, and initiatives that promote responsible recreational fishing within sanctuary waters, and engage these members in stewardship opportunities. Pursue a partnership-based approach with state and federal agencies, such as NOAA Fisheries and California Department of Fish and Wildlife.

Activity 5.5: Foster awareness of ocean health and sustainable tourism practices in the sanctuary to ensure thriving and responsible recreation, tourism, and compatible commercial activities. Develop messaging, activities, and events through active collaboration with the private sector, including but not limited to commercial passenger fishing vessel operators.

Activity 5.6: Characterize tourism value in the sanctuary. Use place-based and system-wide studies to assess tourism activity levels. This activity is aligned with activities outlined in Strategy RM-2 that will characterize and monitor ecosystem services of the sanctuary.

[55] https://oceanservice.noaa.gov/economy/blue-economy-strategy/
[56] For example, see Respect Wildlife at https://respect-wildlife.org/about-us, and the California Recreate Responsibly Coalition at https://www.recreateresponsibly.org/california-coalition.
[57] https://sanctuaries.noaa.gov/visit/giys.html

Strategy EO-6: Increase awareness of the sanctuary and engagement through effective media and communication tools

Leverage local, regional, and national media opportunities and social media platforms to generate interest and engage diverse audiences. Reach and attract audiences through targeted communications about sanctuary species and habitats, scientific developments, ecosystem protection issues, educational opportunities, responsible recreation and tourism opportunities, volunteer programs, and more.

Activity 6.1: Maintain a contact database of media representatives with interest in sanctuary-related stories at the local, regional, and national level. Develop a media communication plan for promoting ongoing public interest stories and short-term, event-driven media plans when appropriate. Build relationships with key local media representatives, including new and diverse outlets, by organizing visits to sanctuary activities, including research cruises and public events as appropriate.

Activity 6.2: Supply media outlets with sanctuary events and public interest stories, and coordinate with ONMS to provide media distribution of community announcements, media advisories, press releases, news articles, and web stories. Contribute media outreach content, including media b-roll, sanctuary Earth is Blue[58] images and video footage, and web and social media resources.

Activity 6.3: Implement a comprehensive social media strategy that increases public awareness of inspiring and compelling sanctuary research, education, and ecosystem protection programs, fostering sanctuary stewardship (e.g., *Get Into Your Sanctuary*[59] campaign and photo contest), and reaching a diverse audience. Follow NOAA protocols for social media use.

Activity 6.4: Cooperate with NOAA Fisheries, National Marine Sanctuary Foundation, and other local, regional, and federal agencies and partner organizations on media outreach topics of common concern or interest. As appropriate, develop multi-partner messaging and coordinated release of information to the media.

Relevant strategies/activities located elsewhere within this management plan

Education, outreach, and volunteers are used broadly to support multiple management plan issues:

- Climate Change Action Plan, Strategy CC-3: Public engagement and communication on ocean-climate impacts and solutions
- Climate Change Action Plan, Strategy CC-6: Understanding the role of Channel Islands and regional marine reserves as reference areas for studying climate change
- Marine Debris Action Plan, Strategy MD-1: Assess the scope, scale, and sources of marine debris in the sanctuary

[58] https://sanctuaries.noaa.gov/earthisblue.html
[59] https://sanctuaries.noaa.gov/visit/giys.html

- Marine Debris Action Plan, Strategy MD-3: Raise public awareness about marine debris and inspire stewardship through education & outreach
- Vessel Traffic Action Plan, Strategy VT-1: Vessel Speed Reduction
- Introduced Species Action Plan, Strategy IS-3: Coordinate response plans with partners
- Zone Management Action Plan, Strategy ZM-1: Support management of the Channel Islands network of Marine Reserves and Marine Conservation Areas
- Research and Monitoring Action Plan, Strategy RM-3: Interpret and apply select technical science information to meet sanctuary needs
- Research and Monitoring Action Plan, Strategy RM-5: Support national science priorities
- Resource Protection Action Plan, Strategy RP-3: Respond to current and emerging issues
- Cultural Resources and Maritime Heritage Action Plan, Strategy CRMH-1: Strengthen Chumash maritime community partnership through increased engagement and continued support
- Cultural Resources and Maritime Heritage Action Plan, Strategy CRMH-4: Develop maritime cultural landscape-focused education and outreach

Existing and Potential Partners

Education and outreach partnerships are dynamic. The following list primarily reflects established sanctuary partners, but it is expected to change over time as opportunities, conditions, and entities evolve.

Academic & affiliated associations (including but not limited to):

California State University Channel Islands, Channel Islands Boating Center, Lompoc Unified School District, Oxnard College, Oxnard Marine Education Center, Oxnard Unified School District, Santa Barbara City College, Santa Barbara Union School District, University of California Santa Barbara, Ventura College, Ventura County Office of Education, Ventura Unified School District.

Government agencies:

Bureau of Ocean Energy Management, California Department of Fish and Wildlife, California MPA Collaborative Network, California State Parks Channel Coast District, California Sea Grant, Channel Islands National Park, City of Goleta, City of Lompoc, City of Oxnard, City of Santa Barbara, City of Santa Barbara Waterfront District, City of Shell Beach, City of Ventura, County of Ventura, NOAA Teacher at Sea Program, NOAA California Bay Watershed Education Training (B-WET) program, NOAA Fisheries, NOAA Marine Debris Program, Santa Barbara County Parks, U.S. Fish and Wildlife Service, USC Sea Grant, Vandenberg Air Force Base, Ventura Port District, Ventura County Channel Islands Harbor Department.

Chumash government and community organizations:

Santa Ynez Band of Chumash Indians, Wishtoyo Foundation, Barbareño Chumash Council, Coastal Band of the Chumash Nation, Barbareño/Ventureño Band of Mission Indians.

Non-governmental organizations:

MERITO Foundation, Santa Barbara Museum of Natural History Sea Center, Santa Barbara Maritime Museum, Aquarium of the Pacific, Reel Guppy Outdoors, ConserveIO, Pacific Grove Museum, Greater Farallones Association, Ocean Institute, Laguna Ocean Foundation, Cabrillo Marine Aquarium, Santa Monica Pier, Malibu Divers, Channel Islands Expeditions, Ventura Dive and Sport, Raptor Dive Charters, Spectre Dive Boat, Santa Barbara Aquatics, Sea Landing, Marine Emporium Landing, Cabrillo High School Aquarium, Santa Barbara Museum of Natural History Sea Center, Santa Barbara Maritime Museum, Outdoors Santa Barbara Visitor Center, Santa Barbara Adventure Company, Surfrider Foundation, Island Packers, Condor Express, Celebration Cruises, Santa Barbara Sailing Center, Channel Islands Sportfishing, Ventura Sportfishing, Youth Literacy Program (Capt. David Bacon), Visit Santa Barbara, Ventura Visitors and Convention Bureau, Oxnard Visitors and Convention Bureau, Central Coast Tourism Council, Visit California, Ocean Exploration Trust.

Performance Measures

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
Strategy EO 1: Advance K12 and college education programming to support sanctuary stewardship and ocean and climate literacy	Increase climate and ocean literacy and stewardship among students and teachers by addressing priority management issues.	Hands-on and virtual K-16 student and teacher curriculum/activities delivered.	Education and outreach team, NOAA B-WET Program External Evaluation Program	Year 1 and ongoing
		K-16 Teacher professional development trainings developed and delivered		
		NOAA-developed curriculum resources promoted		
Strategy EO 2: Enhance sanctuary interpretation, volunteer and outreach programs	Address specific resource protection issues through a variety of outreach programs	Guided learning experiences implemented	Education and Outreach Team, Research Team, Resource Protection Coordinator	Year 1 and ongoing
		Volunteer programs have comprehensive training, coordination, and support		
		Fisheries-related education programs implemented		
		Interpretative experiences using virtual technology developed and implemented		

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
Strategy EO 3: Promote public engagement and stewardship through citizen science monitoring programs	Engage youth and adults in long-term, large-scale citizen monitoring programs	Maintain mobile applications (Spotter pro, Whale Alert)	Education and Outreach Team, Resource Protection Coordinator, Research Team	Year 1 and ongoing
		Data management and sharing in support of CINMS whale ship strike reduction programs and partners		
		LiMPETS data collection supported, aligned with other relevant data sharing protocols.		
		Implement and maintain White Abalone Citizen Science Monitoring program		
Strategy EO 4: Visitor Centers, partner facilities, and signage	Increase awareness and build knowledge of the sanctuary through signage and exhibits	Updated interpretive sign inventory	Education and Outreach Team, Superintendent, Deputy Superintendent of Programs	Year 1 and Ongoing
		Exhibits are properly maintained and provide relevant, updated content		
		Technologies are properly maintained and provide relevant, updated content		
		Updated Long Range Interpretive Plan, with strategies for developing future exhibits		
Strategy EO 5: Foster and promote sustainable tourism and responsible use in support of the Blue Economy	Increase awareness about sustainable tourism and recreation opportunities within the national marine sanctuaries; promote responsible human uses and quality visitor experiences; enhance collaboration between sanctuaries, tourism purveyors, and recreation	Responsible recreation outreach; Get into Your Sanctuary and collaboration with recreation providers (e.g., marine excursion vessel operator MOA)	Education and Outreach Team	Year 1 and ongoing
		Channel Islands Naturalist Corps interpretation and sanctuary outreach product distribution		
		CINMS content and membership with local, regional, and state visitor and convention bureaus		

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
	vendors, and protect biodiversity and economic productivity in national marine sanctuaries.	Human use and economic surveys guided by ONMS		
Strategy EO 6: Increase awareness and engagement through effective media and communication tools	Leverage media opportunities to engage the public through targeted communication	News media and social media outreach campaigns	Program Coordinators, Superintendent	Year 1 and ongoing

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. Fill knowledge gaps by conducting, coordinating, and promoting characterization, monitoring, and assessment activities as well as through synthesis of existing information.

Introduction

Research and monitoring activities must be responsive to existing resource protection and management concerns, able to evaluate issues of emerging concern, and provide ONMS with the information fundamental to sound decision making. To address the diverse array of issues the sanctuary faces, the sanctuary research team actively leads and participates in a broad array of both field based and analytical research, as well as the dissemination of information to aid sanctuary management. In this action plan, the strategies highlight a mix of directed sanctuary-led research, partnerships, and improvements to the ways in which scientific information is translated, interpreted and used to inform management decisions. The strategies outlined below will help the CINMS Research Team equip sanctuary management with the best available science for decision-making across a spectrum of resource management issues.

Much of this work is accomplished through partnership and coordination at the local, regional, and national levels. ONMS relies heavily on partners (e.g., federal and state agencies, academics, non-governmental organizations, 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. In addition, the research team benefits from having a diverse and capable Research Activities Panel (RAP) to rely on for guidance. Distilled information is made immediately available to ONMS education, outreach, and resource protection staff, and is also distributed via the Sanctuary Integrated Monitoring

Network web portal (SIMoN),[60] presentations at conferences and workshops, and through the development of technical reports and peer-reviewed publications. Additionally, the CINMS Research Team participates in a number of 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: 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. Focal areas include, but are not limited to, oceanographic conditions, acoustic monitoring, ecosystem connectivity,

Activity 1.1: Develop project ideas and write ecosystem monitoring research proposals for internal and external funding and vessel time to address resource protection and management needs at site, regional, and national levels. Proposals will support projects related to our top science needs[61] as well as emerging priorities.

