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F11a

December 8, 2014

To: Coastal Commissioners and Interested Parties

From: Alison Dettmer, Deputy Director
Mark Delaplaine, Manager, Energy, Ocean Resources and Federal Consistency Division

Subject: **Addendum to CD-0002-14 NOAA Sanctuaries Expansions**

This addendum provides correspondence (attached), two minor clarifications to one paragraph in the staff report (and corrects a typographical error). Additions are shown below in underline and deletions in ~~strikethrough~~.

Proposed Revisions to the Staff Report

Page 14, Commercial and Recreational Fishing:

Concerning Motorized Personal Watercraft (MPWC) use, MPWCs are currently prohibited in ~~CBNMS, and within 1,000 yards from shore (approximately 0.5 nm) in~~ the GFNMS. NOAA's original proposal had included the establishment of zones for MPWC use in the GFNMS (~~predominantly~~ in the expansion areas), within which fishing using MPWCs as a platform would have been allowed to continue, provided the MPWC use complied with sanctuary regulations. Outside the "MPWC zones" MPWCs would have been prohibited, except for certain "exempt" operators (i.e., the National Park Service, U.S. Coast Guard, Fire or Police Departments "or other Federal, State or local jurisdictions during emergency search and rescue missions or law enforcement operations").

Page 15, Commercial and Recreational Fishing:

> *Motorized Personal Watercraft (MPWC) Use*
>
> *Due to the range of comments in support of, in opposition to, and suggesting change to the MPWC regulations in the proposed rule, NOAA has determined that addressing the various, divergent public comments regarding MPWC regulations in the expansion area would require additional time and public process. Therefore, NOAA is removing its*

proposal for MPWC use zones and regulations from the final action. As a result, MPWCs will not be regulated in the majority of the expansion area with the final rulemaking, but will continue to be prohibited (with exceptions) in the existing GFNMS boundaries. (To aid compliance, NOAA has identified the line of latitude, 38.29989 decimal degrees N, excluding Bodega Harbor, as the demarcation for the existing MPWC prohibition; this includes a very small portion of the expansion area.) Furthermore, because NOAA is removing its ~~fanner~~ former MPWC proposal in this final action, the proposed requirement of a GPS unit for all MPWCs is also removed from the final rule. The existing definition of MPWC would remain the same. It is important to note that NOAA will initiate a separate public process on the topic of MPWC for GFNMS after the finalization of this expansion rule.

THE OCEAN FOUNDATION

December 8, 2014

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94103-2219

Re: Support for concurrence with Consistency Determination CD-0002-14, boundary expansion and revision to management regulations, for NOAA's Cordell Bank and Gulf of the Farallones National Marine Sanctuaries.

Dear Commissioners and Staff:

As a result of more than three decades of bipartisan effort in the U.S. Congress, within the California State Legislature, throughout affected coastal local governments, and by each of California's governors during this period, our state now enjoys the unique opportunity to achieve expansion of the present boundaries of the Cordell Bank and Gulf of the Farallones National Marine Sanctuaries northward from Bodega Bay up to Alder Creek near Pt. Arena. Building upon prior related actions undertaken by the California Coastal Commission, as delineated in staff recommendation F11a, it is now entirely appropriate for the Commission to concur with a Consistency Determination for NOAA's proposed expansion and revision of management regulations for these iconic marine sanctuary sites. This long-sought boundary expansion proposes to incorporate, for the first time, much-needed protection for the world-class ocean upwelling system that nourishes the existing Monterey Bay, Cordell Bank, and Gulf of the Farallones National Marine Sanctuaries, while providing the base of the marine food web underpinning a significant portion of California's coastal-dependent economic sector and sustaining our commercial and recreational fisheries. For these reasons, we are writing in support of concurrence with Consistency Determination CD-0002-14 relative to agenda item F11a on the Commission's December 12, 2014 agenda.

Thank you for your kind consideration of this matter.

Sincerely,

Richard A Charter

Richard Charter
Senior Fellow, Coastal Coordination Program
The Ocean Foundation
waterway@monitor.net

Re CD-0002-14

Item # F11a
CBNMS and GFNMS
Favor Expansion

12/9/2014

Mark Delaplaine
California Coastal Commission
45 Fremont Street, Ste. 2000
San Francisco, CA 94105

Dear Commissioners,

I am writing to express my support for the planned northward expansion of the boundaries of the Cordell Bank and Gulf of the Farallones National Marine Sanctuaries offshore of San Francisco, Marin, Sonoma and Mendocino Counties.

I attended the public hearing in Bodega Bay on June 18, and I would like to address several specific points which arose at that meeting in regard to this proposal.

1) I support the designation of Wildlife Protection Zones to include all areas of special biological significance, especially where there are breeding mammals as these are more susceptible to disturbances. Thus I support restriction of cargo vessels and airplane fly overs in these areas.

2) Wildlife protection zones SHOULD be expanded to include the Russian, Gualala and Garcia Rivers and their estuaries and all along the shoreline. These are an integral part of the ocean ecosystem. As examples, the health of our salmonid population depends upon protecting both their ocean environment and their spawning grounds; maintaining a healthy seal habitat requires looking at the amounts of pollutants washing into the estuaries from our rivers and creeks.

2) I strongly support following the framework which was originally intended by Lynn Woolsey and Barbara Boxer which intended for the boundary to be based on the mean high tide.

3) I support the continuation of current fishing regulations, both recreational and commercial provided that these continue to prove sustainable.

4) I support the allowance of renewable energy development ONLY if those projects can be proven to comply with the terms and conditions determined by NOAA to protect water quality and wildlife habitat to the highest levels possible.

5) I do NOT support the part of the management plan to expand discretionary approval or disapproval of other agencies' permits because this risks the fundamental structure of the Sanctuary which should not be politicized.

Thank you for your consideration.

Sincerely,

Linda Swartz
9 Spring Hill Drive
Cazadero, CA 95421

December 8, 2014

California Coastal Commissioner
Dr. Charles Lester, Executie Director
c/o Mark Delaplaine, Federal Consistency Manager
Via email: mdelaplaine@coastal.ca.gov

Re: CD-0002-14

Dear Dr. Lester and Commissioners:

The Environmental Action Committee of West Marin (EAC) appreciates the opportunity to express its strong support for the proposed northern boundary expansion of the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries (expansion). EAC has actively participated in the public process for the proposed expansion the past several months.

The expansion is greatly needed to protect the ecologically rare and important upwelling system of cold, nutrient-rich waters that occurs off the Northern California coast. This upwelling system supports the great diversity of marine life that we treasure in Californian, from salmon fishing to migrating whales. The expansion will ensure that these nutrient-rich waters remain free from oil drilling, seabed mining, and other destructive commercial activities. Thus, the expansion provides an ecosystem-based level of protection for these critical upwelling waters and is without question worthy of the Commission's support.

Accordingly, EAC strongly agrees with, and urges the Coastal Commission to concur with and adopt, the NOAA consistency findings that the proposed expansion "would protect and restore marine resources, afford special protection to areas and species of special biological and economic significance, help sustain the biological productivity of coastal waters in a manner maintaining healthy populations of all species of marine organisms, protect and restore marine water quality, and reduce the risks from spills of crude oil, gas, petroleum products, and hazardous substances."

Thank you very much for your consideration of our comments.

Respectfully yours,

Amy Trainer, Executive Director

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FIFTH DISTRICT SUPERVISOR
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December 10, 2014

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94103-2219

Re: Support for concurrence with Consistency Determination CD-0002-14
Boundary expansion and revision to management regulations
NOAA's Cordell Bank and Gulf of the Farallones National Marine Sanctuaries

Dear Commissioners and Staff:

After more than three decades of bipartisan effort in the United States Congress, California State Legislature, and with the approval of affected coastal local governments, California has the opportunity to achieve expansion of the present boundaries of the Cordell Bank and Gulf of the Farallones National Marine Sanctuaries.

I offer my support of your staff recommendation F11a, and the determination that California Coastal Commission concurrence with a Consistency Determination for NOAA's proposed expansion and revision of management regulations is appropriate.

The boundary expansion proposes to incorporate much needed protections for the world class upwelling system that nourishes the ecosystem in the existing Monterey Bay, Cordell Bank, and Gulf of the Farallones National Marine Sanctuaries, while supporting our coastal dependent economic and fisheries sectors.

Thank you for your consideration of this historic and appropriate action to protect our coastal resources.

Sincerely,

Efren Carrillo
Supervisor, Fifth District

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F11a

File Date:	4/22/14
60th Day:	6/21/14
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Extended to:	12/15/14
Staff:	M. Delaplaine-SF
Staff Report:	11/20/14
Hearing Date:	12/12/14

STAFF REPORT: REGULAR CALENDAR

Consistency Determination No.: **CD-0002-14**

Federal Agency: **National Oceanic and Atmospheric Administration**

Location: State and Federal Waters Offshore San Francisco, Marin, Sonoma, and Mendocino Counties (Exhibit 1)

Project Description: Boundary expansion (Exhibits 1 & 4-11) and revisions to management regulations (Exhibits 2-3) for the Cordell Bank National Marine Sanctuary (CBNMS) and the Gulf of the Farallones National Marine Sanctuary (GFNMS)

Staff Recommendation: Concurrence

SUMMARY OF STAFF RECOMMENDATION

The National Oceanic and Atmospheric Administration (NOAA) Office of National Marine Sanctuaries (ONMS) proposes to expand the boundaries and revise the management regulations for the Cordell Bank and Gulf of the Farallones National Marine Sanctuaries (respectively, CBNMS and GFNMS). The revised regulations would apply to both the expansion areas and the existing sanctuaries. The expansion areas would be to the north and west of the existing sanctuaries, with the GFNMS being extended north to Point Arena, and with both sanctuaries being extended west to beyond the continental shelf (roughly 40-60 miles west of the mainland to about the 1500 fathom contour line).

NOAA proposes the expansions to protect "… one of the most consistent and intense coastal upwelling centers in all of North America and the spectacular marine ecosystem along the southern Mendocino and Sonoma Coast." The proposal would connect key geographic components of the Point Arena upwelling system, extending sanctuary boundaries from the source waters of the nutrient-based food web to existing areas of high biological productivity around the Farallon Islands and Cordell Bank, and thriving marine ecosystems along and offshore of southern Mendocino and Sonoma Counties. The expansions would also extend further protection for the region's nationally significant seascapes and shipwrecks, and recreational and commercial uses (including fisheries).

The management measures accompanying the expansions would provide comprehensive protection through regulations pertaining to: (1) discharges into Sanctuary waters; (2) seabed alteration; (3) taking, possessing, and introducing certain species; (4) cultural resource disturbance; (5) protection of white sharks; (6) vessel desertions; (7) prohibiting oil, gas and minerals exploration; (8) flying aircraft below 1,000 feet in certain designated zones; (9) sailing cargo vessels in certain designated zones; and (10) prohibiting interference with NOAA enforcement investigations.

The standard of review for under the federal Coastal Zone Management Act (CZMA) (16 U.S.C. § 1451-1464) is whether NOAA's proposal is consistent to the maximum extent practicable with the enforceable policies of approved the California Coastal Management Program (CCMP) (i.e., Chapter 3 of the Coastal Act).

The staff recommends the Commission find that the NOAA's proposal would protect and restore marine resources, afford special protection to areas and species of special biological and economic significance, help sustain the biological productivity of coastal waters in a manner maintaining healthy populations of all species of marine organisms, protect and restore marine water quality, and reduce the risks from spills of crude oil, gas, petroleum products, and hazardous substances. The staff therefore recommends the Commission find the proposal consistent with the marine resource, water quality, and commercial and recreational fishing policies (Sections 30230, 30231, 30232, 30234, and 30234.5) of the Coastal Act. The staff also recommends the Commission finds the project would enhance public access and recreation and protect offshore cultural resources, and be consistent with Sections 30210-30214, 30220, and 30244 of the Coastal Act.

The staff therefore recommends the Commission **concur** with NOAA's consistency determination.

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APPENDICES

EXHIBITS

I. FEDERAL AGENCY'S CONSISTENCY DETERMINATION

NOAA has determined (in consistency determination CD-0002-14) that the project is fully consistent with the California Coastal Management Program (CCMP), and thus also consistent to the maximum extent practicable.

II. MOTION AND RESOLUTION

Motion:

> *I move that the Commission **concur** with consistency determination CD-0002-14 by concluding that that the project is fully consistent, and thus consistent to the maximum extent practicable, with the enforceable policies of the CCMP.*

Staff recommends a **YES** vote on the motion. Passage of this motion will result in an agreement with the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution:

> *The Commission hereby **concurs** with consistency determination CD-0002-14 by NOAA on the grounds that the project is fully consistent, and thus consistent to the maximum extent practicable, with the enforceable policies of the CCMP.*

III. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

NOAA proposes to expand, to ocean areas north and west, the boundaries of the CBNMS and GFNMS (**Exhibit 1**). The GFNMS would be expanded north from Bodega Bay in Sonoma County to just north of Point Arena in Mendocino County. The CBNMS would be expanded farther west offshore of Marin County, and north to include Bodega Canyon. The western expansion of both sanctuaries would be beyond the continental shelf to the approximately 10,000 ft. depth contour (1,667 fathoms), which corresponds to roughly 40-60 miles west of the mainland.

The proposal would add 2016 sq. mi. to the GFNMS, and 1,286 sq. mi. to the CBNMS:

Existing GFNMS:	1,279 sq. mi. (966 nmi^2) [1]
Existing plus proposed:	3,295 sq. mi. (2,488 nmi^2)
Existing CBNMS:	529 sq. mi. (399 sq. nmi^2)
Existing plus proposed:	1,286 sq. mi. (971 sq. nmi^2)

[1] 1 nautical mile square (nmi^2) = @ 1.32 square miles (sq. mi.)

The proposal includes management regulations for the both sanctuaries, which differ to some degree. The measures are summarized in Exhibit 3, which consists of DEIS pp. ES-8-10 (changes to CBNMS), and pp. ES-10-13 (changes to GFNMS), which represent NOAA's original proposal, but which have since been modified as reflected in NOAA's letter to the Commission staff dated October 29, 2014 (Exhibit 2). The measures common to both sanctuaries include:

(1) prohibition of certain activities altogether (such as oil and gas drilling and mining);

(2) strict discharge limitations (with some exceptions allowed, such as for emergencies or military activities vital to national defense); and

(3) designations of Special Wildlife Protection Zones (SWPZs) (i.e., areas called out for special protection, and previously known as Areas of Special Biological Significance (ASBSs).

In addition, the measures applicable to the **CBNMS** would:

(1) apply existing regulations without changes to the proposed expansion area for certain regulations and exceptions related to: discharge, prohibiting oil, gas and minerals exploration, taking and possessing certain species, exemptions for Department of Defense and emergency response, and issuance of emergency regulations;

(2) amend an existing regulation regarding graywater discharge (to be applied to both the existing and proposed expansion area); and

(3) add new regulations related to disturbing historical resources, interference with an investigation, and the ability for NOAA to permit certain activities otherwise prohibited, as follows:

> *…discharges, submerged lands alteration beyond the line representing the 50-fathom isobath surrounding Cordell Bank, taking or possessing marine wildlife and possessing or injuring historic resources. Under no circumstance would oil or gas development be allowed.*

The measures applicable to the **GFNMS** would:

(1) apply existing regulations without changes to the proposed expansion area for certain regulations and exceptions related to: discharge, altering the seabed, taking and possessing certain species, disturbing historical resources, attracting white sharks, deserting a vessel, and exemptions for Department of Defense and emergency response;

(2) amend several existing regulations including prohibiting oil, gas and minerals exploration, discharging graywater, flying aircraft below 1,000 feet in certain designated zones (Exhibit 6), operating cargo vessels with one nm of an SWPZ, approaching white sharks in designated zones near the Farallon Islands, and minor technical changes to boundary coordinates; and

(3) add new regulations related to interference with an investigation.

B. BACKGROUND

NOAA established the GFNMS in 1981 and the CBNMS in 1989. The proposed expansions and revisions are part of NOAA's ongoing periodic review under Section 304(e) of the National Marine Sanctuaries Act (NMSA – 16 U.S.C. 1434(e)), under which it evaluates progress made on implementing management plan and goals "…to ensure that each sanctuary continues to best conserve, protect, and enhance their nationally significant living and cultural resources." (FR April 14, 2014, p. 20983). During past such reviews, NOAA received strong broadbased expressions of support from the public, its own Sanctuary Advisory Councils (SACs), and members of Congress, for the concept of protecting the biologically productive underwater habitat and important upwelling centers contained in the proposed expansion areas. This concept for northern and western expansion of the two sanctuaries began during NOAA scoping meetings for its management plan reviews in 2001, followed by sanctuary advisory council support in 2003 and Congressional support in 2004.

On April 22, 2014, NOAA submitted this consistency determination to the Commission. In a letter October 29, 2014, NOAA notified the Commission staff (Exhibit 2) that it was modifying the submittal, in response to public comments, to exclude from the proposal, at this time: (1) the procedure allowing NOAA to authorize permits for otherwise prohibited activities that were permitted by State and other agencies; and (2) Motorized Personal Watercraft (MPWC) regulation in the expansion area for the GFNMS. As NOAA's letter explains, NOAA intends these two procedures to be addressed separately. The letter also clarifies and makes the following minor modifications to NOAA's original submittal:

1. Certification of Existing Uses - Clarifies that a process is available allowing NOAA to certify existing uses (if such applications are submitted within 90 days of the rule's effective date).

2. Description of Area for GFNMS – Clarifies that the GFNMS includes changes at Arena Cove, and removes mention of the Giacomini Wetland.

3. Arena Cove – Expands (by slightly more than 1 sq. mi.) the excluded area at Arena Cove (to allow all harbor moorings within the cove and expansion of pier and harbor operations).

4. Special Wildlife Protection Zones (SWPZ) definition - Clarifies the definition of SWPZs.

5. Overflight Exception for SWPZ6 – Clarifies which "persons" are excepted from the restrictions.

6. Use of the term "mariculture" – Replaces "mariculture" with the more commonly accepted "aquaculture" throughout the terms of designation and regulations.

7. Separate Rulemaking on Introduced Species – Modifies the language describing this separate effort (explained further on pages 10-11 below).

8. Boundary Coordinates – Provides precise coordinates for regulations prohibiting cargo vessels and approaching white sharks.

9. Cultural Resources Within the Terms of Designation for CBNMS and GFNMS – Clarifies the activities subject to regulations concerning cultural resources.

10. Permits for Oil, Gas, and Minerals Within the Terms of Designation for CBNMS and GFNMS – Relocates the paragraph concerning the prohibition on oil, gas, and mineral development from Article IV, Section 1, to Article V, Section 3, with very slight language modifications.

C. MARINE RESOURCES AND WATER QUALITY

Coastal Act Section 30230 states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30232 states:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

The proposed expansion area for CBNMS would encompass offshore habitats including Bodega Canyon, and for GFNMS would encompass coastal and offshore habitats of northern California from Bodega Head, in Sonoma County, to Manchester State Beach, in Mendocino County. These areas contain unique geological and biological features, and share many features with the

existing sanctuaries, such as the Point Arena upwelling system, the influence of the California Current, and seasonal weather patterns. The unique combination of oceanographic patterns and undersea topography create conditions supporting a rich and diverse assemblage of marine species, including a wide array of temperate cold-water species, and occasional influxes of temperate warm-water species from the south. NOAA considers these marine resources "globally significant," noting, for example, that predators will travel from thousands of miles away to feed in these productive waters. Taken together (and combined with the existing sanctuaries), NOAA's intent is for the two Sanctuaries to include "… a broad biogeographic transition zone providing a gradient of environmental conditions in which the species composition changes from north to south," as well as the broad, regionally-significant, upwelling regime that occurs from the Point Arena area to the Farallon Islands (**Exhibit 10**).

CBNMS Resources
Cordell Bank and Bodega Canyon (which is currently outside the Sanctuary) contain a combination of oceanic conditions and undersea topography that create conditions under which marine ecosystems thrive and provide high biological productivity. The Bank consists of a series of steep-sided ridges and narrow pinnacles rising from the edge of the continental shelf. The seasonal upwelling of nutrient-rich bottom waters and wide depth ranges in the vicinity have led to a unique association of subtidal and oceanic species. The vigorous biological community includes an exceptional assortment of algae, invertebrates, fishes, marine mammals and seabirds.

GFNMS Resources
The expanded GFNMS would encompass a globally significant coastal upwelling center, which includes: (1) a rich and diverse marine ecosystem and a wide variety of marine habitats, including habitat for over 36 species of marine mammals; (2) rookeries for over half of California's nesting marine bird populations and nesting areas for at least 12 of 16 known U.S. nesting marine bird species; (3) abundant populations of fish and shellfish; and (4) one of the largest seasonal concentrations of adult white sharks (*Carcharodon carcharias*) in the world.

Marine Resource Benefits
The proposed expansion areas and revised management measures are intended to maintain and restore the biologically significant marine resources summarized above (and described further in **Exhibit 13** (April 2014 DEIS, pp. 4.3-1 – 4.3-13). The Commission agrees with NOAA as to the significance of these resources and the need for their protection. The Commission finds that the proposed expansions would conserve and protect critically important marine resources, by preventing or reducing human-caused impacts such as marine pollution, and wildlife and seabed disturbance. The revised regulations accompanying the expansions would also benefit these valuable resources by prohibiting activities that could be harmful, including such activities as taking or possessing wildlife, seabed disturbance, oil and gas development, vessel discharges, leaving vessels adrift, and releasing introduced species. The proposed establishment of Special Wildlife Protection Zones (SWPZs) for purposes of prohibiting overflight disturbance of wildlife, and ensuring cargo vessels avoid areas, would further contribute to the proposal's beneficial impacts on marine resources.

The Commission further finds that the expansion areas and management measures would complement existing Sanctuary resource protection program in a manner that is clearly compatible with Coastal Act marine resource and water quality protection policies. The Commission further agrees with NOAA that the education and outreach strategies and activities outlined in the various management plan action plans would foster increased awareness, collaboration and public regard for the marine resources both within and outside proposed sanctuary boundaries, and thus would also be consistent with the Coastal Act education goals articulated in Section 30230.

While no oil and gas production facilities exist or are planned in the vicinity, the certainty that would be provided by the prohibition of all oil and gas development within the existing and proposed sanctuary expansion areas would reduce the risk of oil or gas spills or other hazardous materials being deposited into sanctuary waters and harming marine resources, consistent with Section 30232 of the Coastal Act.

The establishment of the Special Wildlife Protection Zones (SWPZs) (**Exhibit 6**), near Gualala and Fort Ross in the GFNMS expansion area would provide added protection from potential future oil spills and disturbance to sensitive seabird and pinniped colonies. Cargo vessels would be prohibited from transiting closer than one nmi of a SWPZ to prevent wildlife disturbance and minimize the risk of oil spills in these areas; aircraft would be prohibited from flying below 1,000 feet above ground or sea level (whichever is higher) over a SWPZ. These two measures would directly benefit marine resources. Within the existing GFNMS boundaries, the existing zones designated for cargo vessel buffers and overflight restrictions would be converted to SWPZs. The overall size and location would generally be the same as the existing protected areas. Since the SWPZ boundaries generally overlap the protected areas in the existing GFNMS, this change would not affect biological resources; sensitive areas within the existing sanctuary boundaries would continue to be protected.

Coastal Act water quality goals would be met through the measures in the proposed regulations that would prohibit discharges within the sanctuary, with certain exceptions listed in **Exhibit 3** (e.g., clean graywater), and would prohibit discharges or deposition of any material or other matter from beyond the boundary of the sanctuary that subsequently enters the sanctuary and injures a sanctuary resource or quality. These prohibitions would benefit water quality in the expansion areas by reducing the amount of pollutants entering Sanctuary waters, and by reducing or eliminating the potential for hazardous pollutants such as oil, sewage and other harmful chemicals to entering the sanctuaries and injure marine resources. The prohibitions on vessel desertions would further benefit water quality by reducing the threat of discharges of fuel, motor oil, and other harmful pollutants into the marine environment. NOAA proposes to exempt clean graywater discharges from the prohibitions, stating:

> *The proposed exemption for clean graywater discharges would allow such discharges in both CBNMS and GFNMS. This exemption would represent a change in the existing sanctuaries, where such discharges are currently prohibited. However, there are limitations on this type of discharge and discharges would be distributed throughout the entire sanctuary area. Therefore, the potential for adverse impacts on water quality in the existing sanctuaries would be minor and less than significant and would be offset by*

the overall beneficial effect of the proposed action's combination of prohibitions on most discharges in the expansion area.

NOAA's proposal would also benefit water quality by providing it with the authority to: (1) take immediate corrective action to remove a deserted vessel (thereby reducing the potential for hazardous materials to enter the sanctuaries); and (2) prosecute responsible parties, collect damages and restore adversely affected resources.

Introduced Species

A number of commenters on NOAA's DEIS for its original proposal raised concerns over the then-proposed regulation, both within existing and expansion areas of the GFNMS, of aquaculture-related introduced species in certain situations. In response to comments received, NOAA has modified its original proposal (**Exhibit 2**) by removing at this time two components of its proposal, one of which would have allowed NOAA authorizations of future aquaculture under some conditions in state waters, stating:

Authorization Authority for CBNMS and GFNMS

In the proposed rule, NOAA proposed adding to the GFNMS and CBNMS regulations the ability for ONMS to consider an otherwise prohibited activity if such activity is specifically authorized by any valid Federal, State, or local lease, permit, license, approval, or other authorization ("authorization authority"). While NOAA continues to believe authorization authority is a valuable tool for managing certain coastal and marine uses within national marine sanctuaries, the agency has removed this proposal in response to concerns raised by the public during the comment period. Specifically, NOAA is no longer amending the regulations at 15 CFR 922.49 (ONMS regulations), 15 CFR 922.84 (GFNMS regulations) or 15 CFR 922.112(d) (CBNMS regulations) that would have given GFNMS and CBNMS authorization authority. However, it is important to note that NOAA will initiate a separate process that will include public input on the topic of authorization authority for GFNMS and CBNMS after the finalization of this expansion rule.

Even in its original consistency determination for the proposed GFNMS and CBNMS actions, NOAA had noted that it was separately engaged in an effort to revise GFNMS and Monterey Bay National Marine Sanctuary (MBNMS) regulations to address previously-raised introduced species regulation issues. In that separate effort NOAA published a proposed rule entitled "Gulf of the Farallones and Monterey Bay National Marine Sanctuaries Regulations on Introduced Species" and is currently responding to comments received on that proposed rule. In its October 29, 2014 letter to the Commission staff, NOAA has clarified that process as follows:

Separate Rulemaking on Introduced Species

NOAA has been conducting a separate rulemaking on regulations relating to the introduction of introduced species in GFNMS (and MBNMS). That rulemaking, which is scheduled to be completed prior to the final rule, will adjust regulations and terms of designation for GFNMS. Accordingly, the sanctuary expansion final rule will present

> *different regulatory language than was shown in the proposed rule for boundary expansion. Changes include the actual regulatory prohibition in 922.82(a) (l0), a reference to the boundary of Tomales Bay added as Appendix D to this subpart, and a new section 922.85 regarding a memorandum of agreement between NOAA and state agencies describing how the agencies will consult on any future review of aquaculture projects in Tomales Bay. These changes were subject to public review in that separate rulemaking and have been submitted separately to the Coastal Commission for consistency review.*

NOAA's website for that separate rulemaking[2] further describes the ongoing efforts to achieve a state-federal working relationship to address these introduced species concerns. These efforts include developing a Memorandum of Agreement between NOAA, the Commission, the California Natural Resources Agency, the Ocean Protection Council, the California Department of Fish and Wildlife, and the California Fish and Game Commission, which would, among other things, define introduced species, outline agency review processes, and clarify certain understandings. The website discussion includes:

> *NOAA now proposes to amend the terms of designations for both* [*GF*NMS and MBNMS] *sanctuaries regarding introduced species and the associated regulations prohibiting the introduction of such species within or into both the federal and state waters of the sanctuaries. This action would reinstate the terms of designations and regulations as they were promulgated for both sanctuaries in the final rule published on November 20, 2008, with a minor adjustment to the spatial exception for GFNMS. The re-proposed GFNMS regulation on the introduction of introduced species would extend the geographic exception to allow introduced species ...[aqua]culture projects in all of Tomales Bay, rather than restricting the geographic exception to leases for introduced species ...[aqua]culture projects in Tomales Bay existing at the time the regulation takes effect. NOAA and the State of California have also agreed to develop a Memorandum of Agreement (MOA) to describe how the state will consult with GFNMS in the future should it consider any permit or lease agreement for a new or expanded introduced species ...[aqua]culture project in Tomales Bay.*

As currently modified, NOAA's proposed management measures would not deviate from the existing Sanctuary rules on how NOAA will (at least until the above separate regulatory efforts are concluded) address future aquaculture operations. In addition, the Commission retains its own coastal development permitting (and if necessary, federal consistency) authority over any future aquaculture operations proposed in the GFNMS, CBNMS (and MBNMS). The Commission therefore finds that that the proposed boundary expansions and management measures would, with respect to introduced species, be consistent with the marine resource and water quality policies of the Coastal Act. Any future modifications of existing policies will be subject to Commission federal consistency review to assure that NOAA's Sanctuary management measures will remain consistent with these policies.

[2] http://www.regulations.gov/#!documentDetail;D=NOAA-NOS-2012-0113-0001

Conclusion
Based on the above discussions, the Commission finds that NOAA's proposed expansions and management measures are clearly designed to maintain, enhance, and restore marine resources, afford special protection to areas and species of special biological and economic significance, help sustain the biological productivity of coastal waters in a manner maintaining healthy populations of all species of marine organisms, protect and restore marine water quality, and reduce the risks from spills of crude oil, gas, petroleum products, and hazardous substances. The Commission therefore concludes that the proposal would be consistent with the marine resource and water quality policies (Sections 30230, 30231, and 30232) of the Coastal Act.

D. COMMERCIAL AND RECREATIONAL FISHING
Coastal Act Section 30230 states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30234 states:

> *Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.*

Section 30234.5 states:

> *The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

NOAA's DEIS for the proposal notes that the proposed expansion areas are used by approximately 200-300 commercial fishing vessels (spanning all gear types), whose operators report landings at principally four ports (Fort Bragg, Bodega Bay, San Francisco Bay, and Princeton/Half Moon Bay). Landings at Fort Bragg and Bodega Bay predominate (involving approximately 80% of the catch). Species caught and gear type used can vary significantly from year to year, as shown in the following DEIS Table, which depicts three representative years and nine fish species groups:

Table 4.4-3. Selected Top Ex-vessel Revenue Producing Species/Species Groups Reported to the Ports of the Study Area, Pounds and Ex-vessel Value, 2000, 2005, 2011

	2000		2005		2011	
Species Group	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon	132,833	$439,260	358,357	$1,418,374	136,129	$ 701,623
Dungeness crab	44,851	153,247	120,386	237,271	1,715,432	4,174,976
Red urchin	109,718	101,442	428,462	228,413	501,630	355,975
DTS trawl*	67,275	31,897	—	—	530,597	494,721
Sablefish non-trawl	968	1,571	819	1,465	98,582	444,882
Shelf Rockfish	146,130	141,868	8,969	55,026	78,217	92,540
Market squid	78,788	7,718	—	—	555,111	139,098
Spot prawn	4,451	50,949	—	—	693	7,891
Tuna	5,894	8,009	3,799	6,108	44,416	65,651

Source: CFIS database (CDFW 2013). Values were adjusted for inflation (2011 dollars).
*DTS trawl: Dover sole, Thornyheads, and Sablefish complex harvested with trawl gear. Blanks in the table are true zeroes.

The DEIS depicts landings from years 2000-2011 in the following manner:

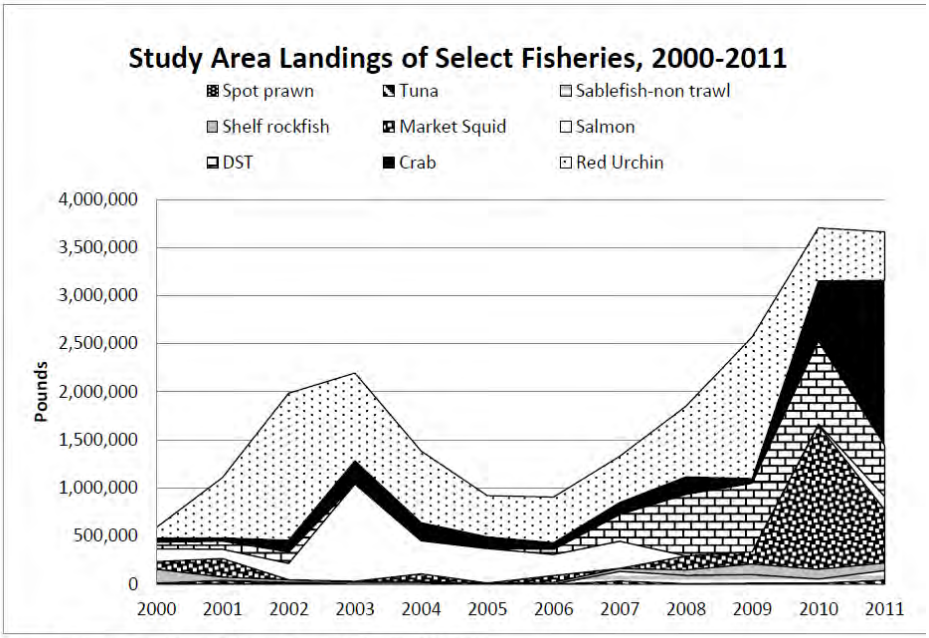


Figure 4.4-3. Landings of Select Fisheries from the Study Area, 2000-2011
Source: CFIS database (CDFW 2013). Values were adjusted for inflation (2011 dollars).

NOAA states that the proposed expansions and management measures would not restrict commercial fishing practices, adversely affect commercial fishing resources, or cause significant economic losses, and that the benefit to the marine environment in general (summarized in the in previous section of this report) would extend to commercial fisheries as well, such as through prohibitions on vessel discharges, submerged lands disturbance, oil and gas exploration, and vessel desertion limitations. NOAA further notes that while some of the vessel discharge regulations have the potential to cause short term adverse impacts on fishing vessel operations (such as fuel, time, or equipment upgrade costs), these effects would be minor, and from an overall perspective, would be more than offset by the benefits to water quality and commercial

fish species within the expansion area. NOAA predicts that under the regulations, fish species would be exposed to fewer contaminants and bacteria, leading to improved reproductive success and increased population sizes.

With respect specifically to submerged lands restrictions, NOAA notes that exceptions from prohibitions would be made for existing lawful moorings, aquaculture activities, and various fishing activities (such as anchoring). NOAA states:

> *In summary, these regulations would provide added protection to the benthic habitats of the study area, would prevent a further loss and degradation of habitats, and improve the overall health of the ecosystem of the study area. The regulations would cause a minor beneficial impact on commercial fishing from habitat enhancement, and a minor burden for vessel owners needing a mooring lease.*

NOAA maintains the prohibitions on oil and gas and other mineral extraction would benefit fish populations and fisheries "by maintaining ecosystem conditions within the sanctuaries, and protect established fishing grounds."