Activity 1.2: Actively participate in research and monitoring efforts when ONMS expertise is the most effective way to address management requirements for information. Participation includes shore-based, vessel-based, and scuba-based operations. CINMS has an active dive program, including a Unit Diving Supervisor. ONMS will collaborate with entities monitoring resources, maintaining data buoys and instruments, making collections, and undertaking other activities addressing CINMS research and monitoring needs.

Activity 1.3: Maintain and develop partnerships with various partners, including federal and state government agencies, academics, non-governmental organizations, the private sector, and foundation. ONMS will integrate with existing networks, including use of the Research Activities Panel (RAP) and other research consortia (e.g., the Expanding Pacific Research and Exploration of Submerged Systems and the Southern California Ocean Observing System).

Activity 1.4: Provide letters of support to partners for appropriate applied science proposals that address our top science needs and emerging issues. Many grant funding agencies require an applied use component to their grants, or some indication of the societal benefits of the proposed research.

Strategy RM-2: Characterize and monitor ecosystem services of the sanctuary

The sanctuary supports a number of ecosystem services, which represent the benefits people gain from ecosystem functions (e.g., the provisioning, regulating, cultural, and other supporting services). Ecosystem services are vital to a wide array of users and stakeholders, but depend on healthy oceans. ONMS will address information gaps in understanding ecosystem services and

[60] https://sanctuarysimon.org/
[61] https://sanctuaries.noaa.gov/science/assessment/cinms.html

human use patterns, as well as assess the adaptability of communities to forecasted ecosystem changes.

Activity 2.1: Characterize and monitor ecosystem services at site, regional, and national levels. Develop research proposals that seek funding from NOAA and external partners in support of projects related to top sanctuary ecosystem service science needs.[62] Direct this work to better understand human use within CINMS and the benefits people derive from the interacting sanctuary resources. For example, ONMS will collaborate with the Sanctuary Use Characterization, Assessment, and Research program that develops profiles of sanctuary communities.

Activity 2.2: Actively participate in select ecosystem service research and monitoring efforts. ONMS will serve as principal investigators when it is the most effective way to apply expertise and address management requirements for human use information.

Activity 2.3: Maintain and develop partnerships to characterize and monitor ecosystem services. Pursue and work with a diversity of willing partners, including those of a traditional nature (e.g., federal and state government agencies, tribal governments and groups, academic institutions, and non-profit organization) as well as non-traditional groups (e.g., private sector entities, non-profit foundations). ONMS will integrate efforts into existing networks, such as those of the Research Activities Panel (RAP) and other consortia.

Activity 2.4: Provide letters of support for appropriate applied ecosystem service 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, as well as emerging issues.

Activity 2.5: Evaluate and implement, if feasible, a sanctuary Sentinel Site[63] designation for Ecosystem Services. Such a designation could help increase regional and national visibility, and attract supportive partnerships, for human dimension-related research needs.

Strategy RM-3: Interpret and apply technical science information to meet sanctuary needs

Timely interpretation of the best available science is critical to support sanctuary decision making. ONMS will convene groups of external researchers, to provide timely analysis and synthesis that meets management, resource protection, and education/outreach needs.

Activity 3.1: Serve as 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.

[62] https://sanctuaries.noaa.gov/science/assessment/cinms.html
[63] https://sanctuaries.noaa.gov/science/sentinel-site-program/

Activity 3.2: Participate in presentations and workshops to share sanctuary science with the general public, volunteer groups, Sanctuary Advisory Council, community groups, universities, agency scientists, and agency (including international) leadership.

Activity 3.3: Administer and engage with the Research Activities Panel (RAP).[64] Promote participation by a diversity of scientists (see also activity 5.5), maintaining the RAP roster over time. Establish a RAP steering committee composed of a subset of RAP members to help coordinate meetings of the full working group.

Activity 3.4: Develop communication products, interpret research findings, and share findings with appropriate audiences. Communication activities include writing and publishing scientific papers and technical reports and engaging with the public on social media and the web.

Strategy RM-4: Support regional science priorities

CINMS is located within a marine transition zone that is affected by oceanographic conditions outside of its boundaries. Thus, understanding how the sanctuary performs requires knowledge of regional resource trends to give context to changes happening within sanctuary waters.

Activity 4.1: 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, ecosystem services, climate change, and seafloor characterization.

Activity 4.2: Maintain the online Sanctuary Integrated Monitoring Network[65] (SIMoN) database and web portal of existing and historic monitoring programs and current marine events. SIMoN has an online database of over 40 monitoring related projects that will be kept up to date if they are active or designated as historical if they are not.

Activity 4.3: Pursue appropriate collaborative arrangements to invite, understand, and include Chumash traditional ecological knowledge into sanctuary programs and projects. See also Strategy CRMH-1, Activity 1.5.

Activity 4.4: Complete the development of a known species inventory for the sanctuary. This will involve conducting additional species literature research, database management, taxonomic expert review, and publication. The inventory project, which began in 2019 and has identified thousands of species, will provide a better understanding of sanctuary biodiversity and inform scientific resource and sanctuary management.

[64] The Research Activities Panel (RAP) is a working group of the Sanctuary Advisory Council and is composed of representatives from regional research organizations. The role of the RAP is to review research priorities related to management of the sanctuary, to promote, encourage and review research projects in the sanctuary, and to provide scientific advice through the Sanctuary Advisory Council. In addition, the RAP assists sanctuary management with the organization and dissemination of information about research activities within the sanctuary and helps facilitate the integration of marine research and policy.

[65] https://sanctuarysimon.org/

Strategy RM-5: Support national science priorities

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 5.1: Contribute sanctuary related science needs assessments[66] to the ONMS website for reference by interested scientists.

Activity 5.2: Produce condition reports in advance of management plan updates. ONMS prepares reports on the status and trends of sanctuary resources prior to updating management plans. Expertise from CINMS will be shared with other sanctuary sites as they develop condition reports.

Activity 5.3: Contribute to national efforts to link vetted condition report indicators across sites with "live" time series data (i.e., "webenization"). These synthesized data products are then made accessible via the web through a series of interactive infographics. Additionally, ONMS supports the development of new indicators related to climate, deep sea ecosystems, and human use.

Activity 5.4: Research staff from CINMS will assist national working groups and committees to address specific issues, including: deep sea characterization, monitoring and assessment; applications of artificial intelligence, acoustic telemetry; social science strategies; impacts of ocean noise; and dive safety.

Activity 5.5: Support development of the next generation of scientists and expand diversity of the science community through mentoring. Mentoring can include: serving on committees; hosting interns (e.g., Council on Ocean Affairs, Science and Technology (COAST), Hollings) and fellows (e.g., Nancy Foster, Sea Grant); serving on graduate student committees; hosting UCSB Bren School projects; supervising undergraduates and Partnerships for Enhanced Engagement in Research (PEER) students; promoting citizen science; and participating in Teacher at Sea and Student at Sea programs.

Relevant strategies/activities located elsewhere within this management plan

- Climate Change Action Plan, Strategy CC-4: Support, track, and share ocean climate and acidification monitoring and research
- Climate Change Action Plan, Strategy CC-5: Assess climate impacts to deep-sea corals and sponges
- Climate Change Action Plan, Strategy CC-6: Understand the role of Channel Islands and regional marine reserves as reference areas for studying climate change
- Marine Debris Action Plan, Strategy MD-1: Assess the scope, scale, and sources of marine debris in the sanctuary

[66] https://sanctuaries.noaa.gov/science/assessment/cinms.html

- Zone Management Action Plan, Strategy ZM-1: Support management of the Channel Islands network of Marine Reserves and Marine Conservation Areas
- Zone Management Action Plan, Strategy ZM-2: Manage zones and sensitive areas
- Vessel Traffic Action Plan, Strategy VT-3: Track and monitor vessel activity
- Introduced Species Action Plan, Strategy IS-1: Support research, detection, and monitoring efforts
- Education and Outreach Action Plan, Strategy EO-3: Promote public engagement and stewardship through citizen science monitoring programs
- Education and Outreach Action Plan, Strategy EO-6: Increase awareness of the sanctuary and engagement through effective media and communication tools
- Resource Protection Action Plan, Strategy RP-3: Respond to current and emerging issues
- Resource Protection Action Plan, Strategy RP-4: Permit appropriate research, education, and management activities
- Operations and Administration Action Plan, Strategy OA-3: Coordinate and support the Sanctuary Advisory Council

Existing and Potential Partners

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

Academic & affiliated associations:

California Cooperative Oceanic Fisheries Investigations, California Sea Grant, California State University at Channel Islands, California State University at Long Beach, California State University at Northridge, CalPoly San Luis Obispo, Scripps Institution of Oceanography, Southern & Central California Coastal Ocean Observing Systems, Stanford University, University of California at Santa Cruz, University of California at San Diego, University of California at Santa Barbara, University of Southern California Sea Grant.

Chumash government and community organizations:

Santa Ynez Band of Chumash Indians, Wishtoyo Foundation, Barbareño Chumash Council, Coastal Band of the Chumash Nation, Barbareño/Ventureño Band of Mission Indians.

Government agencies:

Bureau of Ocean Energy Management, California Coastal Commission, California Department of Fish and Wildlife, California Ocean Protection Council, California Ocean Science Trust, Environmental Protection Agency, National Oceanic and Atmospheric Administration, National Park Service, United States Geological Survey.

Non-governmental organizations:

Marine Applied Research and Exploration, Monterey Bay Aquarium, Monterey Bay Aquarium Research Institute, Ocean Exploration Trust, Reef Environmental Education Foundation, The Nature Conservancy.

Performance Measures

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
Strategy RM-1: Characterize and monitor the biological and physical features and processes associated with the sanctuary	CINMS testbed for addressing regional and national ecosystem monitoring requirements	Proposals submitted to funding entities	Research Team	Year 1-5
	Partnerships continue to adapt to current and emerging information gaps	New partnerships established	Research Team	Year 1-5
	Balanced research team of field scientists and data analysts integrating with research community	Trainings, certifications, conferences, and workshops attended	Research Team	Year 1-5
Strategy RM-2: Characterize and monitor ecosystem services provided by the sanctuary	CINMS testbed for addressing regional and national ecosystem services monitoring requirements	Proposals submitted to funding entities	Research Team (Social Science Lead)	Year 1-5
	Partnerships continue to adapt to current and emerging information gaps	New partnerships established	Research Team (Social Science Lead)	Year 1-5
	CINMS evaluated as a sentinel site for human dimensions and ecosystem services	Proposal submitted for consideration of sentinel site	Superintendent	Year 3
Strategy RM-3: Interpret and apply technical science info to meet sanctuary needs	Research published in the peer-reviewed literature	Publish scientific papers and technical reports	Research Team	Years 1-5
	Sanctuary Advisory Council apprised of latest scientific/research efforts	Presentations and other communications made to the advisory council and associated working groups	Research Team	Years 1-5

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
	Research Activities Panel re-configured with essential expertise to address current and emerging information gaps	Establishment of new RAP	Research Coordinator	Year 1
Strategy RM-4: Support regional science priorities	A complementary group of researchers spanning expertise relevant to regional issues	Regional coordination calls and meetings	Research Coordinator	Years 1-5
	A functional database of new/historical projects occurring in CINMS	Research and monitoring projects updated on SIMoN	Research Team (SIMoN Lead)	Years 1-5
Strategy RM-5: Support national science priorities	Clearly articulated scientific requirements	Development and maintenance of Science Needs Assessments	Research Team	Years 1-5
	A program encouraging mentorship for the next generation	Fellows and interns	Research Team	Years 1-5
	Relevant and accessible scientific data for resource managers	Expand concept for webenized condition report	Research Team (CR Lead)	Years 1-5

Resource Protection Action Plan

Goal: Maintain, protect, and restore the sanctuary's natural biological communities and maritime heritage resources by evaluating and addressing adverse impacts from human activities.