Concerning introduced species in general, NOAA states:

> *Controlling introduced species could have both beneficial and adverse effects on fisheries. The proposed regulations, which are the same as the existing sanctuary regulations, would prohibit the release of introduced species (except striped bass released during catch and release fishing activity). In GFNMS, there would be a second exception for existing ...[aqua]culture, which currently takes place within the existing sanctuary boundaries. The prohibition of introduced species could benefit commercial fisheries in the expansion area by limiting the competition between introduced and native species, thus improving the ongoing stability of the native fish populations, improving stability in the numbers of native fish species available for catch, and helping to stabilize the potential for future revenues derived from commercial catch. In this regard, the proposed regulation would have a beneficial impact on commercial fisheries.*
>
> *One of the pathways for the introduction of species is through commercial fishing operations, specifically, baiting. The proposed regulation would potentially require commercial fisheries to alter their baiting methods so as to reduce the likelihood for the release of introduced species into the sanctuaries. In theory, these alterations may increase the burden on the fisheries, but no known non-native species are currently being used as bait in the study area. Therefore, this requirement may have either no impact or minor adverse impacts on commercial fisheries.*

Concerning Motorized Personal Watercraft (MPWC) use, MPWCs are currently prohibited in CBNMS, and within 1,000 yards from shore (approximately 0.5 nm) in the GFNMS. NOAA's original proposal had included the establishment of zones for MPWC use in the GFNMS (predominantly in the expansion areas), within which fishing using MPWCs as a platform would have been allowed to continue, provided the MPWC use complied with sanctuary regulations. Outside the "MPWC zones" MPWCs would have been prohibited, except for certain "exempt"

operators (i.e., the National Park Service, U.S. Coast Guard, Fire or Police Departments "or other Federal, State or local jurisdictions during emergency search and rescue missions or law enforcement operations").

However, as was the case with "authorization authority" described in the previous section of this report (see pp. 10-11 above), in responding to comments on its original proposal, NOAA has "tabled" these restrictions for the time being, stating:

> *Motorized Personal Watercraft (MPWC) Use*
>
> *Due to the range of comments in support of, in opposition to, and suggesting change to the MPWC regulations in the proposed rule, NOAA has determined that addressing the various, divergent public comments regarding MPWC regulations in the expansion area would require additional time and public process. Therefore, NOAA is removing its proposal for MPWC use zones and regulations from the final action. As a result, MPWCs will not be regulated in the majority of the expansion area with the final rulemaking, but will continue to be prohibited (with exceptions) in the existing GFNMS boundaries. (To aid compliance, NOAA has identified the line of latitude, 38.29989 decimal degrees N, excluding Bodega Harbor, as the demarcation for the existing MPWC prohibition; this includes a very small portion of the expansion area.) Furthermore, because NOAA is removing its fanner MPWC proposal in this final action, the proposed requirement of a GPS unit for all MPWCs is also removed from the final rule. The existing definition of MPWC would remain the same. It is important to note that NOAA will initiate a separate public process on the topic of MPWC for GFNMS after the finalization of this expansion rule.*

Based on the above discussion, the Commission agrees with NOAA, finding that the proposed boundary expansions and management measures would provide long-term benefits to commercial and recreational fishing, through ecosystem, habitat, and water quality improvements, and that while some burdens would be felt by individual operators, those burdens would be minor and short term, and offset by the overall benefits. The Commission will remain involved in and continue to review ongoing proposals related to MPWC regulation. The Commission concludes that the proposed boundary expansions and management measures, as proposed at this time, would be consistent with the commercial and recreational fishing policies (Sections 30230, 30234, and 30234.5) of the Coastal Act.

E. PUBLIC ACCESS AND RECREATION

Section 30210 of the Coastal Act states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with safety needs and the need to protect public rights, rights of private property public owners, and natural resource areas from overuse.*

Section 30212 states in part:

> *(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:*
>
> > *(1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources....*

Section 30214 states in part:

> *(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:*
>
> > *(1) Topographic and geologic site characteristics.*
> >
> > *(2) The capacity of the site to sustain use and at what level of intensity.*
> >
> > *(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.*

Section 30220 provides:

> *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

The waters and adjacent shoreline of the proposed expansion area provide a wide range of recreational opportunities, valued regionwide, nationwide, and internationally. The DEIS notes the extensive use of the Sanctuary expansion areas for coastal access and recreation, such as for beach visitation, coastal hiking, photography, tidepooling, abalone diving, SCUBA diving (both consumptive and non-consumptive), recreational fishing (private boats, commercial passenger fishing vessels, shore based), whale and other marine wildlife watching, bird watching, surfing, recreational boating, camping, and sightseeing along the coast highway. Many visitors stay overnight in campgrounds, a hotel, motel, bed and breakfast inn or vacation home rental along the coast.

Expanding CBNMS and GFNMS would enhance, and not adversely affect, public access to the shoreline. Ocean access would remain unchanged except for the establishment of designated zones and access routes for MPWC use in GFNMS as discussed below. Just the designation alone of the waters off of Sonoma and Mendocino Counties as national marine sanctuaries would increase the public's awareness of their value, benefitting recreation and tourism. Sanctuary educational information and programs would further enhance these perceptions and benefits. NOAA notes that: "Sanctuaries across the U.S. generally increase recognition of their unique and remarkable natural and cultural resources, which lead to increased tourism opportunities (NOAA 2012)."

The expanded sanctuary boundaries would provide added protection to the natural resources that contribute to the area's value as a recreation-tourist destination, while not restricting non-consumptive activities such as boating, wildlife viewing and coastal access. This could result in a beneficial impact on recreation and tourism. Employment opportunities from increased tourism and recreation related activities include jobs related to the need for lodging, food, boating, transportation, guide services, and other incidentals to accommodate travelers interested in coastal activities and opportunities. In addition, local residents of the area engaging in recreation activities also spend funds on food, bait and tackle, oil and gas, sports equipment, equipment maintenance and repair, boat ramps and marina fees, and other incidentals related to their recreation activities.

Further benefits to access and recreation would occur from proposed discharge prohibitions intended to improve water quality, as well as oil and gas prohibitions. Concerning personalized motorized water craft use, as discussed the previous section of this report, in responding to comments on its original proposal NOAA has "tabled" this portion of its original proposal a later date and process. The Commission will retain the ability to analyze and determine whether future proposed MPWC zones will comply with the requirement of Section 30214 of the Coastal Act to implement public access and recreation in a manner taking account habitat needs and the fragility of coastal resources. At this time, the Commission finds the proposal would avoid adverse effects on recreational uses of coastal waters and be consistent with the public access and recreation policies (Sections 30210-30220) of the Coastal Act.

F. CULTURAL RESOURCES

Section 30244 of the Coastal Act states:

> *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

NOAA's records search indicates that over 200 vessel and aircraft losses were documented between 1820 and 1961 along California's north-central coast from Bodega Head north to Point Arena's contiguous waters (**Exhibit 11**). Some of the sites have been located and inventoried by the National Park Service and California State Parks, as well as recreational SCUBA divers (ONMS 2013). Shipwrecks include vessels lost while sailing to and from the north coast doghole ports. These shipwrecks as well as other cultural ties including family and business relationships, demonstrate the interconnected nature of maritime activity that strongly linked communities such as Point Arena, or Gualala, with the city and port of San Francisco.

NOAA further reports that submerged Native American archaeological remnants likely exist in the area, although it has not found any documentation of submerged Native American human settlements in the proposed boundary expansion area to date. NOAA believes the likelihood is nevertheless high, since Coast Miwok and Pomo peoples have lived and harvested the resources of this abundant marine landscape for thousands of years. Sea level rise at the end of the last great Ice Age inundated a large area that was likely used by these peoples when it was dry land.

NOAA also notes that submerged archaeological remnants related to a number of former doghole ports are likely to exist in the area. Doghole ports were small ports on the Pacific Coast between Central California and Southern Oregon that operated between the mid-1800s until 1939. Such archaeological remnants could include landings, wire, trapeze loading chutes and offshore moorings.

The proposed Sanctuary expansions would add protection for significant submerged cultural resources and historical properties, as defined by the National Historic Preservation Act and its regulations, and would prohibit possession, moving, removing, or injuring sanctuary historical resources. NOAA notes that while several existing state and federal laws provide some degree of protection of historical resources, State regulations only extend 3 nmi offshore, and existing federal regulations do not provide comprehensive protection of these resources. Expansion of the sanctuaries would require revision of each site's terms of designation and sanctuary regulations to cover the resources within the proposed area, benefitting current and future generations. In addition, CBNMS and GFNMS management plans would be revised and their programs would be extended to the area, covering resource protection, sustainable uses, research, and education. NOAA states:

> *The National Marine Sanctuaries Act (NMSA) mandates the management and protection of submerged archaeological sites within sanctuary boundaries. Therefore, the ONMS has conducted research to identify submerged heritage resources in the study area and completed an inventory and implemented a Section 106 Review under the NHPA (as described in Section 4.5.2). NOAA preservation mandates for maritime archaeological resources derive directly from elements of the Federal Archaeology Program, including the NHPA. Section 110 of the NHPA states that each federal agency shall establish a preservation program for the protection of historic properties. The laws described in Section 4.5.2 codify the protection of heritage sites from illegal salvage and looting. NOAA jurisdictional authority would be applicable to the study area causing no adverse effect on archaeological properties.*

The proposed action would thus have a beneficial effect on historical resources because it would prohibit drilling, dredging, or altering, constructing, placing, or abandoning any structure material or matter on or in the submerged lands within the proposed expansion area. Any of these activities could potentially disturb, injure, or damage submerged historical resources. Currently GFNMS has regulations in place to protect submerged historical resources. The proposed action includes adding a regulation for CBNMS to protect historical resources, which would prohibit the possession, moving, removing, injuring, or attempting to possess, move, remove or injure a sanctuary historical resource. With this measure, any potential adverse impacts on historical resources would be negligible. The Commission therefore agrees that, with the above-described protections for cultural and archaeological resources, the proposed boundary expansions and management measures would be consistent with the archaeological resources policy (Section 30244) of the Coastal Act.

G. PREVIOUS COMMISSION ACTIONS ON NOAA SANCTUARY PROPOSALS

The Commission has reviewed the following seven previous NOAA consistency determinations for National Marine Sanctuary designations, management plans, and regulations:

1. CD-066-92: MBNMS establishment and management plan;
2. ND-053-99: GFNMS regulation of the operation of motorized personal watercraft
3. CD-036-06: Channel Island NMS (CINMS) management plan;
4. CD-072-06: CINMS marine zoning regulations;
5. CD-009-07: CBNMS management plan;
6. CD-010-07: GFNMS management plan; and
7. CD-011-07: MBNMS management plan.

To summarize these reviews:

1. On August 12, 1992, the Commission concurred with NOAA's consistency determination for the designation of the Monterey Bay National Marine Sanctuary (MBNMS) (CD-066-92).

2. On August 2, 1999, the Commission staff concurred with NOAA's negative determination for the prohibition of motorized personal watercraft (MPWC) in GFNMS nearshore waters (from the mean high-tide line seaward to 1,000 yards (approximately 0.5 nautical mile), including seaward of the Farallon Islands) (ND-053-99).

3. On July 14, 2006, the Commission conditionally concurred with NOAA's consistency determination for a revised management plan and regulations for the Channel Islands National Marine Sanctuary (CINMS) (CD-036-06). The Commission's condition addressed cruise ship discharges, and under the condition NOAA agreed to revise CINMS regulation number 3 (Discharging and Depositing) to prohibit vessels of 300 gross registered tons or more from discharging sewage or graywater into Sanctuary waters.

4. On March 16, 2007, the Commission conditionally concurred with NOAA's consistency determination for the expansion of marine protected areas (MPAs) in the CINMS (CD-072-06). The Commission's condition (with NOAA again agreeing) addressed the most effective way to temporarily (pending further action by the California Resources Agency) fill any "gaps" between state and federal MPAs, because at the time of the Commission's action, the federal and state MPAs were not precisely coterminous.[3]

[3] The condition read:

In the event NOAA elects not to implement Alternative 1a, NOAA will implement Alternative 1c, with the following additional provisions: until such time as the Resources Agency and the Fish and Game Commission designate the areas in between the existing State-designated MPAs and the 3 mile limit (i.e., the "gaps" between the existing state MPAs and the federal MPAs depicted in Alternative 1c …), or the Fish and Game Commission/DFG and NOAA enter into an interagency agreement that establishes MPA protection for these "gap" areas, NOAA will expand Alternative 1c to include in its MPA designation these "gaps" between the outer boundaries of the existing state MPAs and the State-federal waters boundary (3nm from shore).

5-7. On August 10, 2007, the Commission acted on three NOAA consistency determinations for Revised Management Plans for the Cordell Bank (CD-009-07), Gulf of the Farallones (CD-010-07), and Monterey Bay (CD-011-07) National Marine Sanctuaries. The Commission concurred with the first of these, and conditionally concurred with the latter two Sanctuary Plans. The Commission's conditions (for the latter two) addressed introduction of invasive species into the two Sanctuaries and were worded slightly differently. The condition for GFNMS limited the release of introduced species to: (1) striped bass released during catch and release fishing activity; and (2) existing legally valid aquaculture species in Tomales Bay "pursuant to valid lease, permit, license or other authorization issued by the State of California and in effect on the effective date of the final regulation, provided that the renewal by the State of any authorization does not allow cultivation of new or different introduced species or increase the size of the area under cultivation with introduced species." The condition for MBNMS contained no exception for existing aquaculture, and thus the only exception to the prohibition was limited to the release of striped bass released during catch and release fishing.

At the time of the Commission's action NOAA agreed to the conditions. However, also at this time NOAA and the Commission were aware that the Governor of California had the authority to "veto" any NOAA proposal so modified. After the Commission's action, NOAA published a final rule incorporating the Commission's conditions. As proscribed in the National Marine Sanctuaries Act (NMSA), NOAA notified the Governor's office of the Final Rule, and as allowed under the NMSA[4], the Governor of California objected to the bans on invasive species in State waters. NOAA subsequently submitted to the Commission staff a modified proposal that NOAA believed the Governor would accept. These modifications: (1) allowed state-permitted aquaculture in the GFNMS; and (2) limited the ban on introduced species in the MBNMS to only federal waters. The Commission staff concurred with this modified proposal on February 11, 2010. Further efforts to address these concerns are discussed above on pages 10-11 above.

[4] Under the NMSA (16 USC. §1434 (b)(1)), where a Sanctuary includes state waters, if the Governor of that state certifies to NOAA that the designation or any of its terms is unacceptable, the designation or the unacceptable term shall not take effect in the area of the sanctuary lying within the seaward boundary of the State.

APPENDIX A: SUBSTANTIVE FILE DOCUMENTS

1. NOAA Consistency Determinations:

CD-066-92 (MBNMS Designation and Management Plan)
ND-053-99 (GFNMS, MPWC Regulation)
CD-036-06 (CINMS Management Plan)
CD-072-06 (CINMS Marine Zoning Regulations)
CD-009-07 (CBNMS Management Plan)
CD-010-07 (GFNMS Management Plan)
CD-011-07 (MBNMS Management Plan)

2. Draft Cordell Bank & Gulf of the Farallones Draft Environmental Impact Statement, NOAA, Office of National Marine Sanctuaries, April 2014.

3. Proposed Expansion and Regulatory Revision of Gulf of the Farallones and Cordell Bank National Marine Sanctuaries, Proposed Rule, Federal Register Vol. 79, No. 71, April 14, 2014.

4. Updated GFNMS and CBNMS Draft Management Plans, NOAA, April 2014.

PROPOSED EXPANSION

Gulf of the Farallones National Marine Sanctuary
Cordell Bank National Marine Sanctuary
April 2014

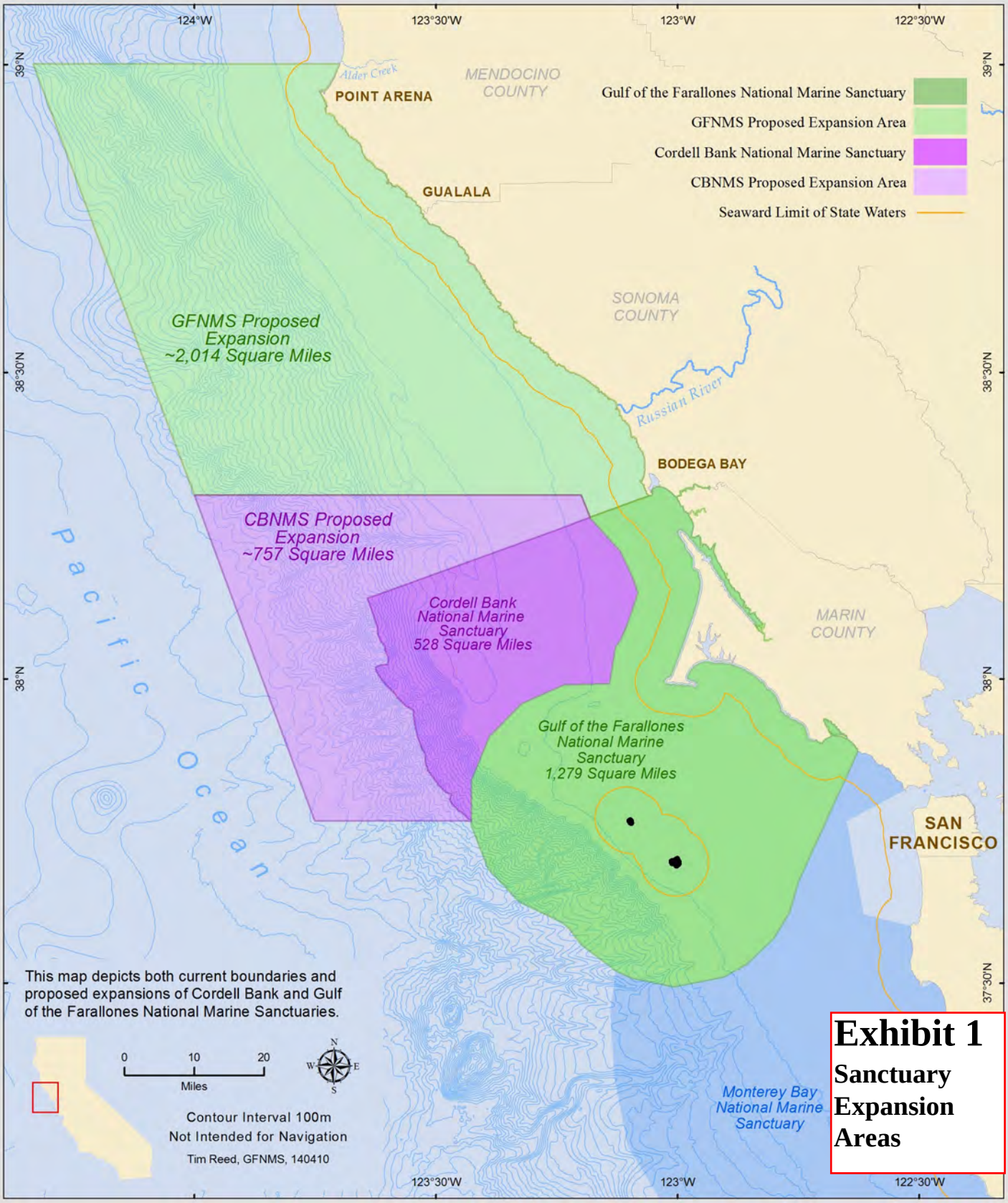


Exhibit 1
Sanctuary Expansion Areas

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of National Marine Sanctuaries | West Coast Region
99 Pacific Street, Bldg 100, Suite F
Monterey, CA 93940

October 29, 2014

Mr. Mark Delaplaine
Manager, Energy, Ocean Resources and Federal Consistency Division
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Dear Mr. Delaplaine:

The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) is proposing to expand Cordell Bank and Gulf of the Farallones national marine sanctuaries (CBNMS and GFNMS). NOAA provided a proposed rule for public review and comment earlier this year. Based on comments received, NOAA intends to make changes in the final rule for these expansions that differ from the proposed rule. The attached document summarizes those changes.

For the same reasons described in our April 15, 2014 letter to Charles Lester, NOAA continues to believe this action is consistent with the California Coastal Management Program. NOAA will not finalize this regulatory action until after the California Coastal Commission has rendered a determination on consistency. We ask that this matter be considered at the earliest date available during the Commission's December 2014 meeting.

Sincerely,

William J. Douros
Regional Director

Exhibit 2
NOAA Revisions

SUMMARY OF CHANGES BETWEEN PROPOSED AND FINAL CBNMS AND GFNMS BOUNDARY EXPANSIONS

1. Authorization Authority for CBNMS and GFNMS
   In the proposed rule, NOAA proposed adding to the GFNMS and CBNMS regulations the ability for ONMS to consider an otherwise prohibited activity if such activity is specifically authorized by any valid Federal, State, or local lease, permit, license, approval, or other authorization ("authorization authority"). While NOAA continues to believe authorization authority is a valuable tool for managing certain coastal and marine uses within national marine sanctuaries, the agency has removed this proposal in response to concerns raised by the public during the comment period. Specifically, NOAA is no longer amending the regulations at15 CFR 922.49 (ONMS regulations), 15 CFR 922.84 (GFNMS regulations) or 15 CFR 922.112(d) (CBNMS regulations) that would have given GFNMS and CBNMS authorization authority. However, it is important to note that NOAA will initiate a separate process that will include public input on the topic of authorization authority for GFNMS and CBNMS after the finalization of this expansion rule.

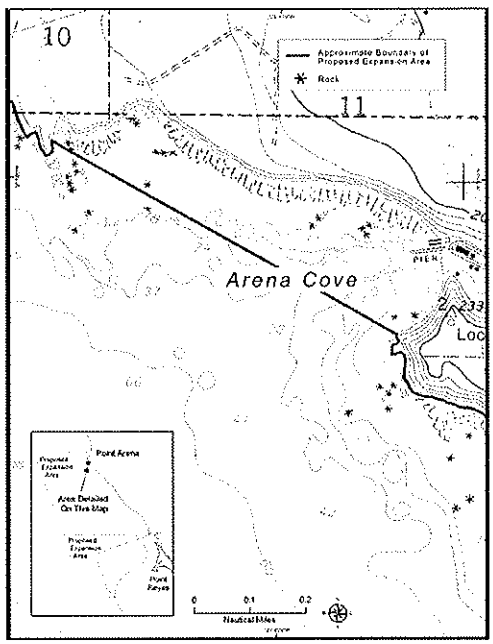
2. Certification of Existing Uses
   While NOAA has elected not to include authorization authority in the final regulations for GFNMS, the agency is clarifying the language at 15 CFR 922.84 describing the process by which it can certify existing activities when designating an area as national marine sanctuary (specifically, 15 CFR 922.84 states certification is the process by which permitted activities existing prior to the expansion of the sanctuary that violate sanctuary prohibitions may be allowed to continue, provided certain conditions are met). The certification process described here only applies to the GFNMS expanded area. Applications for certifying existing uses of the sanctuary would have to be received by NOAA within 90 days of the effective date of the final rule. The requirement and limitations for certifying existing uses are in the National Marine Sanctuaries Act (section 304(c) and the implementing regulations (CFR 922.47).

3. Description of Area for GFNMS
   NOAA has made a small change to its proposed estimate of the area for GFNMS, changing it from 2,490 square nautical miles to 2,488 square nautical miles, due to the following contributing factors: change of boundaries at Arena Cove (described below); use of an updated NOAA shoreline map; and the exclusion of offshore rocks and islands that are above the mean high water line. In addition, NOAA removed the mention of Giacomini Wetland in the description of the sanctuary. The proposed rule generated some confusion regarding the areal extent of GFNMS in Tomales Bay with the mention of the Giacomini Wetland in the description of the sanctuary. NOAA was not proposing a change in the current extent of the GFNMS boundary in Tomales Bay. The addition of Giacomini Wetland to the GFNMS boundary occurred as a result of the migration of the Mean High Water Line in Tomales Bay when the Waldo Giacomini Ranch was converted into a wetland through the Giacomini Wetland Restoration Project. The purpose of previously listing its inclusion in the current boundary description was to inform the

public that since the last official boundary area calculation, which was conducted in 2007, GFNMS waters have since migrated into the Giacomini Wetland and those waters overlap with NPS property. However, it is not necessary to list this area in the boundary description, so NOAA is proposing to remove the specific reference to Giacomini Wetland from the final boundary description.

4. Arena Cove

After careful consideration of public comments, NOAA is adjusting the sanctuary boundary to exclude a larger area of Arena Cove than originally proposed. The final boundary for Arena Cove will be approximately 900 feet from the end of the harbor pier, which would exclude all of the current harbor moorings within the cove and allow for expansion of pier and harbor operations. The final boundary is drawn at a line that connects two points on each side of the cove. NOAA rejected one suggestion to align the boundary with the existing buoy at the edge of the harbor, given the buoy is not a fixed location and would require use of latitude/longitude coordinates for boundary identification (which is less effective for enforcement purposes). This change at Arena Cove increases the exclusion area in the cove by slightly more than 1 square nautical mile, and commensurately decreases the size of the expanded sanctuary. The revised boundary is shown in the figure below.



5. Motorized Personal Watercraft (MPWC) Use

Due to the range of comments in support of, in opposition to, and suggesting change to the MPWC regulations in the proposed rule, NOAA has determined that addressing the various, divergent public comments regarding MPWC regulations in the expansion area would require additional time and public process. Therefore, NOAA is removing its proposal for MPWC use zones and regulations from the final action. As a result, MPWCs will not be regulated in the majority of the expansion area with the final

rulemaking, but will continue to be prohibited (with exceptions) in the existing GFNMS boundaries. (To aid compliance, NOAA has identified the line of latitude, 38.29989 decimal degrees N, excluding Bodega Harbor, as the demarcation for the existing MPWC prohibition; this includes a very small portion of the expansion area.) Furthermore, because NOAA is removing its former MPWC proposal in this final action, the proposed requirement of a GPS unit for all MPWCs is also removed from the final rule. The existing definition of MPWC would remain the same. It is important to note that NOAA will initiate a separate public process on the topic of MPWC for GFNMS after the finalization of this expansion rule.

6. Special Wildlife Protection Zone (SWPZ) definition
Given the public comments identified confusion over the types of activities that would be regulated within SWPZs, the final rule revises the definition of SWPZs at 15 CFR 922.81 in order to clarify its intent. The revised definition articulates specific prohibitions for transiting cargo vessels, low flying aircraft and vessels approaching white sharks within these zones, while clarifying that SWPZs are defined areas susceptible to human disturbances. The designation of a SWPZ does not result in specific activities being prohibited; specific prohibitions for each SWPZ are identified at 15 CFR 922.82. NOAA will also clarify that SWPZs do not include pinniped and bird resting and foraging areas. The definition is purposefully limited to breeding pinnipeds, and, at this time, is not intended to address other marine mammals such as whales and dolphins. The definition has also been modified from "seabirds" to "birds" to include all breeding birds (e.g. oyster catchers) that may be susceptible to human disturbance from low flying aircraft and transiting cargo vessels along the sanctuary shoreline.

   The definition in the final rule will read as follows:

   > Special Wildlife Protection Zones are areas surrounding or adjacent to high abundance of white sharks, breeding pinnipeds (seals and sea lions), orhigh abundance and high biological diversity of breeding birds that are susceptible to human caused disturbance, including federally listed and specially protected species. Coordinates for Special Wildlife Protection Zones are found in Appendix C of this Subpart.

7. Overflight Exception for SWPZ 6
In its proposed rule, NOAA recommended the following exception for SWPZ 6: "...transiting Zone 6 to transport authorized persons or supplies to or from Southeast Farallon Island or for enforcement purposes". Based on comments submitted by the Department of the Interior, NOAA will clarify that this exception applies specifically to persons authorized by the U.S. Fish and Wildlife Service and Farallon National Wildlife Refuge. The exception for enforcement purposes remains unchanged.

8. Use of the term "mariculture"
In the existing GFNMS terms of designation and regulations, NOAA has used the term "mariculture". However, the term "aquaculture" has now become more widely used to describe the same activities as those described by "mariculture", is used by other national

marine sanctuaries (including the adjacent Monterey Bay National Marine Sanctuary (MBNMS)), and is the term of art used in NOAA's 2011policy on aquaculture. In the final rule, NOAA will replace the term "mariculture" with "aquaculture" in the GFNMS regulations. This is a technical change that will not have any effect on the types of activities subject to NOAA regulation.

9. Separate Rulemaking on Introduced Species
NOAA has been conducting a separate rulemaking on regulations relating to the introduction of introduced species in GFNMS (and MBNMS). That rulemaking, which is scheduled to be completed prior to the final rule, will adjust regulations and terms of designation for GFNMS. Accordingly, the sanctuary expansion final rule will present different regulatory language than was shown in the proposed rule for boundary expansion. Changes include the actual regulatory prohibition in 922.82(a)(10), a reference to the boundary of Tomales Bay added as Appendix D to this subpart, and a new section 922.85 regarding a memorandum of agreement between NOAA and state agencies describing how the agencies will consult on any future review of aquaculture projects in Tomales Bay. These changes were subject to public review in that separate rulemaking and have been submitted separately to the Coastal Commission for consistency review.

10. Boundary Coordinates
NOAA is providing exact boundary coordinates for the regulations that prohibit transit of cargo vessels and approaching a white shark.

11. Cultural Resources Within the Terms of Designation for CBNMS and GFNMS
The existing terms of designation for both GFNMS and CBNMS describing activities subject to regulation included the term "activities regarding cultural and historical resources", which was a vague term. Consistent with the regulations already in place for both sanctuaries and with the terms of designation for the adjacent MBNMS, NOAA would clarify the activities subject to regulation related to cultural resources are in fact: "taking, removing, moving, collecting, possessing, injuring or causing the loss of, or attempting to take, remove, move, collect, injure or cause the loss of cultural or historical resources".

12. Permits for Oil, Gas, and Minerals Within the Terms of Designation for CBNMS and GFNMS
In the proposed rule, NOAA proposed placing the following phrase in the GFNMS and CBNMS terms of designation Article IV, Section 1: "In addition, a permit, authorization may not be issued for exploring for, developing or producing oil, gas, or minerals within the Sanctuary under any circumstances." NOAA has determined that this phrase is better placed in the terms of designation Article V, Section 3 for both sanctuaries, with slight modification, to read as follows: "In addition, a permit or authorization may not be issued under any circumstances for exploring for, developing or producing oil, gas, or minerals within the Sanctuary." There was opposition by an energy industry group to limiting development of oil and gas reserves, but NOAA did not receive comments objecting to this additional restriction added to the terms of designation.

below and any substantive differences between existing and proposed regulations are noted. The full text of the proposed regulations is included in the proposed rule, published by NOAA in the Federal Register.

CBNMS

The following prohibitions and permit requirements as modified from current regulations would be applied to both the existing sanctuary and the expansion area. Regulations that are new or substantially modified from existing regulations are noted with an asterisk (*).

Prohibited Activities

The following activities would be prohibited within the sanctuary (including both existing sanctuary and proposed sanctuary expansion area[1]:

- Oil, gas or mineral exploration, development or production.
- Discharging or depositing into the sanctuary, other than from a cruise ship, any material except:
  - Fish, fish parts, chumming materials or bait, used in lawful fishing;
  - For a vessel less than 300 gross registered tons (GRT):
    - clean effluent generated incidental to vessel use and generated by an operable Type I or II marine sanitation device (MSD; U.S. Coast Guard classification); and
    - clean graywater*[2];
  - For a vessel 300 GRT or greater without sufficient tank capacity to hold sewage and/or graywater while within the sanctuary:
    - clean effluent generated incidental to vessel use and generated by an operable Type I or II marine sanitation device (U.S. Coast Guard classification); and
    - clean graywater*;
  - Clean vessel deck wash down, clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, or anchor wash; or
  - Vessel engine or generator exhaust.
- Discharging from a cruise ship except clean vessel engine cooling water, clean vessel generator cooling water, vessel engine or generator exhaust, clean bilge water, or anchor wash.
- Discharging or depositing, from beyond the boundary of the sanctuary, any material that subsequently enters the sanctuary and injures a sanctuary resource or quality, with the same exceptions as listed above.

[1] The order of prohibitions has been modified from the order in the existing regulations.

[2] Graywater is defined in section 312 of the Clean Water Act as galley, bath, and shower water. Clean means not containing detectable levels of harmful matter.

Exhibit 3
Prohibited Activities, Exceptions (Original)

- Removing, taking, or injuring benthic invertebrates or algae located on or within the line representing the 50-fathom isobath surrounding Cordell Bank. (This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States)).

- Drilling into, dredging, or otherwise altering the submerged lands within the line representing the 50-fathom isobath surrounding Cordell Bank; or constructing, placing, or abandoning any structure or material on or in the submerged lands. (This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States)).

- Beyond the line representing the 50-fathom isobath surrounding Cordell Bank, drilling into, dredging, or otherwise altering the submerged lands; or constructing, placing, or abandoning any structure or material on the submerged lands except for anchoring any vessel or lawful use of any fishing gear.

- Taking any marine mammal, sea turtle, or bird, except as authorized by existing regulations.

- Possessing within the sanctuary any marine mammal, sea turtle or bird taken, except as authorized by existing regulations or as necessary for law enforcement purposes.

- Possessing, moving, removing, or injuring a sanctuary historical resource.*

- Introducing or otherwise releasing an introduced species, except striped bass (*Morone saxatilis*) released during catch and release fishing activity.

- Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of regulations.*

Exceptions and Authorizations

There are proposed exceptions to the above prohibitions, as well as a new proposed authorization procedure to allow certain activities:

- Exceptions for Emergencies – The above prohibitions do not apply to activities necessary to respond to an emergency threatening life, property or the environment, or as may be permitted by the Sanctuary Superintendent, with authority delegated by the ONMS Director, in accordance with criteria outlined in 15 CFR § 922.48 (National Marine Sanctuary permits – application procedures and issuance criteria) and specifically allowed within the CBNMS permit procedures and criteria 15 CFR § 922.113.

- Department of Defense – All activities carried out by the Department of Defense (DOD) on the effective date of expansion that are necessary for national defense are exempt from the above prohibitions; other such activities will be exempted after consultation between the Department of Commerce and the DOD. DOD activities not necessary for national defense, such as routine exercises and vessel operations, are subject to all prohibitions contained in the regulations in this subpart.

- Authorizations* – A new authorization authority would establish a mechanism for the sanctuary to potentially allow several specific prohibited activities within the existing sanctuary and the proposed

expansion area if they were approved by another authorizing entity and subject to terms and conditions of the sanctuary. This change would have implications for the existing sanctuary as well as the proposed expansion area. Activities potentially allowed by authorization would include discharges, submerged lands alteration beyond the line representing the 50-fathom isobath surrounding Cordell Bank, taking or possessing marine wildlife and possessing or injuring historic resources. Under no circumstance would oil or gas development be allowed.

- Emergencies – Where necessary to prevent immediate, serious, and irreversible damage to a sanctuary resource, any activity may be regulated on an emergency basis for up to 120 days.

Permits

The proposed regulations would extend permit procedures and criteria for issuing permits currently established in the sanctuaries to the expansion area. With authority delegated by the ONMS Director, the Sanctuary Superintendent may issue a permit for activities prohibited above, subject to terms and conditions. A permit may be issued for activities that will: further research or monitoring related to sanctuary resources and qualities; further the educational value of the sanctuary; further salvage or recovery operations in or near the sanctuary; or assist in managing the sanctuary. In no event may a permit be issued to allow oil, gas or mineral exploration, development or production.

GFNMS

For the proposed action, GFNMS would include similar new provisions listed above for CBNMS, as well as additional modified prohibitions. These regulations would be applied to the entire sanctuary, both existing and expanded boundaries. New or substantially modified regulations are noted with an asterisk (*).