Introduction

The core purposes and policies of the National Marine Sanctuaries Act (NMSA) guide the sanctuary's resource protection program and this action plan. Specifically, listed among NMSA purposes for national marine sanctuaries are:[67]

> *to maintain the natural biological communities in the national marine sanctuaries, and to protect, and, where appropriate, restore and enhance natural habitats, populations, and ecological processes*;
>
> *to facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities*

The sanctuary is affected by a complex and dynamic range of challenges and threats. For example, impacts to sanctuary resources and human use could be associated with significant population growth in counties adjacent to the sanctuary, a changing climate, rapid technological changes, new interests in using ocean space and harnessing resources, and improvements in marine monitoring and detection capabilities. These changes can affect the nature and extent of industrial, scientific, commercial and recreational maritime activities, often leading to new sanctuary resource protection issues and challenges that must be addressed.

This action plan includes strategies and activities in the areas of emergency response, enforcement, emerging issues, permitting, collaborative planning, and management with NOAA and other agencies. The sanctuary will continue to develop and implement resource protection strategies, activities, policies, and programs related to the network of marine reserves and marine conservation areas, state and federally managed fisheries, marine mammals and seabirds, sensitive habitats, shipping, visitor use, and emerging issues. To the extent practicable given available resources, ONMS will work in a coordinated and complementary manner with local stakeholders and authorities that have similar or overlapping mandates, jurisdiction, objectives, or interests (see partners listed below). Additionally, ONMS will strive to provide long-term resource protection in the face of climate change (see the Climate Change Action Plan).

Strategy RP-1: Respond to emergencies that threaten sanctuary resources

Provide oversight and coordinate response with other key agencies to emergency incidents such as oil and other hazardous material spills in or near the sanctuary, vessel and aircraft groundings or sinkings, and other emergencies that threaten sanctuary resources. As needed, follow up with assessments of injuries to sanctuary resources, damage assessment case

[67] (16 U.S.C. §§ 1431(b)(3), (b)(6).)

processing, restoration planning, and other actions to mitigate adverse impacts to the ecosystem and ecosystem services.

Activity 1.1: Integrate into the Incident Command System[68] to help respond to marine-based emergencies and drills within or adjacent to the sanctuary.

Activity 1.2: Develop and document case-specific injury assessments, resolutions, restoration and monitoring plans (if necessary), and associated cost estimates.

Activity 1.3: Maintain situational awareness and all necessary qualifications and training for emergency response (e.g., HAZWOPER, SCAT, ICS-100, CPR/First Aid). Coordinate periodic (ideally annual) reviews, and make recommendations to ensure site readiness, such as updating Area Contingency Plans.

Activity 1.4: Develop incident-specific solutions to ensure timely and cost effective removal of grounded vessels, cleanup of debris, and accountability for unrecoverable and sunken boats or other pollutants and materials. Work collaboratively with partners to pursue solutions that ensure responsible parties take appropriate action and/or are held accountable.

Activity 1.5: Serve as regional support to National Marine Fisheries Service Stranding Network to support marine mammal entanglements and stranding response, including training ONMS vessel crew and staff. Assist development and testing of innovative gear and fishing practices to reduce entanglements.

Activity 1.6: Review and revise existing oil spill response plan. This includes regular updating of emergency response notification procedures and identifying specific duties and response protocols for ONMS.

Strategy RP-2: Enforce regulations to protect sanctuary resources

Effective surveillance and enforcement are critical to protecting sanctuary resources. ONMS works with NOAA's Office of Law Enforcement (OLE) and General Counsel, and with external law enforcement partners (e.g., California Department of Fish and Wildlife, National Park Service, and U.S. Coast Guard) to enforce sanctuary regulations and all other state and federal regulations applicable within the sanctuary.

Activity 2.1: Participate in the regional cooperative enforcement group, "Island Sentinel," which includes OLE, California Department of Fish and Wildlife, National Park Service, U.S. Coast Guard, and others. Facilitate and participate in coordination calls, act as liaison to these agencies, and facilitate their provision of enforcement updates to the Sanctuary Advisory Council.

Activity 2.2: Facilitate the development and implementation of new enforcement tools and techniques to improve data collection and sharing across agencies. Technology may include:

[68] The Incident Command System refers to the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure and designed to aid in the management of resources during incident response.

shore based radar, crewed and uncrewed aircraft surveillance, automatic identification systems, remote sensing, and the mobile app eFINS.

Activity 2.3: Conduct outreach and training for partner enforcement agencies that is focused on explaining sanctuary regulations and highlighting important issues at CINMS, such as enforcement of protective sanctuary zones.

Activity 2.4: Provide clear protocols for effectively and efficiently documenting suspected violations in cooperation with OLE. For example, document and quantify incoming complaints, suspected violations, incident referrals, and resource impacts.

Strategy RP-3: Respond to current and emerging issues

The activities supporting this strategy focus on the identification, tracking, and risk assessment for potential threats to sanctuary resources in preparation for potentially taking protective management action, where appropriate. With regard to emergency response situations that could harm sanctuary resources, see Strategy RP-1.

Activity 3.1: Track and monitor emerging issues that may pose a threat to natural or cultural sanctuary resources. This may include, but not be limited to: impacts to sensitive habitats such as deep sea corals and eelgrass; impacts to commercial and recreational fishing grounds; nearby proposed offshore energy or aquaculture projects; activities associated with the decommissioning and removal of offshore oil and gas platforms adjacent to the CINMS boundary.

Activity 3.2: Evaluate if ONMS is able to address the new or modified issue by considering the intensity, duration, and geographic extent of the potential threat to sanctuary resources or qualities, and whether the issue is within ONMS jurisdiction and/or mandate to address. Prioritize the issue by examining the rate at which the potential issue and/or threat is growing, and soliciting input from ONMS, the public, the Sanctuary Advisory Council, appropriate state and federal agencies, and other partners. If appropriate, respond to the issue by working with relevant state and federal agencies, scientific institutions, and other partners to develop a comprehensive response plan.

Strategy RP-4: Permit appropriate research, education, and management activities

Where appropriate, ONMS will issue permits for activities that advance sanctuary research, education, and management goals, providing specific terms and conditions to reduce and mitigate short term impacts to sanctuary resources.

Activity 4.1: Evaluate and process permit applications for proposed research, education, and management activities.

Activity 4.2: Conduct environmental review, as necessary, under the National Environmental Protection Act (NEPA) for proposed research, education, or management related activities.

Activity 4.3: Monitor and review permit compliance by reviewing permittee required reports, tracking permitted activities using the sanctuaries permit database, and reporting any non-compliance to the enforcement program.

Strategy RP-5: Review and provide policy guidance on activities of other agencies

To implement sanctuary policies and regulations, ONMS provides input on projects, plans, and permits of NOAA and other state and federal agencies, providing policy guidance as needed.

Activity 5.1: Review and comment on other federal, state, and local agencies' programs, policies, regulation modifications, and environmental reviews during public processes, including general plan updates and local coastal plan updates.

Activity 5.2: Consult formally and informally on a variety of marine policy issues relevant to regional and national priorities of NOAA and provide policy guidance to federal and state agencies (e.g., National Park Service, NOAA Fisheries, USCG, Department of Defense, California Fish and Game Commission, and others). Meet NMSA consultation requirements (see 16 U.S.C. § 1434(d) on Interagency Cooperation).

Activity 5.3: Assess, track, and provide input to new proposed sanctuaries, MPAs, and other area-based management designations as they relate to the sanctuary (e.g., nominated Chumash Heritage National Marine Sanctuary, proposed changes to state and federal fishery zones).

Relevant strategies/activities located elsewhere within this management plan

- Climate Change Action Plan, Strategy CC-6: Understand the role of Channel Islands and regional marine reserves as reference areas for studying climate change
- Marine Debris Action Plan, Strategy 2: Remove marine debris and reduce new inputs
- Vessel Traffic Action Plan, Strategy 4: Track and monitor vessel activity
- Introduced Species Action Plan, Strategy 2: Manage invasion vectors and promote prevention through education and outreach
- Introduced Species Action Plan, Strategy 3: Coordinate response plans with partners
- Education and Outreach Action Plan, Strategy EO-2: Enhance sanctuary interpretation, volunteer, and outreach programs
- Research and Monitoring Action Plan, Strategy RM-1: Characterize and monitor the biological and physical features and processes associated with the sanctuary
- Research and Monitoring Action Plan, Strategy RM-2: Characterize and monitor ecosystem services provided by the sanctuary
- Research and Monitoring Action Plan, Strategy RM-3: Interpret and apply select technical science information to meet sanctuary needs

Existing and Potential Partners

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

Academic & affiliated associations:

California State University Channel Islands, California State University Long Beach, California State University Northridge, Marine Research and Exploration (MARE), Monterey Bay Aquarium Research Institute, Santa Barbara City College, University of California, Santa Barbara, Ventura County Community College District.

Chumash government and community organizations:

Santa Ynez Band of Chumash Indians, Wishtoyo Foundation, Barbareño Chumash Council, Coastal Band of the Chumash Nation, Barbareño/Ventureño Band of Mission Indians.

Government agencies:

Bureau of Ocean Energy Management, California Coastal Commission, California Department of Fish and Wildlife/Office of Spill Prevention and Response, California Fish and Game Commission, California State Lands Commission, National Marine Fisheries Service, NOAA Bay Watershed Education and Training (B-WET) Program, National Park Service, NOAA Climate Program Office, NOAA Deep Sea Coral Research and Technology Program, NOAA Fisheries Restoration Center, NOAA General Counsel (Natural Resources, Law Enforcement), NOAA Integrated Ecosystem Assessment Program, NOAA National Centers for Coastal and Ocean Science, NOAA Northwest and Southwest Fishery Science Centers, NOAA Ocean Acidification Program, NOAA Pacific Marine Environmental Laboratory, Pacific Fishery Management Council, Sanctuary Advisory Council, Santa Barbara County Office of Education, Sierra Club, U.S. Coast Guard, U.S. Geological Survey, Ventura County Office of Education.

Performance Measures

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
Strategy RP-1: Respond to emergencies that threaten sanctuary resources	Protection of sanctuary resources; coordination with other emergency response agencies.	Healthy sanctuary resources with minimal to mitigatable short term impacts.	Resource Protection Coordinator, in coordination with other responding agencies	Ongoing (as incidents occur)
		Presence and actions of emergency responders and ONMS to prevent or respond to emergencies (e.g., a grounded vessel).		
Strategy RP-2: Enforce regulations to protect sanctuary resources	Protection of sanctuary resources	Healthy sanctuary resources with minimal to mitigatable short term impacts.	Resource Protection Coordinator, in coordination	Ongoing, long term

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
	Coordination with enforcement partners	Presence and actions of enforcement partners to protect sanctuary resources. Number of sanctuary incidents reported to NOAA and cases pursued over time.	with NOAA and other law enforcement partners	Ongoing, with annual summary of incidents and cases
Strategy RP-3: Identify, evaluate, prioritize, and respond to current and emerging issues	Prevention or minimization of issues (i.e., introduced species) threatening sanctuary resources	Coordination with agency partners to marshal resources and implement agency actions.	Resource Protection Coordinator	Ongoing, as new issues arise and require response
Strategy RP-4: Permit appropriate research, education and management activities	Further the understanding, educational value and/or assist in management of the sanctuary.	Minimal to mitigatable short term impacts. Scientific data collected, # of students/people educated; enhanced management such as access to islands from new piers.	Resource Protection Coordinator, in coordination with ONMS on permit issuance.	Ongoing, as permit applications are submitted
Strategy RP-5: Review and provide policy guidance on activities of other agencies	Protection of sanctuary resources	Integration of sanctuary policy into other agency actions. Timely and thorough response to requests for review or consultation.	Resource Protection Coordinator	Ongoing, as the need for agency coordination arises.