Prohibited Activities

Several of the proposed prohibitions are the same as CBNMS, including prohibitions of: oil, gas or mineral development, discharges, taking any marine mammal, sea turtle, or bird, possessing any marine mammal, sea turtle, or bird, possessing, moving, removing, or injuring a sanctuary historical resource, and interfering with enforcement action*. In addition, the following activities would be prohibited within GFNMS (15 CFR 922.82, Prohibited or otherwise regulated activities):

- Constructing any structure other than a navigation aid on or in the submerged lands of the sanctuary; placing or abandoning any structure on or in the submerged lands of the sanctuary; or drilling into, dredging, or otherwise altering the submerged lands of the sanctuary in any way, except:
  - By anchoring vessels;
  - While conducting lawful fishing activities;
  - Routine maintenance and construction of docks and piers on Tomales Bay; or
  - Mariculture activities conducted pursuant to a valid lease, permit, license or other authorization issued by the State of California.
- Operating motorized personal watercraft (MPWC), except:

- For emergency search and rescue missions or law enforcement operations (other than routine training activities) carried out by the National Park Service, U.S. Coast Guard, Fire or Police Departments or other Federal, State or local jurisdictions; or
- For a MPWC equipped with a GPS unit within four designated zones in the expansion area of the sanctuary.*

The four proposed MPWC zones would avoid the proposed Special Wildlife Protection Zones (SWPZs) and include traditional coastal access points. The proposed MPWC zones would be located as follows (see Chapter 3, Description of Proposed Action and Alternatives, for maps of proposed locations):

- Zone 1 (From latitude 39 to Arena Cove) (Area: 6.4 sq nm) – This seasonal zone would be open from October to February. It would be closed from March to September to limit potential negative interactions with MPWC landing on Manchester beach during the time that Snowy Plovers, listed as threatened by the Endangered Species Act, nest on beach.
- Zone 2 (From Arena Cove to Havens Neck) (Area: 19.8 sq nm) – Prominent visual markers at Arena Cove, Moat, Saunders Landing, Iverson Landing and Haven's Neck would be used to define the eastern boundary. The proposed zone would require MPWC users to stay seaward of all the listed points at all times. Use of waypoints at each of the shoreside locations would help operators with compliance.
- Zone 3 (Timber Cove) (Area: 2.9 sq nm) – Zone 3 would be accessed through a boat ramp at Timber Cove.
- Zone 4 (From Bodega Head to Coleman Beach) (Zone Area: 4.5 sq nm; Access Area: 0.3 sq nm) – A 100-yard access route from Bodega Harbor using the harbor entrance and two navigational buoys would allow entrance to the southern boundary of the zone. Seasonal access would also be available through Salmon Creek, at Bean Avenue and the Ranger's Station (see Figure 3.2-15).

- 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 — same as CBNMS; or species cultivated by mariculture activities in Tomales Bay pursuant to a valid lease, permit, license or other authorization issued by the State of California and in effect on the effective date of the final regulation.

- Disturbing marine mammals or seabirds by flying motorized aircraft at less than 1000 feet over the waters within the seven designated SWPZs except to transport persons or supplies to or from the Farallon Islands or for enforcement purposes. Failure to maintain a minimum altitude of 1000 feet above ground level over such waters is presumed to disturb marine mammals or seabirds.*

- Operating any cargo vessel engaged within an area extending one nm from a designated SWPZ.*

As part of these two regulations that reference SWPZs, the sanctuary would designate SWPZs instead of continuing to use Areas of Special Biological Significance (ASBS) and other specified locations. There would be a total of five SWPZs in the current sanctuary boundaries, which would be subject to protection from cargo vessel traffic and low flying aircraft. These zones include: Tomales Point, Point

Reyes, Duxbury Reef-Bolinas Lagoon, and two zones at the Farallon Islands (shown in Figures 3.2-4, 3.2-5, 3.2-6 and 3.2-7 in Chapter 3). Two zones would be created in the proposed expansion area near Gualala and Fort Ross (see Figures 3.2 8 and 3.2-9 in Chapter 3). They would be established in areas of high biological diversity and/or abundance of species including federally listed and specially protected species. SWPZs would be established where biological resources are susceptible to disturbance and need protection from certain activities that could harm these sensitive resources.

The existing GFNMS regulations use a combination of specified locations and State ASBS to protect sensitive seabird and pinniped areas from cargo vessel disturbance or discharge, and from low flying aircraft disturbance. ASBS are those areas designated by California's State Water Resources Control Board as requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. ASBS are a subset of State Water Quality Protection Areas established pursuant to California Public Resources Code section 36700 et seq. These areas were designated based on the presence of certain species or biological communities that, because of their value or fragility, deserve special protection by preserving and maintaining natural water quality conditions to the extent practicable.

Within the existing GFNMS boundaries, ASBS coincide with areas of high biological diversity and/or abundance of species, but the ASBS in the expansion area are not in locations that could provide adequate protections to wildlife if used for proposed cargo vessel or low flying aircraft prohibitions. Therefore, SWPZs are proposed to better reflect resource areas needing protection from cargo vessels and low flying aircraft and to provide consistency between the existing and proposed boundary areas.

In the existing sanctuary boundaries, the proposed boundaries of the new SWPZs are very similar to the areas currently protected from cargo vessels and low flying aircraft, which were defined as areas including a two nautical mile buffer or one nautical mile buffer, respectively, around the Farallon Islands, Bolinas Lagoon or any ASBS. A new definition to describe SWPZs, which approximately cover the areas where the low flying aircraft regulation currently apply, would be added to the GFNMS regulations. Cargo vessels would be required to sail at least one nautical mile from any SWPZ. The proposed new cargo vessel prohibition would remain similar in size and location to the areas currently protected from cargo vessels. Therefore, this proposed change in the current boundaries would result in a negligible change for transiting cargo vessels.

- Attracting a white shark in the sanctuary; or approaching within 50 meters of any white shark within one nautical mile of, and inside, the newly designated SWPZs around Southeast and North Farallon Islands. Currently, NOAA prohibits approaching within 50 meters of a white shark within two nautical miles of the Farallon Islands to prevent harassment and reduce disturbance of white sharks. The location and size of the zones would remain effectively similar to the current prohibition at both the Southeast and North Farallon Islands, however, the area around Middle Farallon Island would be removed resulting in a total area that is smaller than the existing zone. The previous zone was circular and surrounded all the Farallon Islands. The two new zones would be changed to a polygon and match the cargo vessel prohibition zones by creating a one nautical mile buffer around proposed SWPZs 6 and 7. Deserting a vessel aground, at anchor, or adrift in the sanctuary.

- Leaving harmful matter aboard a grounded or deserted vessel in the sanctuary.

- Anchoring a vessel in a designated seagrass protection zone in Tomales Bay, except as necessary for mariculture operations conducted pursuant to a valid lease, permit or license.

Exceptions and Authorizations

There are proposed exceptions to the above prohibitions, as well as a proposed authorization procedure to allow certain activities:

- Exceptions for Emergencies – same as CBNMS.

- Department of Defense – The exemption for DOD activities would be similar to the exemption in CBNMS. All activities currently carried out by DOD are considered essential for national defense and not subject to the prohibitions listed above. Any additional activities would be exempted only after consultation with the Sanctuary Superintendent and the Department of Defense.

- Authorizations* – As with CBNMS, this new authorization authority would potentially allow some specific otherwise prohibited activities listed above if they are authorized by a lease, permit, license, approval, or other authorization issued by another agency. As with CBNMS, this change would have implications for the existing sanctuary as well as the proposed expansion area. Activities potentially allowed by authorization would include discharges, construction on submerged lands, operating MPWC, taking or possessing marine wildlife and possessing or injuring historic resources. Introduction of a non-invasive introduced species from shellfish mariculture in State waters may also be allowed in GFNMS under this authorization process. Under no circumstance would oil, gas or minerals development be allowed.

Permits

The proposed GFNMS regulations would provide a permit process for otherwise prohibited activities and criteria for issuing permits, similar to the proposed CBNMS permit provisions, including findings listed above for CBNMS. The proposed regulations would extend permit procedures and criteria for issuing permits currently established in the sanctuary to the expansion area.

No Action Alternative

Evaluation of a No Action alternative is required under NEPA. The No Action alternative is equivalent to the status quo, with regard to sanctuary boundaries and regulations. No boundary adjustments would be made to include additional north central coast waters and no changes would be made to existing regulations or the terms of designation for either sanctuary. All management practices currently occurring in the north coast offshore area would continue. The No Action alternative would involve continuing to implement the current management plans and regulations for the two sanctuaries. Future development and activities in the proposed expansion area would be subject to existing federal and state regulations. No added protection of biological resources, water quality or cultural resources would be provided and the various educational and monitoring programs outlined in the sanctuary management plans would not be implemented in the proposed expansion area.

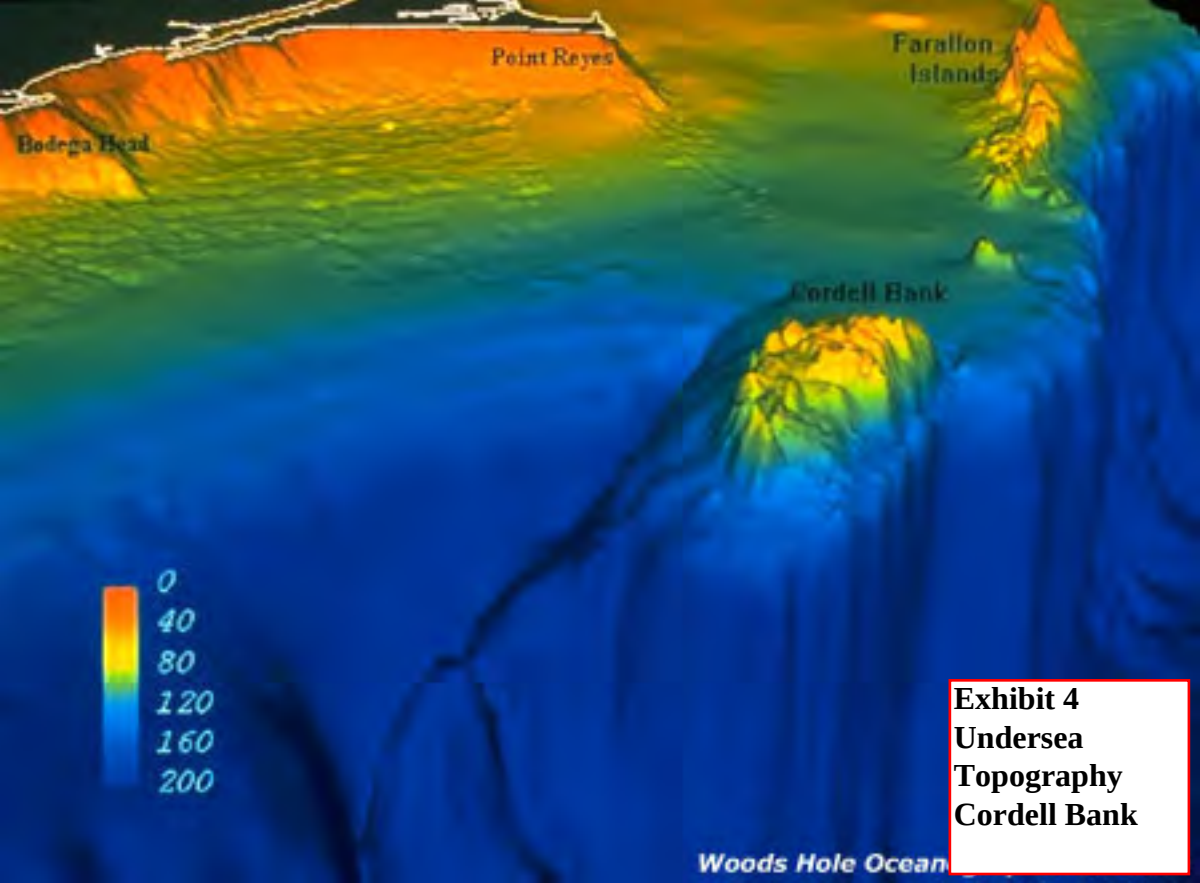


Exhibit 4
Undersea Topography
Cordell Bank

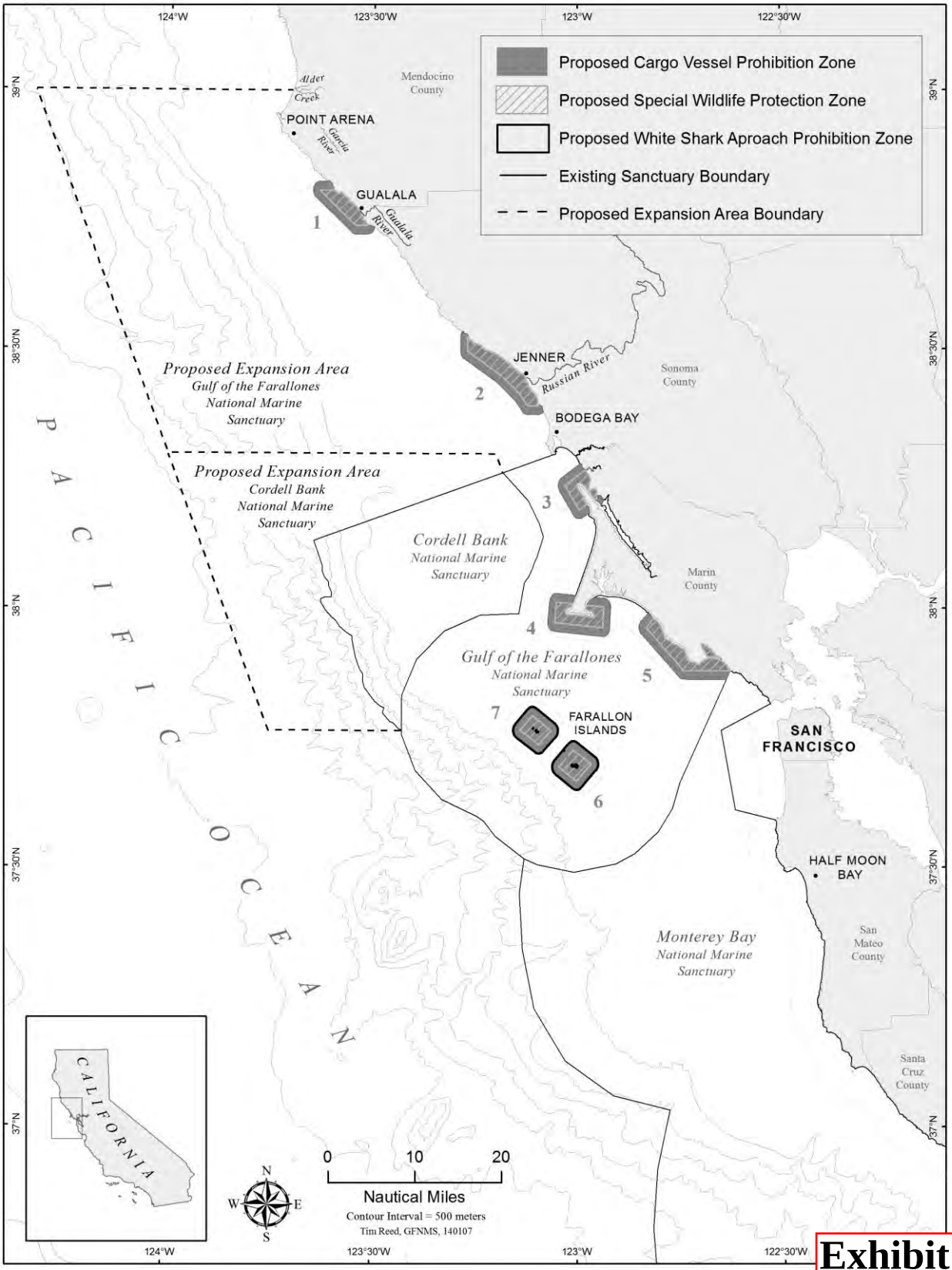


Figure 3.2-10. Proposed Cargo Vessel Prohibition Zones and Proposed White Shark Approach Prohibition Zones