Cultural Resources and Maritime Heritage Action Plan

Goal: Identify, protect, and raise awareness of the sanctuary's cultural, maritime, historical, and archaeological resources. Collaborate with and learn from Chumash 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 cultural resources and values connected to sanctuary waters. Inclusive of this important work is collaborative engagement with contemporary Chumash community partners who seek to continue stewarding these invaluable waters.

Historical archaeological and cultural resources are collectively referred to as "maritime heritage" and include the wide variety of tangible and intangible resources that represent our human connections to ocean areas. Archaeological sites and other cultural resources within the sanctuary, such as shipwrecks and Chumash Native American artifacts, are protected under state and federal law, including sanctuary regulations (15 CFR §922.72(a)(8)) and the National Historic Preservation Act (16 CFR 470). To enforce these regulations, NOAA partners with the National Park Service, U.S. Coast Guard, and the state of California. ONMS also prioritizes conducting education and outreach with boaters to reduce negative impacts to the maritime heritage resources. The goal of these programs is to educate and increase public awareness and appreciation of the cultural connections and maritime history associated with sanctuaries.

With utmost respect for Indigenous communities that have lived in the area of the sanctuary for time immemorial, ONMS seeks to work in support of and partnership with Chumash people engaged in continuing the long tradition of stewarding the waters surrounding the northern Channel Islands (Box 2). As stated by Chumash community authors in the "Chumash Ecosystem Service Assessment" chapter of the recent condition report (2019), "*The Chumash peoples, including Chumash culture, values, cosmology, lifeways, epistemologies, and languages have thus emerged specifically from the lands and waters of the Santa Barbara Channel and have continued to develop and change in relationship with them.*"[69] The Chumash community, in keeping with their deep ancestral ties with these lands and waters, continue their cultural work, including traditional tomol crossings from the mainland to Limuw (Santa Cruz Island) in traditionally-built plank canoes ("tomols"). Following the guidance from the 2021 White House Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships,[70] ONMS is committed to work in partnership with willing and interested members and groups from the Chumash community.

Strategy CRMH-1: Strengthen Chumash community partnership through increased engagement and continued support

Work with Chumash partners to support and learn from their efforts to revitalize Chumash cultural connections to the Channel Islands and surrounding marine waters. Respectfully collaborate with Chumash community members to incorporate Indigenous knowledge into relevant sanctuary programs and projects (Box 2).

Activity 1.1: Continue to provide opportunities for Chumash voices to be heard through sanctuary programs. In coordination with Chumash Community representatives appointed to the Sanctuary Advisory Council, and with other interested Chumash contacts, support Chumash cultural revitalization efforts and the sharing of traditional maritime knowledge to help others learn about Chumash maritime culture.

Activity 1.2: Provide continuing planning, navigation, and safety support for annual tomol crossing events. As invited since 2001, ONMS and its vessel operators will provide safety planning and on-water safety vessel assistance during the 20-mile paddle.

[69] https://sanctuaries.noaa.gov/media/docs/2016-condition-report-channel-islands-nms.pdf#page=187
[70] https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/26/memorandum-on-tribal-consultation-and-strengthening-nation-to-nation-relationships/

Activity 1.3: By invitation and with permission from Chumash community contacts, continue to provide still photography and video-based multimedia support to the tomol crossing and other sanctuary-related events. Share multimedia products with Chumash partners for their revitalization movement and outreach purposes. Enter into agreements related to securing footage of Chumash activities and the subsequent sharing of resources, when necessary and appropriate.

Activity 1.4: Work with Chumash partners to collaborate on new content for the sanctuary's website, signage, and ONMS publications and outreach platforms (e.g., Earth is Blue videos and web story features).

Activity 1.5: Pursue appropriate collaborative arrangements to invite, understand, and include Chumash traditional ecological knowledge[71] in sanctuary programs and projects. Work closely with Chumash Community advisory council representatives to identify and implement proper protocols and participants.[72]

Activity 1.6: Develop and implement an effective and efficient process to support meaningful engagement with Chumash tribal bands. This can include timely notification on projects of potential tribal interest, meaningful discussion and learning, consideration of concerns and suggestions prior to NOAA decision-making, and, for federally-recognized bands, legally required consultation processes.

[71] Traditional and local knowledge is the integrated and situated knowledge held by individuals and communities about people, places, and livelihoods. It is a living body of knowledge that includes environmental observations and experiences that occur in places and within an Indigenous cultural context; as such, traditional ecological knowledge is embedded in culture and cannot be separated from the people and places where it is generated (Usher, 2000; Nadasdy, 1999).

[72] ONMS will seek to understand and incorporate traditional ecological knowledge respectfully and through appropriate processes, guided in part by relevant NOAA guidance: https://www.noaa.gov/sites/default/files/2021-11/19-065933-Traditional-Knowledge-in-Decision-Making-Document-Signed.pdf.

Box 2: ONMS Approaches to Fostering Indigenous Community Engagement

- Build trust and respect through long-term cooperative relationships with Indigenous communities by listening to and meaningfully engaging and consulting with them.
- Recognize that respect for Indigenous knowledge, cultures, and traditional practices contributes to sustainable and equitable development and the ONMS mission.
- Promote collaborative and reciprocal relationships with Indigenous communities by sharing and co-generating knowledge and information, clarifying expectations, and communicating our responsibilities, intentions, commitments, other resources, and limitations.
- Understand and acknowledge the historical, political, social, cultural, and environmental context of Indigenous communities with ties to sanctuaries and monuments.
- Recognize the diversity of ways that Indigenous communities organize, govern, and exercise sovereignty and self-determination.
- Acknowledge that Indigenous communities are the custodians of their heritage and culture, and have the right to practice and revitalize their cultural traditions and customs. This includes the right to maintain, protect, and develop the past, present, and future manifestations of their cultures. Indigenous communities control access and use of this knowledge and other tangible and intangible manifestations of their culture.
- Ensure ONMS leadership and staff are aware of the sensitivities surrounding information sharing, terminology, protocols, and world views when discussing or representing Indigenous communities and their cultures.
- Recognize the spectrum of interactions from informal engagement to formal consultation, and ensure that ONMS staff understand when certain approaches are appropriate and are equipped with tools and training to support each approach.
- Work with Indigenous communities to develop and implement management actions to understand, interpret, and protect tangible and intangible Indigenous cultural resources, including how ONMS represents any associated information in messaging and outreach products.
- Increase accountability of ONMS staff on Indigenous engagement through individual performance plans and other reporting.

Strategy CRMH-2: Inventory and assess cultural resources and maritime heritage sites

Since 1980, ONMS has partnered with Channel Islands National Park, the state of California, and volunteers from Coastal Maritime Archaeology Resources (CMAR), to conduct joint missions on new shipwreck discoveries and inventory submerged sites. 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 2.1: Inventory maritime heritage resources within the sanctuary, populate shipwreck databases, and expand the ONMS Maritime Archaeology 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 (NRHP) criteria for nomination.

Activity 2.2: Conduct reconnaissance expeditions that include systematic research and surveys of maritime heritage sites. Reconnaissance surveys should include seafloor mapping associated with historic research. Continue annual site monitoring of known heritage resources to document environmental change or human impacts.

Activity 2.3: Continue to establish external partnerships to inventory traditional cultural 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 2.4: Continue to work with partners to analyze sanctuary seafloor mapping data, remotely operated vehicle footage, and autonomous underwater vehicle surveys in an effort 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 CRMH-3: Manage and protect submerged maritime heritage resources

In compliance with the National Environmental Policy Act (NEPA) process and Section 106 of the NHPA, ONMS is required to identify historic and potentially historic property locations and to consider activities that may have an adverse effect on these 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 a stewardship role; and 3) enforcement coordinated with federal, tribal, and state partners.

Activity 3.1: ONMS will comply with NHPA Section 106 review requirements for federal action, including issuing permits. Any federal action must account for its effect on historic properties (as defined in 54 USC §306108). Section 106 of the NHPA requires federal agencies to consider the impact of their actions on historic properties.

Activity 3.2: Coordinate stewardship initiatives with key partners to protect maritime heritage resources including: 1) Chumash contacts, 2) the sport diving community, 3) learning centers and museums, and 4 appropriate local law enforcement agencies.

Activity 3.3: Develop 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 CRMH-4: 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 4.1: Develop a maritime cultural landscape study focused on the deeper knowledge of the sanctuary and its surrounding maritime heritage resources and related activities. Engage the public, Chumash partners, local and academic communities, and stakeholders.

Activity 4.2: Conduct research on maritime culture, including: Chumash practices, shipwrecks, shoreline structures (e.g., lighthouses), coastal and geological surveys, traditional recreational activities (e.g., surfing, fishing), and stewardship. Develop maritime cultural landscape studies[73] in collaboration with relevant experts.

Activity 4.3: Expand the sanctuary's maritime heritage website. Potential updates may include: Chumash heritage and their connections to place; maritime heritage resource; living journals of shipwreck survivors; archaeological expedition updates; and the development of a shipwreck story map.

Activity 4.4: Lead and support efforts to create and maintain exhibits related to sanctuary maritime heritage resources, and to conduct associated public lectures. Pursue these arrangements in partnership with visitor centers and learning centers including the Santa Barbara Maritime Museum, Channel Islands Maritime Museum, and Channel Islands Boating Center.

[73] Maritime cultural landscape studies help ONMS understand the complex, dynamic, and evolving relationships of people and the sea. The study of maritime cultural landscapes allows ONMS to explore the diversity of human experiences, behaviors, and interactions with the maritime system.

Relevant strategies/activities located elsewhere within this management plan

- Climate Change Action Plan, Strategy CC-1: Address climate resilience and adaptation planning
- Marine Debris Action Plan, Strategy MD-3: Raise public awareness about marine debris
- Introduced Species Action Plan, Strategy IS-1: Support research, monitoring, detection, and tracking efforts of introduced species
- Education and Outreach Action Plan, Strategy EO-2: Enhance sanctuary interpretation, volunteer, and outreach programs
- Education and Outreach Action Plan, Strategy EO-3: Promote public engagement and stewardship through citizen science monitoring programs
- Education and Outreach Action Plan, Strategy EO-4: Visitor centers, partner facilities, and signage
- Education and Outreach Action Plan, Strategy EO-5: Foster and promote sustainable tourism and responsible use in support of the Blue Economy
- Education and Outreach Action Plan, Strategy EO-6: Strategy EO-6: Increase awareness of the sanctuary and engagement through effective media and communication tools
- Research and Monitoring Action Plan, Strategy RM-1: Characterize and monitor the biological and physical features and processes associated with the sanctuary
- Research and Monitoring Action Plan, Strategy RM-3: Interpret and apply select technical science information to meet sanctuary needs
- Resource Protection Action Plan, Strategy RP-1: Respond to emergencies that threaten sanctuary resources
- Resource Protection Action Plan, Strategy RP-2: Enforce regulations to protect sanctuary resources
- Resource Protection Action Plan, Strategy RP-4: Permit appropriate research, education, and management activities
- Operations and Administration Action Plan, Strategy OA-2: Performance tracking and partnership support
- Operations and Administration Action Plan, Strategy OA-4: Maintain safe field operation platforms and applied technologies

Existing and Potential Partners

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

Academic & affiliated associations:

California State University Channel Islands, 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, Ventura County Community College District.