Exhibit 5
Cargo Vessel, Special Wildlife, and White Shark Restricted Areas

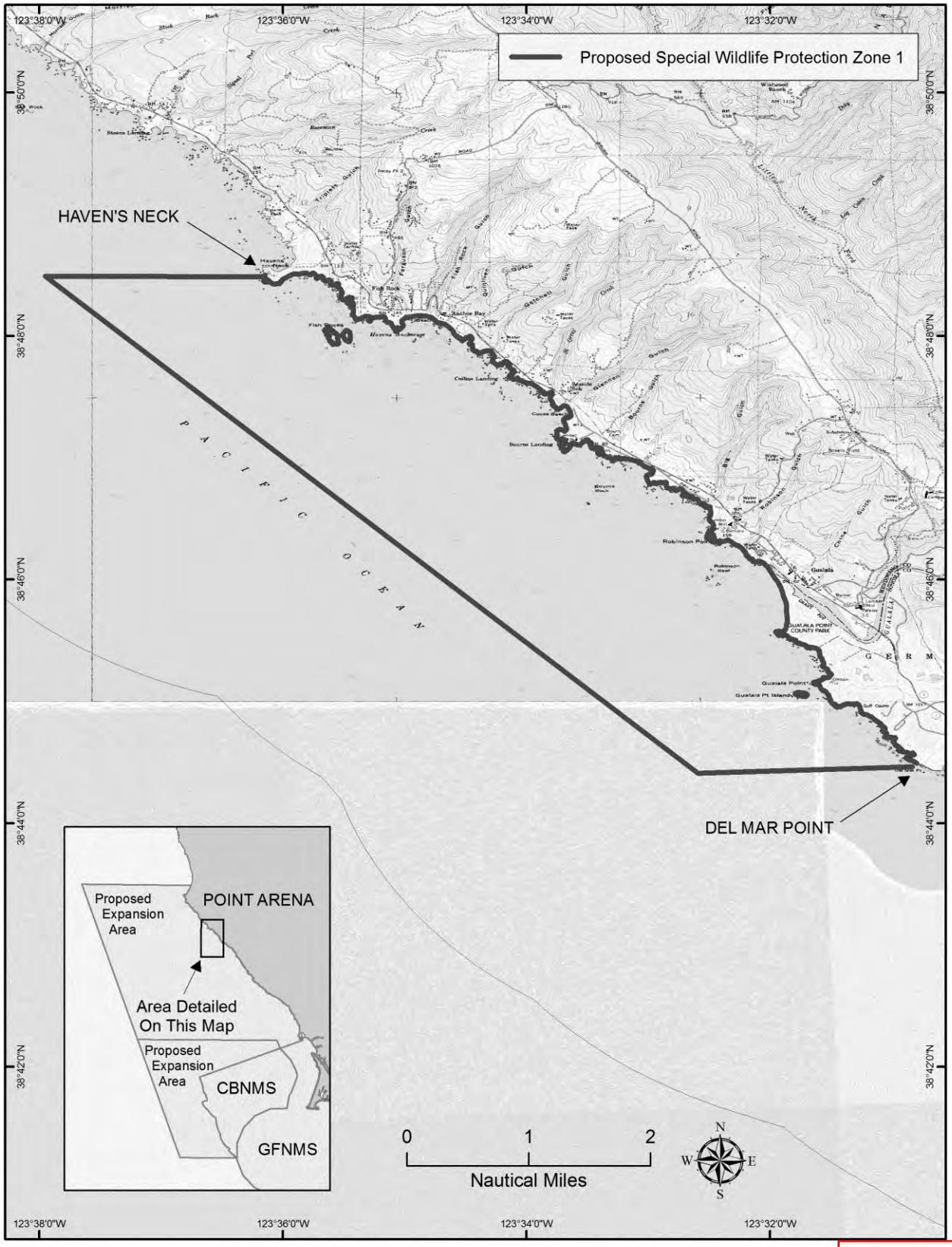


Figure 3.2-8. Proposed Special Wildlife Protection Zone 1 – Point Arena

Exhibit 6
Special Wildlife Protection Zones

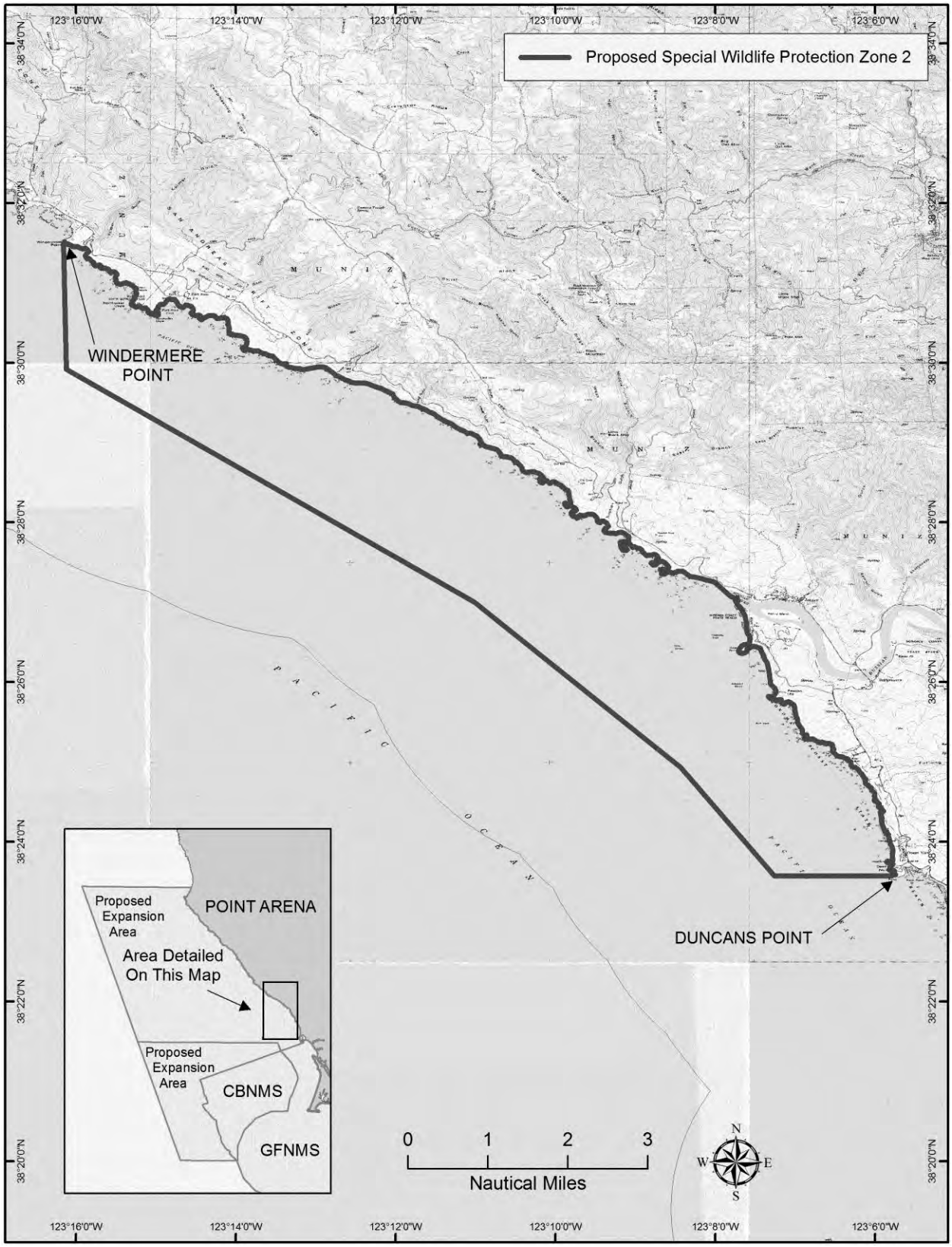


Figure 3.2-9. Proposed Special Wildlife Protection Zone 2 – Fort Ross

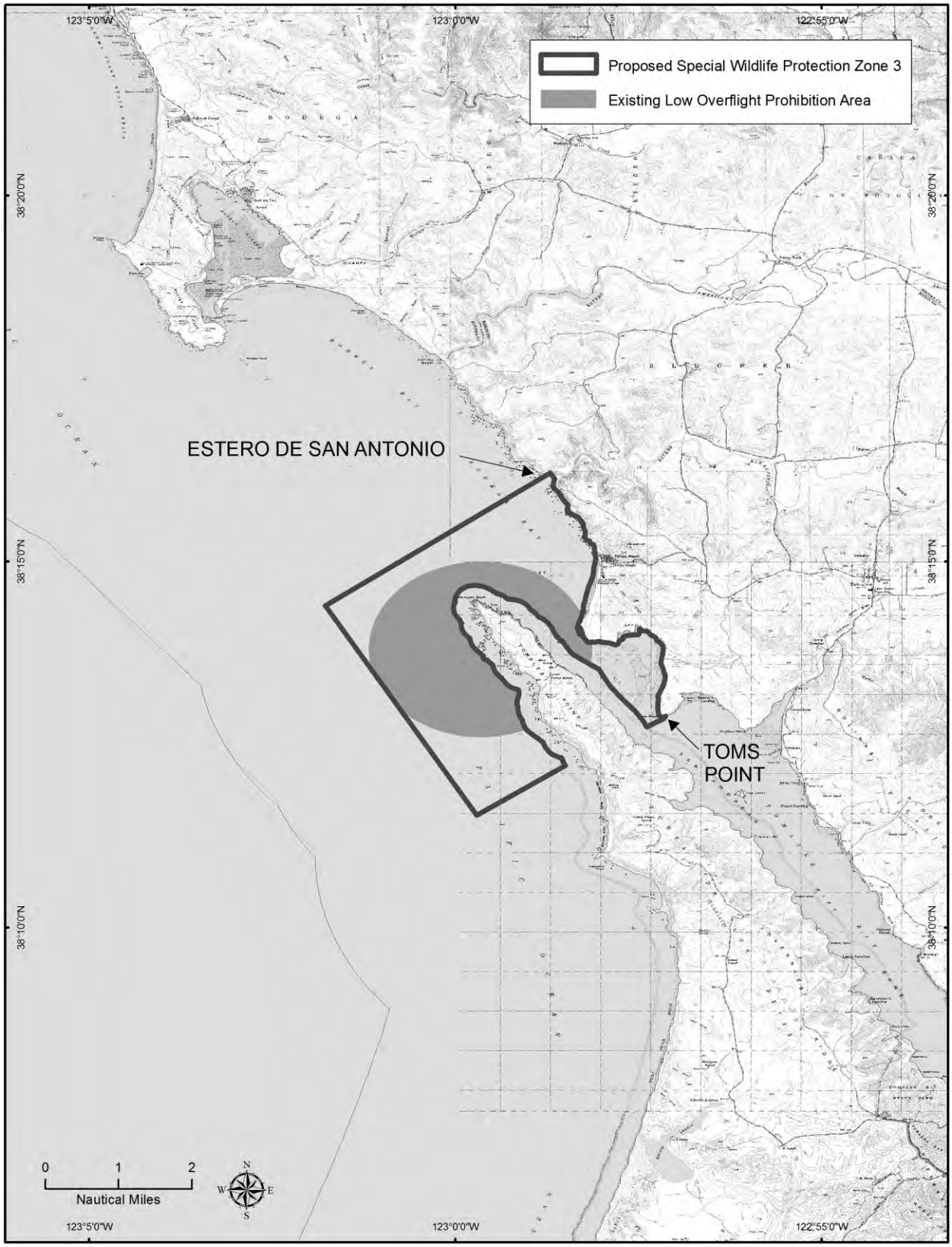


Figure 3.2-4. Proposed Special Wildlife Protection Zone 3 – Tomales Point

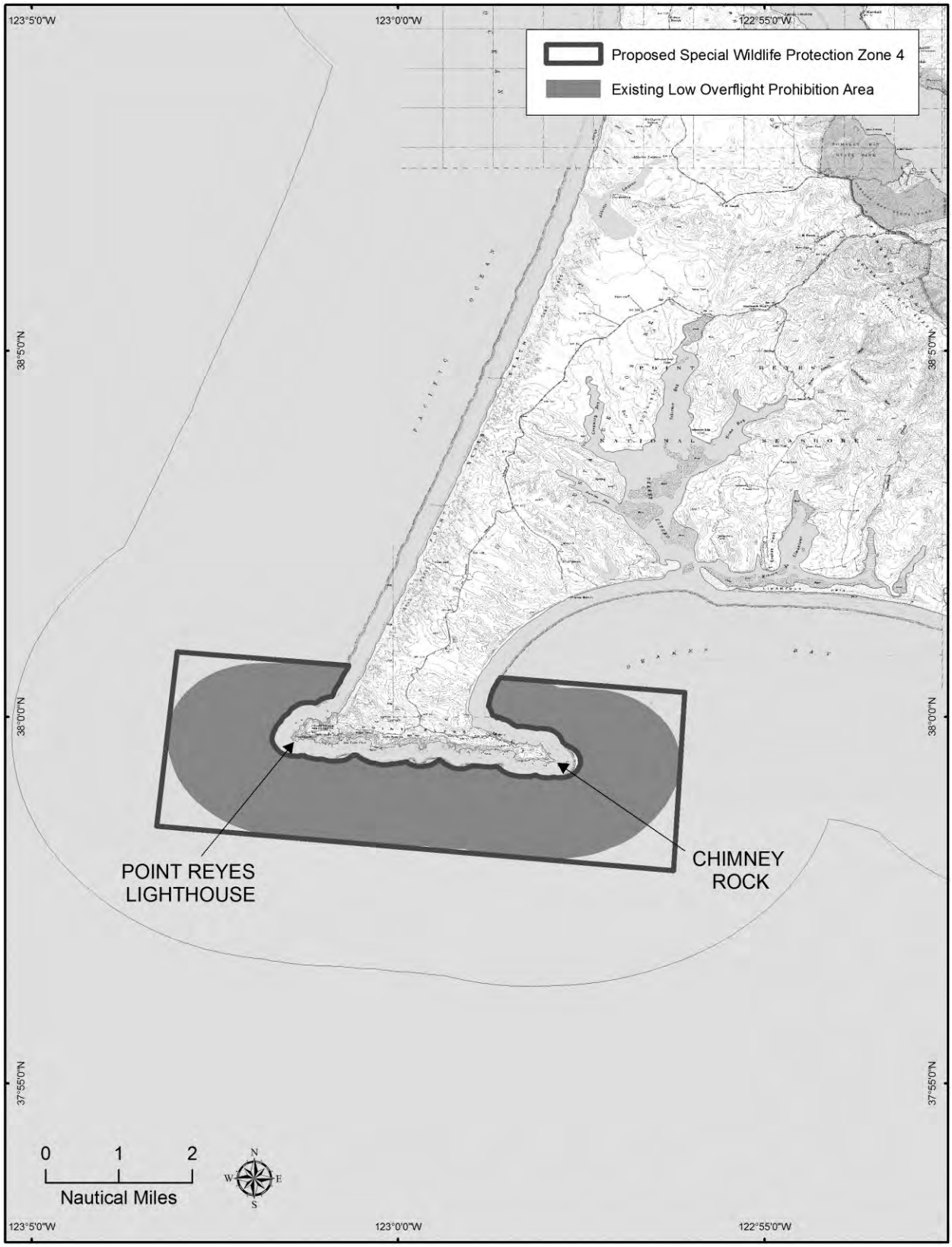


Figure 3.2-5. Proposed Special Wildlife Protection Zone 4 – Point Reyes

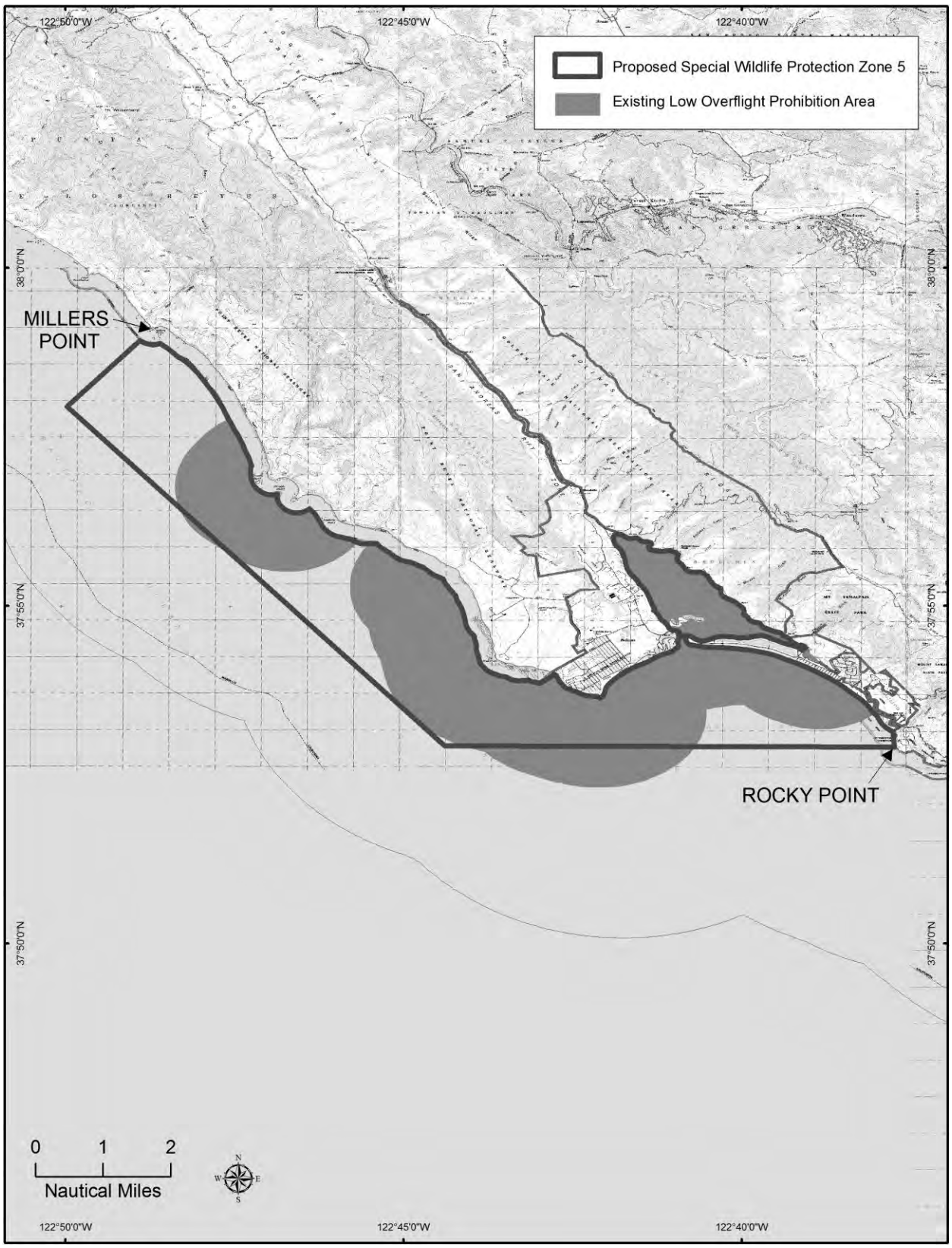


Figure 3.2-6. Proposed Special Wildlife Protection Zone 5 – Duxbury Reef– Bolinas Lagoon