Chumash government and community organizations:

Santa Ynez Band of Chumash Indians, Chumash Maritime Association, Wishtoyo Foundation, Barbareño Chumash Council, Coastal Band of the Chumash Nation, Barbareño/Ventureño Band of Mission Indians, Chumash Community Working Group of the Sanctuary Advisory Council, Tomol Captain leadership, and other interested Chumash bands, tribal governments, and organizations.

Government agencies:

Bureau of Ocean Energy Management, California Department of Parks and Recreation, California State Historic Preservation Office, California State Lands Commission, ONMS Maritime Heritage Program, National Marine Fisheries Service, NOAA Bay Watershed Education and Training (B-WET) Program, National Park Service Submerged Resources Center, NOAA Climate Program Office, NOAA Deep Sea Coral Research and Technology Program, NOAA Fisheries Restoration Center, NOAA Integrated Ecosystem Assessment Program, NOAA National Centers for Coastal and Ocean Science, NOAA Office of Coast Survey, NOAA Northwest and Southwest Fishery Science Centers, NOAA Ocean Acidification Program, NOAA Pacific Marine Environmental Laboratory, Pacific Fishery Management Council, Santa Barbara County Office of Education, U.S. Geological Survey, U.S. Coast Guard, Ventura County Office of Education.

Non-governmental organizations:

Aquariums, museums, and informal science centers, Aquarium of Pacific, Association of Zoos and Aquariums, California Sea Grant, Community Environmental Council, Channel Islands Maritime Museum, Diving With a Purpose, Scripps Institution of Oceanography, Society of Black Archaeologists.

Performance Measures

Strategy Title	Desired Outcome	Output Measure	Who Measures	Timeline
Strategy CRMH-1: Strengthen Chumash maritime community partnership through increased engagement and continued support	Improved understanding of Chumash knowledge applicable to sanctuary management; meaningful contributions from Chumash community members.	Meaningful and productive meetings of the Chumash Community working group; Chumash appointments to the Sanctuary Advisory Council.	Advisory Council Coordinator; Maritime Heritage Coordinator	Ongoing
		Support tomol crossing planning, navigation, and multimedia.	Deputy Superintendent and Vessel Operations Coordinator	

Strategy Title	Desired Outcome	Output Measure	Who Measures	Timeline
		Collaborate on outreach programs	Maritime Heritage Coordinator	
Strategy CRMH-2: Inventory and assess cultural resources and maritime heritage sites	Inventory, survey, evaluated by the National Register of Historic Places criteria for nomination.	Expand shipwreck database.	Maritime Heritage Coordinator	Ongoing
	Monitor sites for human and/or environment changes.	Populate ONMS Maritime Archaeology Resource Inventory System.	Maritime Heritage Coordinator	
Strategy CRMH-3: Manage and protect submerged archaeological resources	Protection and management of submerged archaeological resources through permitting, enforcement, education, and stewardship.	Compliance with National Environmental Policy Act and Sections 106 and 110 National Historic. Preservation Act.	Maritime Heritage Coordinator	Ongoing
	Develop protocols to monitor climate change effects on MH resources.	Document climate-related effects on MH resources.	Maritime Heritage Coordinator and Research Coordinator	Year 2-3
Strategy CRMH-4: Develop maritime cultural landscape-focused education and outreach	Develop maritime or tribal cultural landscape initiatives.	CINMS website.	Maritime Heritage Coordinator	Ongoing
	Expand CINMS maritime heritage outreach.	Exhibits and signage	Education and Outreach Coordinators	Year 2
	Partner with museums and education centers on MH exhibits and outreach programs.	Public presentations and academia	Maritime Heritage Coordinator and Education and Outreach Coordinator	Ongoing

Operations and Administration Action Plan

Goal: Provide operations and administrative support required for implementation of effective programs, including staffing and infrastructure, facilitation of field operations, and Sanctuary Advisory Council coordination.

Introduction

This action plan prioritizes the provision of budget administration, infrastructure management of vessels and facilities, and support for staffing and the Sanctuary Advisory Council. These functions are necessary to safely and sustainably implement the action plans throughout this document.

Strategy OA-1: Manage the sanctuary budget

Manage the sanctuary budget by continuing to develop and track the annual operating plans and facilitating contracts, grants, procurements, and acquisitions.

Activity 1.1: Develop, manage, and track the annual operating plans and budget per ONMS and West Coast Region guidance. Continue to perform budget planning and tracking and produce annual operating plans. The management plan, West Coast regional priorities, ONMS National Strategic Plan, and ONMS Annual Budget Guidance Memorandum will be used to develop budget requests and set project priorities outlined each year in the annual operating plan.

Activity 1.2: Facilitate contracts, grants, procurements, and acquisitions in compliance with Federal Acquisition Regulations. ONMS will continue to work with the NOAA Acquisition and Grants Office (AGO) to provide a comprehensive suite of administrative services including procurement, program support services, health and safety, administrative payments, space management, publications, and security.

Strategy OA-2: Performance tracking and partnership support

Implementation of the management plan requires coordination within and between action plans, sharing of staff and financial resources between program areas, and cooperation and coordination among many partner agencies, organizations, and individuals. Performance of the management plan will be tracked and partnerships fostered.

Activity 2.1: Assess management plan performance through tracking and reporting on the stated goals, measures, and outcomes for each strategy (see the Performance Measures section at the end of each action plan). Establish reporting mechanisms/processes for management plan implementation, emerging issues, milestones, and accomplishments.

Activity 2.2: Develop memoranda of agreement to support programs, partnerships, and administrative needs related to management and programmatic activities. Develop, revise, and maintain these inter and intra agency agreements as needed.

Activity 2.3: Cultivate non-profit foundation partnerships to facilitate programs in support of the management plan**.** For example, ONMS will focus on partnerships with the California Marine Sanctuary Foundation and the National Marine Sanctuary Foundation.

Activity 2.4: Cultivate external partnerships to support management activities. Overlapping jurisdictions, differing agency mandates, and limited resources necessitate the development of a management plan that brings together multiple institutions for the common purpose of comprehensive ecosystem protection.

Strategy OA-3: Coordinate and support the Sanctuary Advisory Council

Since its establishment, the Sanctuary Advisory Council has provided vital advice for the decisions affecting the sanctuary, bringing valuable community expertise to the task of ensuring effective sanctuary management. ONMS will continue to support the ongoing operation of the Sanctuary Advisory Council and seek input on sanctuary issues.

Activity 3.1: Support ongoing operation of the Sanctuary Advisory Council. Operational support will include scheduling and conducting regular council meetings, agenda development, public announcements, website updates, and maintenance of the email-based communication system.

Activity 3.2: Seek input from the advisory council to inform the revision and renewal of the council's 5-year charter, associated operational protocols,[74] and CINMS management plan.

Activity 3.3: Support increased diversification of advisory council membership, outreach, and accessibility. Working in collaboration with ONMS headquarters and nationwide advisory council coordinators, evaluate barriers to broader participation on the advisory council and work to find solutions. This will also include finding ways to make advisory council meetings more accessible and inclusive to a diversity of guests, students, and speakers.

Activity 3.4: Support working groups and subcommittees of the Sanctuary Advisory Council.[75] This includes**:** the council's Research Advisory Panel, Conservation Working Group, Sanctuary Education Team, Chumash Community Working Group, and Marketing Subcommittee. ONMS will continue to provide support to working group chairpersons to assist with meeting planning, group deliberations, and guidance on development of advice for consideration by the full advisory council.

Strategy OA-4: Maintain safe field operation platforms and applied technologies

Providing staff with the appropriate vehicles, equipment, technology, training, and oversight is essential to maintaining the highest level of safety while planning and conducting field operations. To support effective and safe field operations, ONMS will maintain research vessels, aircraft, and other platforms, maintain safety for staff and partners, and maintain safe diving activities.

Activity 4.1: Support the maintenance, operation, and replacement of research vessels, aircraft, and other available platforms. ONMS will plan for and manage lifecycle costs,

[74] https://channelislands.noaa.gov/sac/charter.html
[75] https://channelislands.noaa.gov/sac/working_groups.html

technological refreshment, upgrades, and replacement of new and existing assets to align with operational requirements. This will involve:

- Seeking collaborative opportunities for use of small boats, ship time, uncrewed systems, and aircraft time to support sanctuary needs;
- Planning and acquiring a replacement for the existing Class III sanctuary research vessel. The R/V *Shearwater* was put into service in 2002, and was designed for a 20 year service life; and
- Maintaining staff training and certifications in order to conduct routine field and emergency operations on a variety of vessels and aircraft.

Activity 4.2: Maintain the highest level of safety and readiness for staff, research partners, and observers during field operations. For example, divers and boat crew will maintain current first aid, CPR, emergency oxygen administration; field operatives will undergo hazardous waste operations and emergency response (HAZWOPER) training; and ONMS will participate in oil spill response training and drills.

Activity 4.3: Identify needs for diving operations from the management plan. ONMS will develop a dive operations plan articulating the needs of the sanctuary diving program, including the projected needs as indicated in other action plans. All diving plans will adhere to NOAA/ONMS diving requirements.

Strategy OA-5: Oversee CINMS facilities, assets, and information technology

ONMS will continue to conduct facility support by providing effective, day-to-day administration of the services necessary to fulfill the sanctuary's mission.

Activity 5.1: Manage facilities (e.g., sanctuary offices, visitor facilities, and vessel slips) and NOAA assets (e.g., laptops, federal records, vehicles, etc.). Lead by demonstrating and implementing current industry and government standards for green building and green operating procedures. Anticipate emerging needs, develop and oversee leases, agreements, memoranda of agreements (MOA), or other options to support sanctuary facility requirements over time. Develop and oversee contracts for utilities, facility and property maintenance, and upkeep where required.

Activity 5.2: Ensure safety and security measures are in place at all sites. Outline safety plans for all facilities per Federal Protective Service' Facility Security Assessments and conduct routine safety assessments of facilities. Conduct periodic safety drills for fire, shelter in place, earthquake, and tsunami warnings. Incorporate safety training into employee orientations.

Activity 5.3: Provide support of computers, servers, and peripherals to meet ONMS and programmatic requirements, including the ability to work remotely from the field or teleworking locations, and to support virtual meetings. Maintain working hardware and licensed software. Conduct maintenance on site when possible. This includes budgeting for new computers as part of IT system lifecycle planning.

Activity 5.4: Oversee IT policy compliance. All staff are required to take an annual IT security course and other related training. Cooperate with annual security and compliance assessments for network, workstations, and servers.

Strategy OA-6 Provide administrative and human resources support

To achieve the goals and objectives presented in this management plan, ONMS will provide administrative and human resources support to staff and affiliates at CINMS. It will encourage a culture of collaboration, inclusion, and respect to ensure that the sanctuary is a great, safe, and healthy place to work.