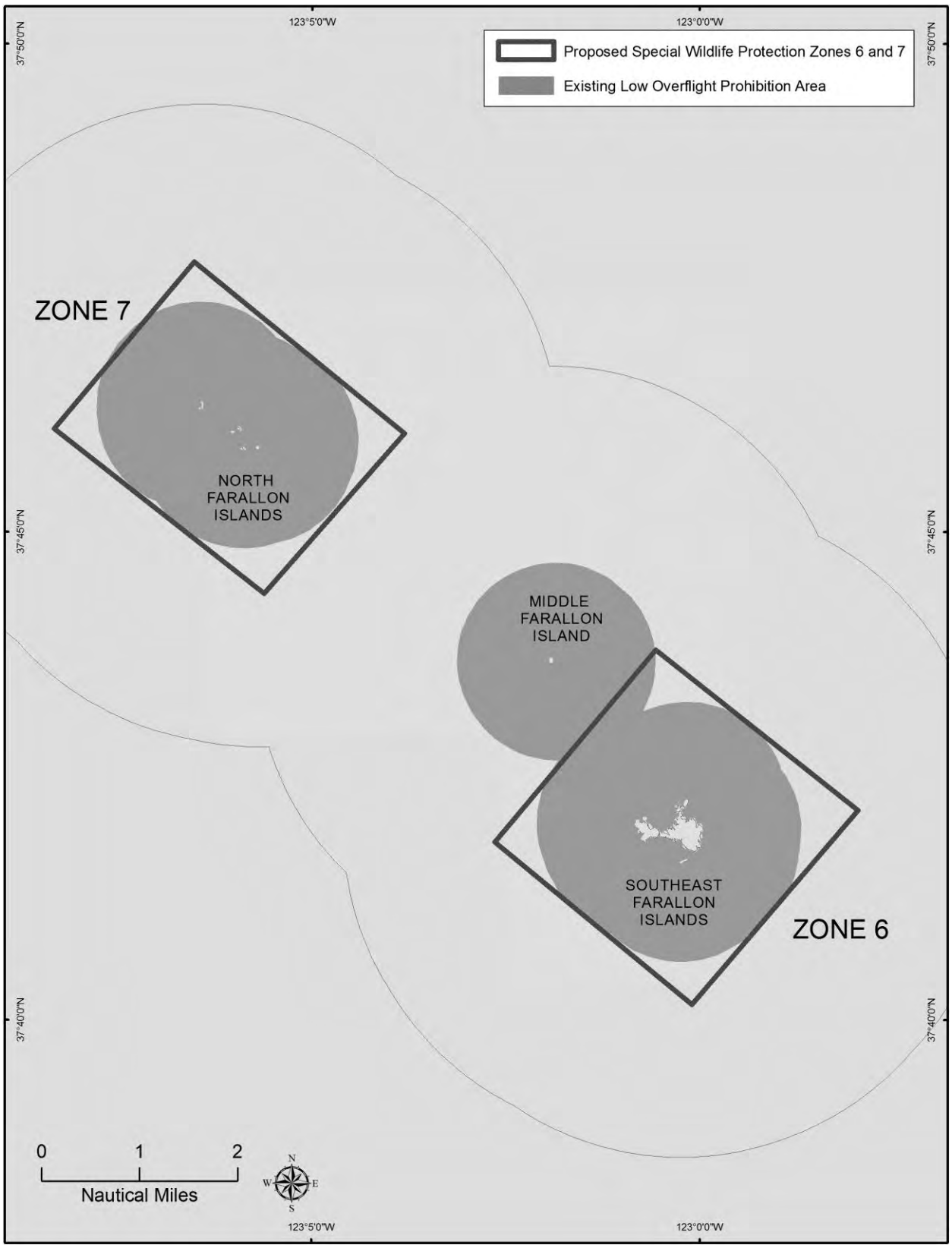


Figure 3.2-7. Proposed Special Wildlife Protection Zones 6 and 7 – Farallon Islands

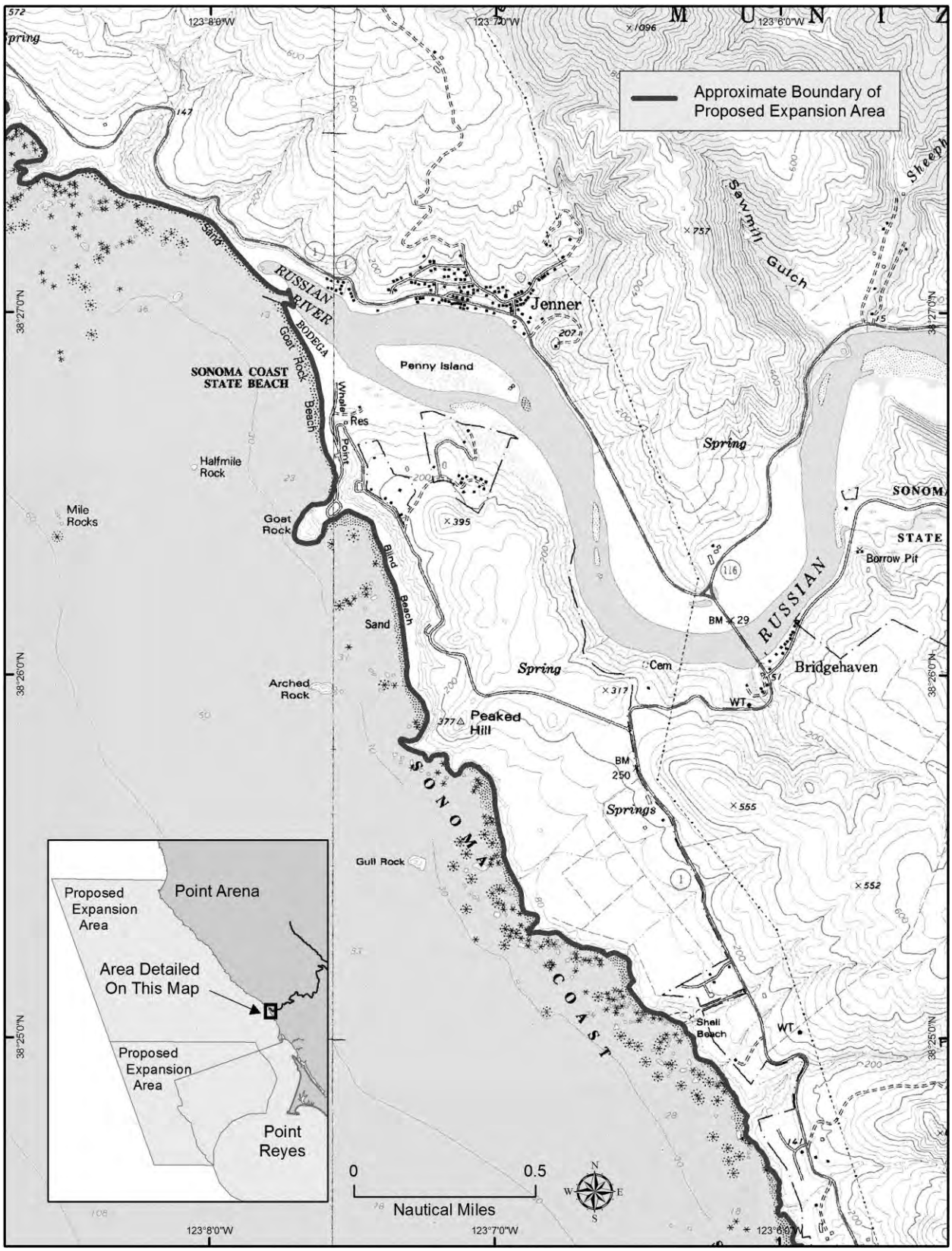


Figure 3.2-3. Russian River Boundary Detail – Proposed Action

Exhibit 7
Russian River Boundary

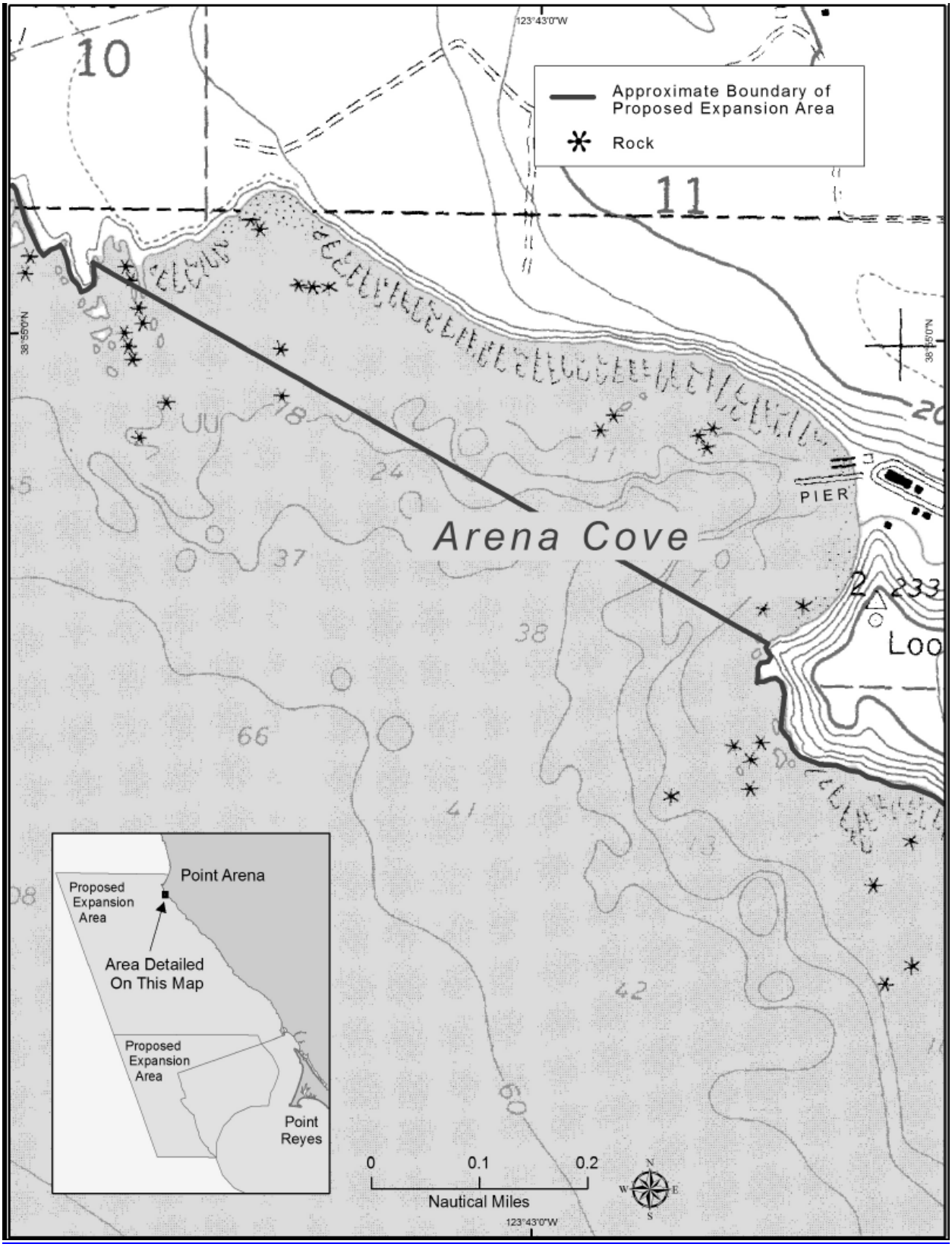


Exhibit 8
Revised Arena Cove Boundary

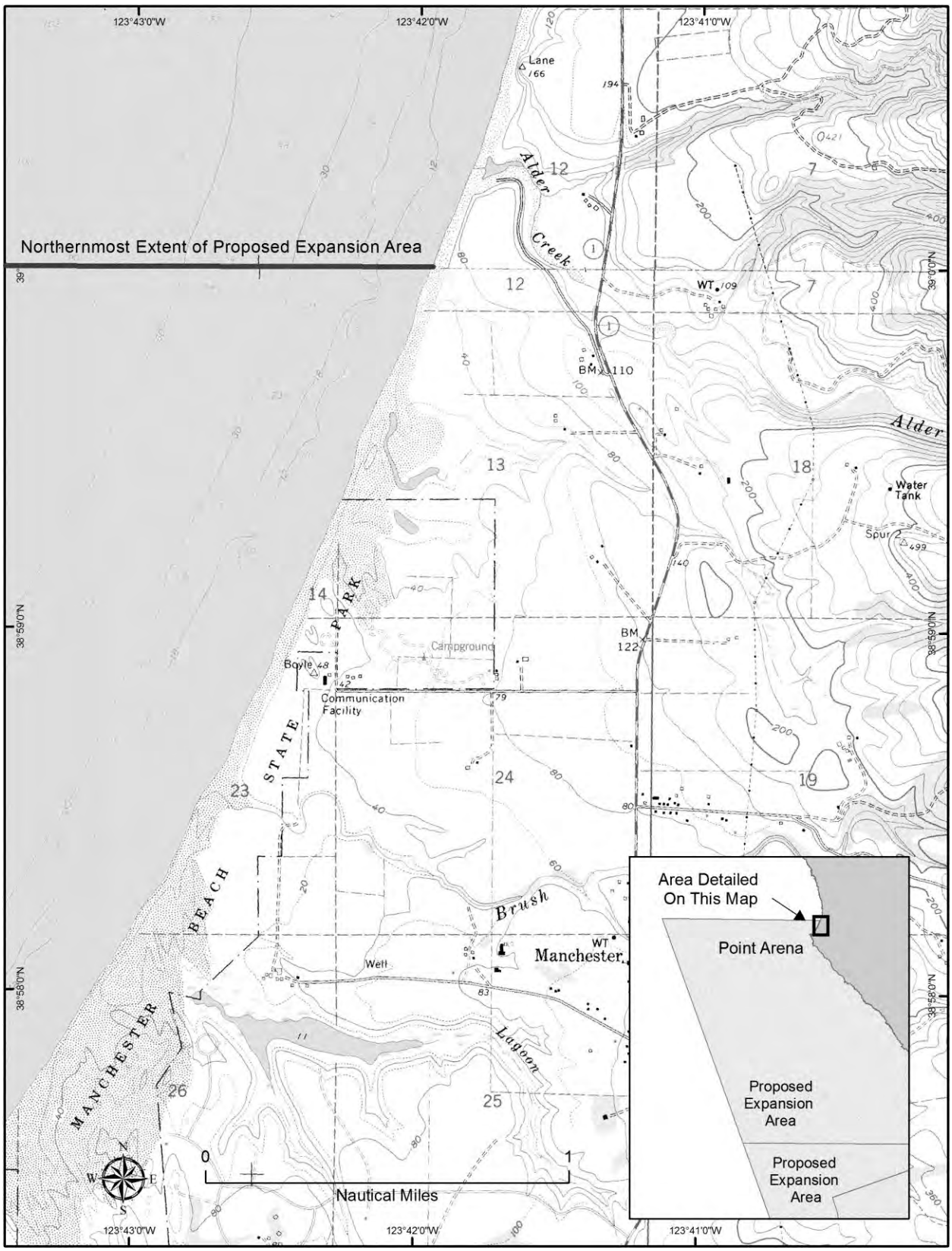


Figure 3.2-1. Northern GFNMS Boundary Detail – Proposed Action

Exhibit 9
Northernmost Boundary

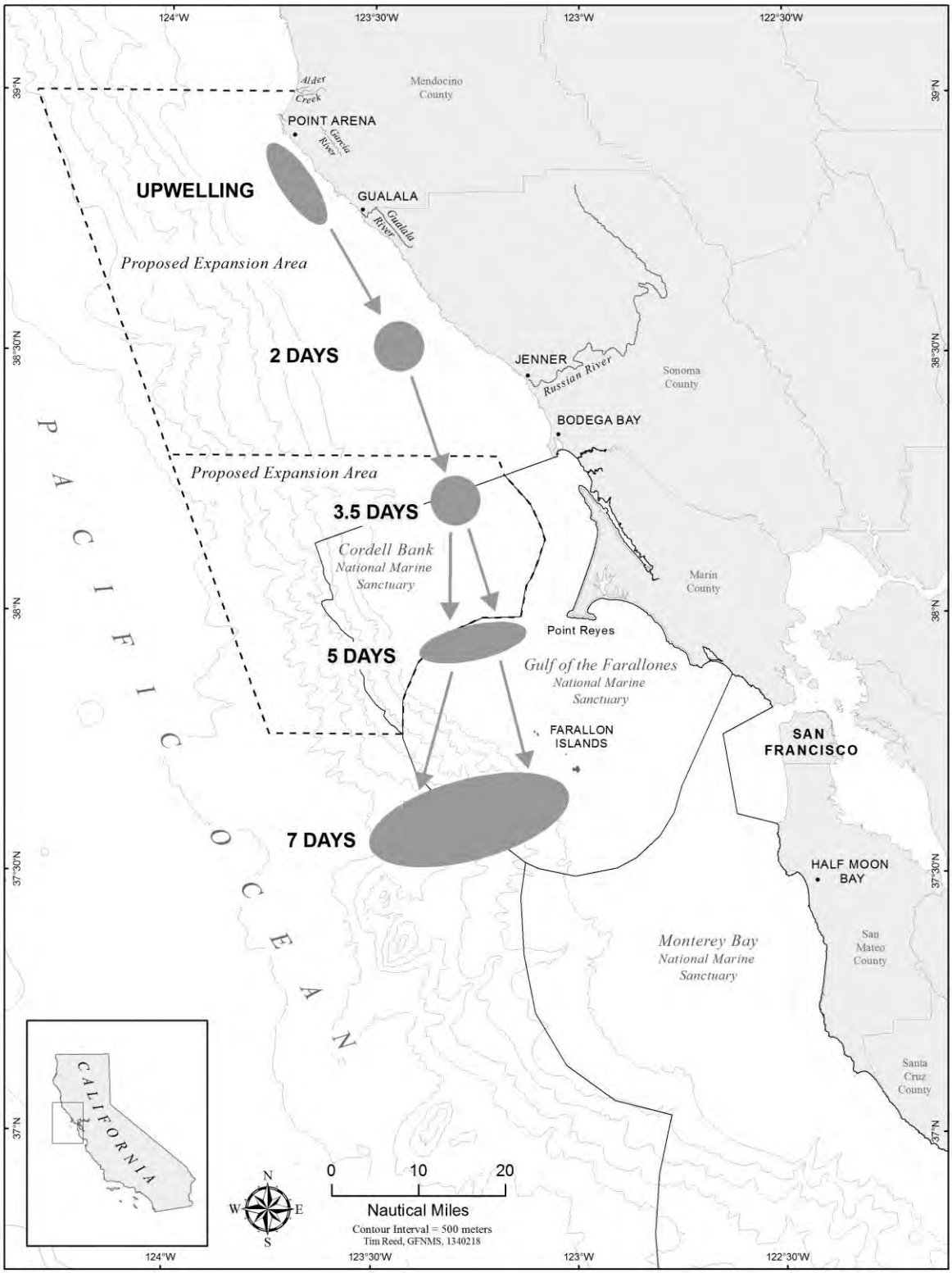


Figure 4.3-1. Southward Flow of Water from Upwelling Center at Point Arena

This schematic illustration developed by J.L. Largier from High Frequency radar observed flows (Halle and Largier 2011) shows typical surface flow patterns that transport newly upwelled water away from the perennial upwelling center at Point Arena. As the water is exposed to light, a phytoplankton bloom develops, with significant concentrations after a few days and maximum concentrations expected after about a week, when the water is in the vicinity of Cordell Bank and the Gulf of Farallones.