Activity 6.1: Provide efficient and effective administrative support services that are coordinated across multiple sanctuary sites, especially within the West Coast region, to optimize performance and enhance consistency.

Activity 6.2: Manage staff, interns, and volunteers. Strive to make opportunities available to a broader diversity of individuals with succession planning, mentoring, and providing career growth opportunities for staff and affiliates. For example, see Strategy EO-2 for information on supporting volunteer involvement with citizen science projects.

Activity 6.3: Oversee training and develop training schedules. Comply with all Department of Commerce, NOAA, NOS, and ONMS training requirements and improve training opportunities for staff. Include training opportunities that promote greater cultural awareness and enhance justice, equity, diversity, and inclusion, both internally as well as with staff interactions throughout the community.

Relevant strategies/activities located elsewhere within this management plan

- Strategy CC-1: Address climate resilience and adaptation planning
- Strategy CC-5: Assess climate impacts to deep-sea corals and sponges
- Strategy MD-2: Remove marine debris and reduce new input
- Strategy IS-1: Support research, detection, and monitoring efforts
- Strategy RM-1: Characterize and monitor the biological and physical features and processes associated with the sanctuary
- Strategy RP-1: Respond to emergencies that threaten sanctuary resources
- Strategy CRMH-2: Inventory and assess cultural resources and maritime heritage sites

Existing and Potential Partners

Including but not limited to: California Department of Fish and Wildlife, California Marine Sanctuary Foundation, Cardinal Point Captains, Channel Islands National Park, City of Santa Barbara, County of Ventura Harbor Department, National Marine Sanctuary Foundation, Naval Base Ventura County, Sanctuary Advisory Council and subgroups, University of California Santa Barbara, U.S. Coast Guard, Vandenberg Air Force Base.

Performance Measures

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
OA-1: Manage the CINMS budget	CINMS's annual appropriation is tracked and managed	Budget plan and annual operating plans	Superintendent and Deputy	Annually
		Finalized contracts, transfers, agreements, and acquisitions	Superintendent, Deputy, and Program Support Specialist	Ongoing
OA-2: Performance tracking and partnership support	Management plan accomplishments tracked	Annual accomplishments report	Superintendent and Deputy Superintendent	Annually
OA-3: Coordinate and support Sanctuary Advisory Council	Sanctuary Advisory Council maintained	Six meetings/year	Advisory Council Coordinator and Deputy Superintendent	Annually
		Annual Sanctuary Advisory Council report	Deputy Superintendent	Annually
	Sanctuary Advisory Council charter updated as needed	Revised and approved charter	Deputy Superintendent	2024, 2029
OA-4: Maintain safe field operation platforms and applied technologies	Maintain the highest level of safety when planning and conducting field operations	Schedule days at sea (DAS) with staff and partners aboard CINMS vessels for operations, and charter flights, in support of research, monitoring, education and outreach, emergency operations, and support of partner agencies, training, drills, and transportation.	Vessel Operations Coordinator, Resource Protection Coordinator (for flights)	Ongoing
		Maintain certifications, training and proficiency for vessel crew. Schedule and oversee safety training and drills.	Vessel Operations Coordinator	Ongoing
		Maintain HAZWOPER certifications	Emergency Response Coordinator	Annually

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
		Maintain field kits and personal protective equipment	Emergency Response Coordinator	Annually
		Participate in oil spill response trainings	Resource Protection Coordinator and Deputy Superintendent	Opportunistically
		Adhere to NOAA/ONMS diver requirements	CINMS Dive Safety Officer	Ongoing
		Unit Diving Supervisor on staff	CINMS Dive Safety Officer	Ongoing
		NOAA Diver certifications and equipment maintained	CINMS Dive Safety Officer	Ongoing
		Participation in regular safety training/drills, simulations and inspections	Vessel Operations Coordinator and CINMS Dive Safety Officer	Ongoing
OA-5 Oversee CINMS facilities, assets, and information technology	Manage facilities including sanctuary offices, visitor facilities, vessels and vessel slips.	Maintain leases and agreements for office space and vessel berthing	Deputy Superintendent	Annually
		Prepare crew and documentation for annual fleet inspection of vessels. Coordinate with ONMS Small Boat Program and marine engineer to develop requirements and contracting for annual boatyard work for CINMS vessels in addition to managing maintenance and repairs.	Deputy Superintendent and Vessel Operations Coordinator	Annually
	Provide and maintain IT hardware, network, servers and software in compliance with NOAA and ONMS requirements	Annual IT security refresher courses maintained	Superintendent	Annually
		IT equipment, software, and networks updated and replaced per NOAA guidelines	IT Specialist	Ongoing

Strategy Title	Desired Outcome (Objective)	Output Measure	Who Measures	Timeline
OA-6: Provide administrative and human resources support	Support, recruit, and retain staff, including: affiliates, interns, fellows, and volunteers to support sanctuary programs, management plan goals, and to enhance justice, equity, diversity, and inclusion.	Staff and volunteer requirements supported	Superintendent and Deputy Superintendent	Ongoing
		Training opportunities implemented	Deputy Superintendent	Ongoing
		CINMS property inventory, including vehicles, maintained	Deputy Superintendent	Annually
		Time & attendance and travel records, maintained	Superintendent	Ongoing

Section 3:
Appendices

Waves at Santa Rosa Island. Photo: Robert Schwemmer/NOAA

Appendix A – Implementation Prioritization and Funding Scenarios

National marine sanctuaries are funded by federal appropriations, but it takes far greater resources to fund CINMS activities than are provided in the sanctuary's annual budget. As emphasized in a 2021 review conducted by the National Academy for Public Administration (2021),[76] ONMS is relatively underfunded as an agency. ONMS therefore pursues and depends upon significant amounts of external funding from collaborations with various agencies, partnerships with other organizations, and in-kind or volunteer-based labor and supplies.

Operational expenses consist of discretionary and non-discretionary activities; a large portion of the CINMS based budget (more than 85%) covers non-discretionary activities, such as federal labor, office rent, and utilities. The remainder of the CINMS budget is applied to discretionary activities, with research vessel operations representing the majority. Due to the limitations of the CINMS annual budget, many of the activities within the action plans will depend on the availability of appropriate staff and resources for implementation, with a strong reliance on external funding from partnerships. External funding is of course influenced by the priorities of the funding partners, so the sequencing of action plan implementation does not always strictly align with identified priority rankings.

With increased appropriated funding, CINMS would be better equipped to address all of the priorities represented by the action plans and strategies listed in Table 1. In the absence of an increase in appropriated funds, the extent of implementation will be significantly determined by the availability of external funding. ONMS has generally been successful at securing a variety of funding opportunities that align with sanctuary priorities, but there is no guarantee that outside funding will continue in the future at needed levels.

The shaping of priorities for this management plan began with consideration of the sanctuary's condition report findings. Review of public scoping comments and input and prioritization rankings from the Sanctuary Advisory Council also played an important role in helping ONMS to identify top priorities for inclusion within this plan. Importantly, the resulting action plans, strategies, and activities have already undergone a filtering process that has resulted in the identification of important priorities. Consequently, none of the resulting content in this plan reflects "low" priorities, although certain budget conditions will result in different levels of implementation.

Table 1 presents prioritization information for the strategies across this plan's ten action plans. The scenarios shown in Table 1 reflect the application of three potential levels of Congressionally-appropriated federal funds allocated to CINMS (the base budget): level funding, a 5% decrease, and a 5% increase. *High* priorities reflect those strategies to which sanctuary ONMS intends to apply a greater portion of available resources so as to advance progress. *Medium* priorities reflect those strategies to which ONMS expects to apply a moderate portion of available resources so as to moderately advance progress. *Low* priority ratings are applied to strategies that, while still important to CINMS, would require additional funding in

[76] https://napawash.org/academy-studies/national-marine-sanctuaries-program-the-first-fifty-years-and-the-next-fifty-years

order to do more than the bare minimum, and as such are expected to receive low amounts of staff attention unless supplemented by external resources. As resources become available, a greater level of implementation is possible.

As Table 1 reflects, a 5% base budget cut scenario will result in an increase in the number of strategies expected to receive a low level of implementation. Importantly, those strategies that remain at a medium or high implementation priority rating, even during a budget decrease scenario, reflect important issues and core programming that ONMS intends to continue despite financial challenges.

Table 1. Implementation Prioritization Table.

Strategy Implementation Priorities (using CINMS base budget) H – High; M – Medium; L – Low	**Federal Budget Scenario**		
	Level Funding*	**5% Increase**	**5% Decrease**
Climate Change Action Plan			
Strategy CC-1: Address climate resilience and adaptation planning	M	H	M
Strategy CC-2: Reduce greenhouse gas emissions	M	H	M
Strategy CC-3: Public engagement and communication on ocean-climate impacts and solutions	M	H	M
Strategy CC-4: Support, track, and share ocean climate and acidification monitoring and research	H	H	H
Strategy CC-5: Assess climate impacts to deep-sea corals and sponges	H	H	H
Strategy CC-6: Understand the role of Channel Islands and regional marine reserves as reference areas for studying climate change	M	H	M
Marine Debris Action Plan			
Strategy MD-1: Assess scope, scale, and sources of debris	M	M	L
Strategy MD-2: Remove marine debris and reduce new inputs	M	M	M
Strategy MD-3: Raise public awareness about marine debris	M	M	M
Vessel Traffic Action Plan			
Strategy VT-1: Vessel Speed Reduction	H	H	M
Strategy VT-2: Manage vessels spatially	H	H	H
Strategy VT-3: Track and monitor vessel activity	M	H	M
Introduced Species Action Plan			
Strategy IS-1: Support research, detection, and monitoring efforts	M	M	L
Strategy IS-2: Manage invasion vectors and promote prevention through education and outreach	L	M	L
Strategy IS-3: Coordinate response plans with partners	L	M	M
Zone Management Action Plan			
Strategy ZM-1: Support management of the Channel Islands network of Marine Reserves and Marine Conservation Areas	M	H	M
Strategy ZM-2: Management of zones and sensitive areas	M	H	M
Strategy ZM-3: Participate in the Channel Islands Biosphere Reserve System	L	M	L
Education and Outreach Action Plan			
Strategy EO-1: Advance K-16 education programming to support sanctuary stewardship and climate literacy	M	M	L
Strategy EO-2: Enhance sanctuary interpretation, volunteer and outreach programs	H	H	M

Strategy Implementation Priorities (using CINMS base budget) H – High; M – Medium; L – Low	**Federal Budget Scenario**		
	Level Funding*	**5% Increase**	**5% Decrease**
Strategy EO-3: Promote public engagement and stewardship through citizen science monitoring programs	M	H	M
Strategy EO-4: Visitor Centers, Partner Facilities, and Signage	M	H	M
Strategy EO-5: Foster and promote sustainable tourism and responsible use in support of the Blue Economy	M	H	M
Strategy EO-6: Increase awareness of the sanctuary and engagement through effective media and communication tools	M	M	L
Research and Monitoring Action Plan			
Strategy RM-1: Characterize and monitor the biological and physical features and processes associated with the sanctuary	H	H	M
Strategy RM-2: Characterize and monitor ecosystem services provided by the sanctuary	H	H	M
Strategy RM-3: Interpret and apply select technical science information to meet sanctuary needs	H	H	H
Strategy RM-4: Support regional science priorities	H	H	M
Strategy RM-5: Support national science priorities	H	H	M
Resource Protection Action Plan			
Strategy RP-1: Respond to emergencies that threaten sanctuary resources	H	H	H
Strategy RP-2: Enforce regulations to protect sanctuary resources	H	H	H
Strategy RP-3: Respond to current and emerging issues	M	H	M
Strategy RP-4: Permit appropriate research, education, and management activities	M	M	M
Strategy RP-5: Review and provide policy guidance on activities of other agencies	M	H	M
Cultural Resources and Maritime Heritage Action Plan			
Strategy CRMH-1: Strengthen Chumash maritime community partnership through increased engagement and continued support	M	H	M
Strategy CRMH-2: Inventory and assess submerged maritime heritage resources	L	M	L
Strategy CRMH-3: Manage and protect submerged maritime heritage resources	M	M	M
Strategy CRMH-4: Develop maritime cultural landscape-focused education outreach	M	H	M
Operations and Administration Action Plan			
Strategy OA-1: Manage the sanctuary budget	M	M	M
Strategy OA-2: Performance tracking and partnership support	M	M	M
Strategy OA-3: Coordinate and support the Sanctuary Advisory Council	M	M	M
Strategy OA-4: Maintain field operation platforms and applied technologies	M	H	M
Strategy OA-5: Oversee CINMS facilities, assets, and information technology	M	H	M
Strategy OA-6: Provide administrative and human resources support	M	H	M
* “Level funding” assumes annual adjustments to keep pace with the level of U.S. cost inflation, typically around 3%.			

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Appendix C – Acronyms

AIS	Automatic Identification System
ATBA	Area To Be Avoided
B-WET	Bay Watershed Education and Training
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CINMS	Channel Islands National Marine Sanctuary
CPR	Cardiopulmonary resuscitation
DOD	Department of Defense
eFINS	electronic Fisheries Information Network System
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FMP	Final Management Plan
FR	Federal Register
FWPCA	Federal Water Pollution Control Act
HAZWOPER	Hazardous Waste Operations and Emergency Response
ICS	Incident Command System
IMO	International Maritime Organization
IT	Information Technology
K-16	Kindergarten through undergraduate college
NOS	National Ocean Service
LiMPETS	Long Term Monitoring Program and Experiential Training for Students
MAB	Man and Biosphere
MARE	Marine Applied Research and Exploration
MBTA	Migratory Bird Treaty Act
MERITO	Multicultural Education for Resource Issues Threatening Oceans
MESC	Marine Exchange of Southern California
MMPA	Marine Mammal Protection Act
MOA	Memorandum of Agreement
MPA	Marine Protected Area
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NMSA	National Marine Sanctuaries Act
NOAA	National Oceanic and Atmospheric Administration
OLE	Office of Law Enforcement
ONMS	Office of National Marine Sanctuaries
RAP	Research Activities Panel
SCAT	Shoreline Cleanup and Assessment Technique
SIMoN	Sanctuary Integrated Monitoring Network
TSS	Traffic Separation Scheme
UCSB	University of California Santa Barbara
UNESCO	United Nations Educational, Scientific and Cultural Organization
U.S.C.	United States Code
USCG	United States Coast Guard
VSR	Vessel Speed Reduction

Appendix D – Sanctuary Regulations and Scope of Regulatory Authority

D.1 - Sanctuary Regulations

Federal regulations for Channel Islands National Marine Sanctuary are listed in the Code of Federal Regulations at Title 15, Sections 922.70 through 922.74.[77] A reprint of these regulations appears below. These regulations were last modified on January 16, 2009 (74 FR 3260), with the exception of 15 CFR 922.72(a)(7) shown below concerning sanctuary overflights, which was last modified on January 26, 2012 (77 FR 3922).

§ 922.70 Boundary.

The Channel Islands National Marine Sanctuary (Sanctuary) consists of an area of approximately 1,110 square nautical miles (nmi) of coastal and ocean waters, and the submerged lands thereunder, off the southern coast of California. The Sanctuary boundary begins at the Mean High Water Line of and extends seaward to a distance of approximately six nmi from the following islands and offshore rocks: San Miguel Island, Santa Cruz Island, Santa Rosa Island, Anacapa Island, Santa Barbara Island, Richardson Rock, and Castle Rock (the Islands). The seaward boundary coordinates are listed in appendix A to this subpart.

§ 922.71 Definitions.

In addition to those definitions found at 15 CFR 922.3, the following definitions apply to this subpart:

Cruise ship means a vessel with 250 or more passenger berths for hire.

Graywater means galley, bath, or shower water.

Introduced species means any species (including but not limited to any of its biological matter capable of propagation) that is non-native to the ecosystems of the Sanctuary; or any organism into which altered genetic matter, or genetic matter from another species, has been transferred in order that the host organism acquires the genetic traits of the transferred genes.

Motorized personal watercraft means a vessel, usually less than 16 feet in length, which uses an inboard, internal combustion engine powering a water jet pump as its primary source of propulsion. The vessel is intended to be operated by a person or persons sitting, standing or kneeling on the vessel, rather than within the confines of the hull. The length is measured from end to end over the deck excluding sheer, meaning a straight line measurement of the overall length from the foremost part of the vessel to the aftermost part of the vessel, measured parallel to the centerline. Bow sprits, bumpkins, rudders, outboard motor brackets, and similar fittings or attachments, are not included in the measurement. Length is stated in feet and inches.

[77] CINMS regulations are officially printed in the Code of Federal Regulations at 15 CFR §§ 922.70 - 922.74, available online: https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=72c0b3e229cd9f8d3ba8b7e5bc516d61&h=L&mc=true&n=pt15.3.922&r=PART&ty=HTML#sp15.3.922.g

Oceangoing ship means a private, commercial, government, or military vessel of 300 gross registered tons or more, not including cruise ships.

Pelagic finfish are defined as: Northern anchovy (*Engraulis mordax*), barracudas (*Sphyraena* spp.), billfishes (family Istiophoridae), dolphinfish (*Coryphaena hippurus*), Pacific herring (*Clupea pallasi*), jack mackerel (*Trachurus symmetricus*), Pacific mackerel (*Scomber japonicus*), salmon (*Oncorhynchus* spp.), Pacific sardine (*Sardinops sagax*), blue shark (*Prionace glauca*), salmon shark (*Lamna ditropis*), shortfin mako shark (*Isurus oxyrinchus*), thresher sharks (*Alopias* spp.), swordfish (*Xiphias gladius*), tunas (family *Scombridae*), and yellowtail (*Seriola lalandi*).

Stowed and not available for immediate use means not readily accessible for immediate use, e.g., by being securely covered and lashed to a deck or bulkhead, tied down, unbaited, unloaded, or partially disassembled (such as spear shafts being kept separate from spear guns).

§ 922.72 Prohibited or otherwise regulated activities—Sanctuary-wide.

(a) Except as specified in paragraphs (b) through (e) of this section, the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted:

(1) Exploring for, developing, or producing hydrocarbons within the Sanctuary, except pursuant to leases executed prior to March 30, 1981, and except the laying of pipeline pursuant to exploring for, developing, or producing hydrocarbons.

(2) Exploring for, developing, or producing minerals within the Sanctuary, except producing by-products incidental to hydrocarbon production allowed by paragraph (a)(1) of this section.

(3)(i) Discharging or depositing from within or into the Sanctuary any material or other matter except:

(A) Fish, fish parts, or chumming materials (bait) used in or resulting from lawful fishing activity within the Sanctuary, provided that such discharge or deposit is during the conduct of lawful fishing activity within the Sanctuary;

(B) For a vessel less than 300 gross registered tons (GRT), or an oceangoing ship without sufficient holding tank capacity to hold sewage while within the Sanctuary, biodegradable effluent generated incidental to vessel use by an operable Type I or II marine sanitation device (U.S. Coast Guard classification) approved in accordance with section 312 of the Federal Water Pollution Control Act, as amended, (FWPCA), 33 U.S.C. 1321 *et seq*. Vessel operators must lock all marine sanitation devices in a manner that prevents discharge or deposit of untreated sewage;

(C) Biodegradable matter from:

(1) Vessel deck wash down;

(2) Vessel engine cooling water;

(3) Graywater from a vessel less than 300 gross registered tons;

(4) Graywater from an oceangoing ship without sufficient holding tank capacity to hold graywater while within the Sanctuary;

(D) Vessel engine or generator exhaust;

(E) Effluent routinely and necessarily discharged or deposited incidental to hydrocarbon exploration, development, or production allowed by paragraph (a)(1) of this section; or

(F) Discharge allowed under section 312(n) of the FWPCA.

(ii) Discharging or depositing from beyond the boundary of the Sanctuary any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource or quality, except those listed in paragraphs (a)(3)(i)(B) through (F) of this section and fish, fish parts, or chumming materials (bait) used in or resulting from lawful fishing activity beyond the boundary of the Sanctuary, provided that such discharge or deposit is during the conduct of lawful fishing activity there.

(4) Drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary; or constructing or placing any structure, material, or other matter on or in the submerged lands of the Sanctuary, except as incidental to and necessary to:

(i) Anchor a vessel;

(ii) Install an authorized navigational aid;

(iii) Conduct lawful fishing activity;

(iv) Lay pipeline pursuant to exploring for, developing, or producing hydrocarbons; or

(v) Explore for, develop, or produce hydrocarbons as allowed by paragraph (a)(1) of this section.

(5) Abandoning any structure, material, or other matter on or in the submerged lands of the Sanctuary.

(6) Except to transport persons or supplies to or from any Island, operating within one nmi of any Island any vessel engaged in the trade of carrying cargo, including, but not limited to, tankers and other bulk carriers and barges, any vessel engaged in the trade of servicing offshore installations, or any vessel of three hundred gross registered tons or more, except fishing or kelp harvesting vessels.

(7) Disturbing marine mammals or seabirds by flying motorized aircraft at less than 1,000 feet over the waters within one nautical mile of any Island, except to engage in kelp bed surveys or to transport persons or supplies to or from an Island. Failure to maintain a minimum altitude of 1,000 feet above ground level over such waters is presumed to disturb marine mammals or seabirds.

(8) Moving, removing, injuring, or possessing, or attempting to move, remove, injure, or possess a Sanctuary historical resource.

(9) Taking any marine mammal, sea turtle, or seabird within or above the Sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 *et seq.*,

Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 *et seq*., Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 *et seq*., or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

(10) Possessing within the Sanctuary (regardless of where taken from, moved, or removed from) any marine mammal, sea turtle, or seabird, except as authorized by the MMPA, ESA, MBTA, or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

(11) Marking, defacing, damaging, moving, removing, or tampering with any sign, notice, or placard, whether temporary or permanent, or any monument, stake, post, or other boundary marker related to the Sanctuary.

(12) Introducing or otherwise releasing from within or into the Sanctuary an introduced species, except striped bass (*Morone saxatilis*) released during catch and release fishing activity.

(13) Operating a motorized personal watercraft within waters of the Sanctuary that are coextensive with the Channel Islands National Park, established by 16 U.S.C. 410(ff).

(b)(1) The prohibitions in paragraphs (a)(3) through (13) of this section and in §922.73 do not apply to military activities carried out by DOD as of the effective date of these regulations and specifically identified in section 3.5.9 (Department of Defense Activities) of the Final Channel Islands National Marine Sanctuary Management Plan/Final Environmental Impact Statement (FMP/FEIS), Volume II: Environmental Impact Statement, 2008, authored and published by NOAA ("pre-existing activities"). Copies of the document are available from the Channel Islands National Marine Sanctuary, 113 Harbor Way, Santa Barbara, CA 93109. Other military activities carried out by DOD may be exempted by the Director after consultation between the Director and DOD.

(2) A military activity carried out by DOD as of the effective date of these regulations and specifically identified in the section entitled "Department of Defense Activities" of the FMP/FEIS is not considered a pre-existing activity if:

(i) It is modified in such a way that requires the preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act, 42 U.S.C. 4321 *et seq*., relevant to a Sanctuary resource or quality;

(ii) It is modified, including but not limited to changes in location or frequency, in such a way that its possible adverse effects on Sanctuary resources or qualities are significantly greater than previously considered for the unmodified activity;

(iii) It is modified, including but not limited to changes in location or frequency, in such a way that its possible adverse effects on Sanctuary resources or qualities are significantly different in manner than previously considered for the unmodified activity; or

(iv) There are new circumstances or information relevant to a Sanctuary resource or quality that were not addressed in the FMP/FEIS.

(3) In the event of destruction of, loss of, or injury to a Sanctuary resource or quality resulting from an incident, including, but not limited to, discharges, deposits, and groundings, caused by a DOD activity, DOD, in coordination with the Director, must promptly prevent and mitigate

further damage and must restore or replace the Sanctuary resource or quality in a manner approved by the Director.

(4) All DOD activities must be carried out in a manner that avoids to the maximum extent practicable any adverse impacts on Sanctuary resources and qualities.

(c) The prohibitions in paragraphs (a)(3) through (10), (a)(12), and (a)(13) of this section and in §922.73 do not apply to any activity conducted under and in accordance with the scope, purpose, terms, and conditions of a National Marine Sanctuary permit issued pursuant to 15 CFR 922.48 and 922.74.

(d) The prohibitions in paragraphs (a)(3) through (11) and (a)(13) of this section and in §922.73 do not apply to any activity necessary to respond to an emergency threatening life, property, or the environment.

(e) The prohibitions in paragraphs (a)(3) through (11) and (a)(13) of this section and in §922.73 do not apply to any activity necessary for valid law enforcement purposes in the Sanctuary.

§ 922.73 Additional prohibited or otherwise regulated activities—marine reserves and marine conservation area.

(a) Marine reserves. Unless prohibited by 50 CFR part 660 (Fisheries off West Coast States), the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted within a marine reserve described in appendix B to this subpart, except as specified in paragraphs (b) through (e) of §922.72:

(1) Harvesting, removing, taking, injuring, destroying, collecting, moving, or causing the loss of any Sanctuary resource, or attempting any of these activities.

(2) Possessing fishing gear on board a vessel unless such gear is stowed and not available for immediate use.

(3) Possessing any Sanctuary resource, except legally harvested fish on board a vessel at anchor or in transit.

(b) Marine conservation area. Unless prohibited by 50 CFR part 660 (Fisheries off West Coast States), the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted within the marine conservation area described in appendix C to this subpart, except as specified in paragraphs (b) through (e) of §922.72:

(1) Harvesting, removing, taking, injuring, destroying, collecting, moving, or causing the loss of any Sanctuary resource, or attempting any of these activities, except:

(i) Recreational fishing for pelagic finfish; or

(ii) Commercial and recreational fishing for lobster.

(2) Possessing fishing gear on board a vessel, except legal fishing gear used to fish for lobster or pelagic finfish, unless such gear is stowed and not available for immediate use.

(3) Possessing any Sanctuary resource, except legally harvested fish.

§ 922.74 Permit procedures and issuance criteria.

(a) A person may conduct an activity prohibited by §922.72(a)(3) through (10), (a)(12), and (a)(13), and §922.73, if such activity is specifically authorized by, and conducted in accordance with the scope, purpose, terms, and conditions of, a permit issued under §922.48 and this section.

(b) The Director, at his or her sole discretion, may issue a permit, subject to terms and conditions as he or she deems appropriate, to conduct an activity prohibited by §922.72(a)(3) through (10), (a)(12), and (a)(13), and §922.73, if the Director finds that the activity:

(1) Is appropriate research designed to further understanding of Sanctuary resources and qualities;

(2) Will further the educational value of the Sanctuary;

(3) Will further salvage or recovery operations in or near the Sanctuary in connection with a recent air or marine casualty;

(4) Will assist in managing the Sanctuary; or

(5) Will further salvage or recovery operations in connection with an abandoned shipwreck in the Sanctuary title to which is held by the State of California.

(c) The Director may not issue a permit under §922.48 and this section unless the Director also finds that:

(1) The proposed activity will have at most short-term and negligible adverse effects on Sanctuary resources and qualities;

(2) The applicant is professionally qualified to conduct and complete the proposed activity;

(3) The applicant has adequate financial resources available to conduct and complete the proposed activity;

(4) The duration of the proposed activity is no longer than necessary to achieve its stated purpose;

(5) The methods and procedures proposed by the applicant are appropriate to achieve the goals of the proposed activity, especially in relation to the potential effects of the proposed activity on Sanctuary resources and qualities;

(6) The proposed activity will be conducted in a manner compatible with the primary objective of protection of Sanctuary resources and qualities, considering the extent to which the conduct of the activity may diminish or enhance Sanctuary resources and qualities, any potential indirect, secondary, or cumulative effects of the activity, and the duration of such effects;

(7) The proposed activity will be conducted in a manner compatible with the value of the Sanctuary as a source of recreation and as a source of educational and scientific information, considering the extent to which the conduct of the activity may result in conflicts between different users of the Sanctuary and the duration of such effects;

(8) It is necessary to conduct the proposed activity within the Sanctuary;

(9) The reasonably expected end value of the proposed activity furthers Sanctuary goals and purposes and outweighs any potential adverse effects on Sanctuary resources and qualities from the conduct of the activity; and

(10) Any other matters the Director deems appropriate do not make the issuance of a permit for the proposed activity inappropriate.

(d) Applications. (1) Applications for permits should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Manager, Channel Islands National Marine Sanctuary, 113 Harbor Way, Santa Barbara, CA 93109.

(2) In addition to the information listed in §922.48(b), all applications must include information the Director needs to make the findings in paragraphs (b) and (c) of this section.

(e) In addition to any other terms and conditions that the Director deems appropriate, a permit issued pursuant to this section must require that the permittee agree to hold the United States harmless against any claims arising out of the conduct of the permitted activities.

Appendix A to Subpart G of Part 922—Channel Islands National Marine Sanctuary Boundary Coordinates

Sanctuary boundary coordinates are available online in Appendix A to Subpart G of Part 922.[78]

D.2 – Scope of Regulatory Authority

To the extent necessary and reasonable to ensure the protection and management of sanctuary resources and qualities, Article IV of the terms of designation for CINMS establishes several activities as subject to potential regulation, including prohibitions. Activities subject to regulation are listed below, and can also be found published in the Federal Register, Vol. 74, No. 11 (January 16, 2009) p. 3219.[79]

Article IV. Scope of Regulations. Section 1. Activities Subject to Regulation

The following activities are subject to regulation, including prohibition, as may be necessary to ensure the management, protection, and preservation of the conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, and esthetic resources and qualities of this area:

a. Exploring for, developing, or producing hydrocarbons or minerals within the Sanctuary;
b. Discharging or depositing from within or into the Sanctuary any material or other matter;

[78] https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=72c0b3e229cd9f8d3ba8b7e5bc516d61&h=L&mc=true&n=pt15.3.922&r=PART&ty=HTML#ap15.3.922_174.a

[79] Also available online at: https://nmssanctuaries.blob.core.windows.net/sanctuaries-prod/media/archive/management/fr/74_fr_3216.pdf

c. Discharging or depositing from beyond the boundary of the Sanctuary any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource or quality;
d. Drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary; or constructing, placing, or abandoning any structure, material, or other matter on or in the submerged lands of the Sanctuary;
e. Operating a vessel (i.e., watercraft of any description) within the Sanctuary except fishing vessels or vessels traveling within a Vessel Traffic Separation Scheme or Port Access Route designated by the Coast Guard outside of 1 nmi from any Island;
f. Disturbing a marine mammal or seabird by an overflight below 1000 feet;
g. Within a marine reserve, marine park, or marine conservation area, harvesting, removing, taking, injuring, destroying, possessing, collecting, moving, or causing the loss of any Sanctuary resource, including living or dead organisms or historical resources, or attempting any of these activities;
h. Within a marine reserve, marine park, or marine conservation area, possessing fishing gear;
i. Moving, removing, injuring, possessing, or attempting to move, remove, injure, or possess a Sanctuary historical resource;
j. Taking any marine mammal, sea turtle, or seabird within or above the Sanctuary;
k. Possessing within the Sanctuary (regardless of where taken from, moved, or removed from) any marine mammal, sea turtle, or seabird;
l. Marking, defacing, damaging, moving, removing, or tampering with any sign, notice, or placard, whether temporary or permanent, or any monument, stake, post, or other boundary marker related to the Sanctuary;
m. Introducing or otherwise releasing from within or into the Sanctuary an introduced species.

D.3 – Summary of Regulatory Exceptions

Regulatory Exceptions

Most CINMS regulatory prohibitions and restrictions contain exceptions for certain specified activities. For example, it is prohibited to place a structure on, or otherwise alter the submerged lands of CINMS. Since this broad prohibition would prevent certain routine activities, such as anchoring a vessel or installing and maintaining Coast Guard navigational aids on the seafloor, specific exceptions for these activities were embedded in the regulation. Thus, anchoring a vessel or installing a navigational aid is not prohibited. The detailed exceptions for each CINMS regulatory prohibition are listed in Appendix D.1, and can be viewed at 15 CFR §§ 922.72 - 922.73.

Department of Defense Exceptions

Most sanctuary regulatory prohibitions do not apply to military activities that were specifically identified by the U.S. DoD as pre-existing at the time of CINMS designation in 1980 and at the time of regulatory updates that took effect in 2009. Specifically, pre-existing DoD activities are

those listed in Section 3.5.9 of the 2008 CINMS Final Environmental Impact Statement.[80] All other DoD activities are subject to sanctuary regulations unless specifically exempted by NOAA after consultation with DoD. All DoD activities, whether excepted or not, must be carried out in a manner that avoids to the maximum extent practicable any adverse impacts on sanctuary resources and qualities. Also, in the event of threatened or actual, destruction of, loss of, or injury to a sanctuary resource or quality resulting from DoD operations conducted contrary to NOAA recommendations, federal law and regulations require DoD to promptly consult with NOAA, to prevent and mitigate further damage and restore or replace the sanctuary resource or quality in a manner approved by NOAA. The CINMS regulatory provisions concerning DoD activities are listed in Appendix D.1, and can be viewed at 15 CFR § 922.72(b).

Emergency and Law Enforcement Exceptions

Most CINMS regulatory prohibitions do not apply to an activity necessary to respond to a legitimate emergency threatening life, property or the environment, provided sanctuary management ultimately concurs that the emergency was unforeseeable and imminent and that the response action taken was prudent and necessary to prevent significant harm. Similarly, most CINMS regulatory prohibitions do not apply to activities necessary for valid law enforcement purposes within the sanctuary. See Appendix D.1 for details, or Title 15 CFR §§ 922.72(d), (e).

[80] The 2008 CINMS FEIS is available online at: https://channelislands.noaa.gov/management/manplan/pdf/feis11-08.pdf

NATIONAL MARINE
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AMERICA'S UNDERWATER TREASURES