Exhibit 10
Upwelling Flows

then lying on the launching ways at the Ross shipyard. The voyage was uneventful until June 18th when landfall was made off the northern California coast. Just before midnight of that day, the *Il'mena* became trapped behind the cape and projecting reef of present day Point Arena and after several desperate but failed tacking maneuvers, the ship grounded in the surf zone just north of the cape. Passengers and crew were quickly transferred to shore where they spent the remainder of the night in the shelter of the small sand dunes that parallel the shoreline (Allan 2013).

One submerged historic property, SS *Pomona*, was listed on the National Register of Historic Places in 2008; the shipwreck is located in Fort Ross Cove, Sonoma County, partly in a California State Park. The steamship *Pomona* was built in 1888 by the Union Iron Works in San Francisco for the Oregon Improvement Company. The passenger-cargo steamer was a single-propeller, steel-hulled vessel that traveled between San Francisco and Vancouver, British Columbia making stops at ports in between. On March 17, 1908, the SS *Pomona* was transiting northward on a routine voyage encountering heavy seas when it struck a reef off Fort Ross. Captain Swansen, *Pomona*'s master, tried to save the vessel by running it aground in Fort Ross cove, but impacted a wash rock inside the cove and sank. Over the subsequent months, salvage efforts were conducted on the ship, and eventually she was dynamited as a navigational hazard. Today, the wreckage of SS *Pomona* lies in less than 50 feet of water in Fort Ross Cove (ONMS 2013).

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Arena Cove, north side of harbor	Schooner	*Sara Alexander*	1889	115922
Bodega Head, 5 miles northwest of	U.S. Military Aircraft	Avenger TBM-3	1944	22945
Bodega Bay, 7 miles north of	Steam Schooner	*Newburg*	1918	130779
Bodega Bay, off	Motor Fishing Vessel	*Eight Bros*	1937	220563
Bodega Head	Schooner	*Joseph*	1880	75800
Bodega Head, 12 miles off	U.S. Military Aircraft	Helldiver SB2C-4	1944	20261
Bodega Head, 150 yards offshore	Steam Schooner	***Albion River***	1903	107737
Bodega Head, 6.5 miles north	Barge	*Caroga*	1953	259176
Bodega Head, off	Schooner–Tern Rig	*Volunteer*	1906	161573
Bodega, near	Brig	*Marshall*	1859	
Bowens Landing	Brig	*Wolcott*	1863	
Bowens Landing	Schooner	*Flying Mist*	1867	9589
Bowens Landing	Schooner	*Free Trade**	1871	9848
Bowens Landing	Schooner	*Artful Dodger*	1877	1170
Bowens Landing	Schooner	*Mary Hart*	1878	17412
Bowens Landing	Schooner	*California**	1880	5155
Bowens Landing	Schooner	*Nidaros*	1882	18541
Bowens Landing	Schooner	*California*	1888	5757
Bowens Landing	Schooner	*Ellen Adelia*	1890	7984
Bowens Landing	Schooner	*Bill the Butcher**	1893	2755
Bowens Landing	Schooner	*Caroline Medan*	1883	5725
Bowens Landing, about 4 1/2 miles off	Schooner	*Emily Stephens*	1882	135388
Bowens Landing, small cove	Schooner	*A. J. Monje*	1869	
Caspars Reef or Saunders Reef	Steam Schooner	*Caspar*	1897	126518
Del Mar Landing	Steam Schooner	*Santa Barbara**	1905	117003

Exhibit 11
Shipwrecks & Lost Aircraft

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Del Mar Landing, 1/4 mile southeast	Steam Schooner	***Klamath***	1921	206801
Duncan's Landing	Schooner	*Emma Adelia*	1872	7984
Duncan's Landing	Schooner	*Sovereign*	1873	23175
Duncan's Mill	Schooner	*Glenarm*	1875	10733
Fish Rock	Schooner	*North American*	1859	
Fish Rock	Schooner	*Cochief*	1863	
Fish Rock	Schooner	*Sarah Louise*	1875	23173
Fish Rock	Schooner	*David and Ettie**	1878	6893
Fish Rock	Schooner	*Osceola*	1880	19145
Fish Rock	Schooner	*Mary Zephyr*	1882	17418
Fish Rock	Schooner	*Stranger**	1882	2032
Fish Rock	Scow Schooner	*H. Bendel*	1888	95295
Fish Rock	Schooner Yacht	*Ariel*	1888	105374
Fish Rock	Schooner	*Cochief*	1889	
Fish Rock	Schooner	*Charlotte*	1889	5144
Fish Rock	Schooner	*Ester Cobos**	1889	135342
Fish Rock	Schooner	*John McCullough*	1893	75521
Fish Rock	Schooner	*Rio Rey**	1900	110864
Fish Rock	Schooner	*Rio Rey*	1901	110864
Fish Rock	Steam Schooner	*Crescent City*	1903	126014
Fish Rock	Steam Schooner	*Brooklyn**	1916	31705
Fish Rock	Tramp Steamer	***Orteric***	1922	141907
Fish Rock Reef	Steam Screw	*Arispe*	1854	
Fish Rock Reef	Brig	*Donna Maria*	1854	
Fisks Mill	Schooner	*Carolita*	1876	5539
Fisks Mill	Schooner	*Gracie B. Richardson*	1888	85889
Fisks Mill	Schooner	*Archie and Fontie*	1902	106742
Fort Ross	Schooner	*Sacramento*	1844	
Fort Ross	Ship	***Joseph S. Spinney***	1892	75678
Fort Ross	Steam Screw	***Whitelaw***	1893	80942
Fort Ross	Schooner	*J. Eppinger*	1901	76710
Fort Ross	Pass Cargo Steamer	***Pomona***	1908	150444
Fort Ross	Schooner	*Osceola**	1875	19145
Fort Ross Landing	Fishing Vessel	*Riga*	1932	230590
Fort Ross, 1 1/2 miles from	Schooner	*Arab**	1882	1517
Fort Ross, 3 miles south	Pass/Cargo Steamer	*Monterey*	1880	90211
Gualala	Schooner	*Three Sisters*	1880	24795
Gualala Point, southwest of	Freighter	***Dorothy Wintermote***	1938	216365
Gualala River	Schooner	*Skylark*	1876	23183
Horseshoe Point	Freighter	***Norlina***	1926	212840
Iversen's Landing	Scow Schooner	*S. Danielson*	1903	115945
Iversen's, Rough and Ready	Schooner	*Ida Florence**	1883	12447
Iversens Landing	Schooner	*Rosalie*	1883	

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Iversens Landing	Schooner	*Arthur*	1890	105384
Iversens Landing	Schooner	*Betty Danielson*	1902	
Iversens Landing	Schooner	*Davidson*	1903	
Iversens Landing, Rough and Ready	Schooner	*Olivia Schultz*	1883	19488
Iversens Landing, Rough and Ready	Schooner	*Anne*	1877	1193
Iversens Landing, Rough and Ready	Schooner	*Solano*	1877	234482
Iversens Landing, Rough and Ready	Schooner	*Ida Florence*	1890	12447
Jenner Point, 2 miles west	U.S. Military Aircraft	Hellcat	1945	43056
Manchester Beach	Fishing Vessel	*Santa Rosalia*	1950	
Point Arena	Pilot Boat	*Fannie*	1852	
Point Arena	Schooner	*Charles and Edward*	1858	
Point Arena	Sloop–Sealer	*Jack Hays*	1858	
Point Arena	Schooner	*Don Leandro*	1861	
Point Arena	Schooner	*Rosalie*	1862	
Point Arena	Ship	*E. Bulkley*	1864	
Point Arena	Schooner	*Helen*	1865	
Point Arena	Schooner	*Amazone or Amazon*	1869	
Point Arena	Schooner	*B. F. Lee**	1870	1870
Point Arena	Schooner	*Emilie Schroeder**	1871	8637
Point Arena	Schooner	*Elsie Iverson*	1872	
Point Arena	Schooner	*Annie M. Iverson*	1873	105146
Point Arena	Schooner	*Annie*	1874	
Point Arena	Schooner	*Sine Johnson**	1874	23136
Point Arena	Brig	*Curlew**	1875	5133
Point Arena	Schooner	*Barbara Fritchie**	1880	
Point Arena	Schooner	*Zulu*	1880	
Point Arena	Schooner	*Robert and Minnie**	1880	110289
Point Arena	Schooner	*Alviso*	1883	
Point Arena	Schooner	*Reliance*	1885	110965
Point Arena	Schooner	*Elsie Iverson*	1886	135840
Point Arena	Schooner	*Fannie A. Hyde*	1886	9948
Point Arena	Schooner	*Albert Walker**	1888	106532
Point Arena	Steam Schooner	*Prentiss**	1905	150938
Point Arena	Steam Schooner	*Shna-Yak**	1908	204509
Point Arena	Steam Schooner	*G. C. Lindauer**	1912	39775
Point Arena	Steam Schooner	*Fort Bragg**	1912	207985
Point Arena	Auxiliary Schooner	*Dunkerque*	1918	
Point Arena	Tug	*Nata*	1918	
Point Arena	Gasoline Schooner	*Mae Hyman**	1921	220460
Point Arena		*H. F. Harper*	1922	
Point Arena		*Escola*	1926	
Point Arena	Steam Schooner	*Svea**	1928	203192
Point Arena		*Vanguard*	1930	

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Point Arena	Tanker	*Lebec**	1937	221358
Point Arena	Freighter	***Pacific Enterprise***	1949	149949
Point Arena	Schooner	*C. W. Gunnel*	1862	
Point Arena	Schooner	*Venus**	1875	25893
Point Arena	Schooner	*Barbara Hernster**	1901	3372
Point Arena Cove	Schooner	*Ajax*	1869	1190
Point Arena Cove	Schooner	*General Ord*	1889	85053
Point Arena Cove	Scow Schr Barge	*Horace Templeton*	1920	95249
Point Arena Cove	Gas Screw–Freight	*Cuautemoc*	1924	223010
Point Arena Cove, just south of	Steam Schooner	***Noyo***	1935	211426
Point Arena Cove, south side reef	Steam Schooner	***West Coast***	1891	81085
Point Arena Harbor	Schooner	*S. F. Blunt*	1868	
Point Arena Light, 1.5 miles north of	Fishing Vessel	*Georgene M.*	1953	250179
Point Arena Light, 4 miles, 035 deg true	Fishing Vessel	*Star of the Sea*	1961	230081
Point Arena Lighthouse, 1/4 mile northwest	Pass Cargo Steamer	***Winnebago***	1909	81871
Point Arena Lighthouse, north side	Schooner	*James Townsend*	1895	13832
Point Arena Lighthouse, off	Pass Cargo Steamer	*Phoenix**	1910	150929
Point Arena Reef	Bark	*Hyack*	1863	
Point Arena, 15 miles off	U.S. Military Aircraft	Helldiver	1944	18740
Point Arena, 15 miles south	U.S. Military Aircraft	Hellcat	1944	42172
Point Arena, 20 miles off	Purse Seiner	*Nordic Pride*	1941	241040
Point Arena, 25 miles southeast of	Steam Schooner	*Noyo*	1918	130395
Point Arena, near	Steamship	*Charles Nelson**	1910	127253
Point Arena, near	Steamer	*Celilo**	1919	211948
Point Arena, north of	Brig	IL'MENA	1820	
Point Arena, North–Manchester Beach	Steamer	***San Benito***	1896	116342
Point Arena, north side of lighthouse	Pass Cargo Steamer	*Eastport*	1875	8884
Point Arena, off	Steam Schooner	*Daisy Putnam**	1919	211722
Point Arena, south of lighthouse	Steam Schooner	*Jeanie**	1900	76889
Point Arena, south reef	Passenger Steamer	*Sea Foam*	1931	201861
Point Arena, south side	Steam Schooner	*Point Arena**	1904	150402
Point Arena, south side of harbor	Schooner	*Golden Gate**	1889	85314
Point Arena, Wash Rock	Schooner	*Eliza Miller**	1880	
Point Arena, Wash Rock	Steam Schooner	*Del Norte**	1917	157295
Russian Gulch	Auxiliary Schooner	*Stockton City*	1922	81613
Russian Gulch, Sonoma	Schooner	*Hannah Louise*	1872	11673
Russian Gulch, Sonoma	Steam Schooner	*Maggie Ross*	1892	92037
Russian Landing	Schooner	*D. C. Haskins*	1885	6643
Russian River	Schooner	*Eagle*	1863	
Russian River	Schooner	*Far West**	1863	
Russian River	Schooner	*Maggie Young*	1889	91200
Russian River	Schooner	*C. T. Hill**	1889	126539
Russian River, 280 DGR, 15 miles off	U.S. Military Aircraft	Avenger	1945	45839

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Russian River, 2 miles below mouth	Schooner	*Ann Sophia*	1870	1183
Salmon Creek	Schooner	*Albert and Edward*	1877	105592
Salt Point	Schooner	*Mary Zephyr**	1866	
Salt Point	Schooner	*Mary D. Pomeroy*	1879	91162 or 02
Salt Point	Schooner	*Phantom*	1881	150163
Salt Point, 4 miles northwest	Brig	*Ellen H. Wood*	1859	
Salt Point, Gerstle Cove	Schooner	*Nautilus*	1877	18595
Salt Point, near	Schooner	*Bianca*	1861	
Salt Point, near		*Erial*	1889	
Saunder's Reef	Schooner	*Jaqua*	1888	
Saunder's Reef, foundered off Fish Rock	Steam Schooner	***Arctic***	1922	107640
Saunders Reef	Steam Screw	*Ferndale**	1883	120434
Saunders Reef	Steamer	*Iaqua**	1913	100715
Saunders Reef	Oil Tanker	***Whittier***	1922	81862
Signal Port (Hard Scratch & Steen's)	Schooner	*R. B. Handy*	1883	110290
Stewarts Point	Schooner	*Christina Steffens**	1888	125500
Stewarts Point	Schooner	*Portia*	1894	150443
Stewarts Point	Steamer	***Albion***	1913	106967
Stewarts Point	Freighter	*Kenkoku Maru**	1951	52855
Stewarts Point	Schooner	*Pet*	1866	
Stewarts Point	Schooner	*Huichica**	1871	11680
Stewarts Point	Schooner	*Minerva*	1871	
Stewarts Point	Schooner	*Pinol*	1873	20090
Stewarts Point	Schooner	*Matilda Heron*	1875	17407
Stewarts Point	Schooner	*D. W. Tietjen*	1878	6532
Stewarts Point	Schooner	*Charles T. Winslow*	1885	5156
Stewarts Point	Schooner	*Mary Etta*	1905	92284
Stewarts Point	Schooner	*Fannie A. Hyde**	1871	9948
Stewarts Point	Schooner	*Kate Piper*	1871	14202
Stewarts Point	Schooner	*Lizzie Derby**	1871	1871
Stewarts Point	Schooner	*George Henrich*	1871	85027
Stewarts Point, Fisherman's Bay	Schooner	*Susie*	1876	115098
Stewarts Point, Fisherman's Bay	Steamer	*Wild Pigeon*	1870	26787
Stewarts Point, Fishermans Bay	Schooner	*Abraham Lincoln*	1881	1180
Stewarts Point, 6 miles southwest	Schooner	*J. Mora Moss*	1874	13559
Stewarts Point	Schooner	*Jennie Reed*	1861	
Timber Cove	Schooner	*Liberty*	1872	15207
Timber Cove	Schooner	*Golden Rule*	1882	10731
Timber Cove	Steamer–Screw	*Acme*	1889	106607
Timber Cove	Schooner	*Ester Cobos*	1891	135342
Timber Cove (Windermere Point)	Bark	***Windermere***	1883	78765
Timber Cove, Fish Creek	Schooner	*Christina Steffens**	1880	125500

Source: ONMS 2013.
*Indicates vessel refloated, salvaged or not a total loss. Vessel names in bold have been located.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of National Marine Sanctuaries | West Coast Region
99 Pacific Street, Bldg 100, Suite F
Monterey, CA 93940

CD-002-14

April 15, 2014

Dr. Charles Lester
Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Dear Dr. Lester:

The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) is proposing to expand Cordell Bank and Gulf of the Farallones national marine sanctuaries (CBNMS and GFNMS). These are federal marine protected areas offshore of California's coast from northern San Mateo County to southern Sonoma County designated under the National Marine Sanctuaries Act (NMSA). Specifically, NOAA is proposing an expansion of sanctuary boundaries and application of sanctuary regulations to waters and submerged lands offshore of Marin County and adjacent to and offshore Sonoma and Mendocino counties, up to a point near Alder Creek (at the 39th parallel), and westward approximately 40 miles. Some of the revisions under consideration would require a change to the terms of designation of the two sanctuaries, pursuant to the NMSA (16 U.S.C. 1433(b)(2) and 1434(a)(4)), and ONMS is consulting with appropriate Federal and State government agencies, management authorities, and other interested parties on the proposal. In compliance with the Coastal Zone Management Act (16 U.S.C. 1456 and 15 CFR Section 930.30 *et seq* of the NOAA Federal Consistency Regulations), ONMS is requesting your concurrence on its determination of consistency on the proposed action to expand CBNMS and GFNMS as described in the proposed rule and draft management plans for CBNMS and GFNMS, which have been released for public comment in April 2014.

While NOAA has made no final decisions on this expansion, the proposed action and alternatives are based on environmental analyses required by the National Environmental Policy Act in a draft environmental impact statement (DEIS), and reflect consideration of comments received from the public, the CBNMS and GFNMS sanctuary advisory councils, Federal, State, and local agencies, and stakeholder groups.

Application of the NMSA to the proposed expansion area north and west of the existing sanctuaries would provide comprehensive and coordinated management to the biologically diverse and productive ecosystem of the area, including the Point Arena upwelling center. As a part of this proposal, NOAA is considering amendment of existing regulations, adding new regulations, and extending sanctuary research, education, outreach, and resource protection programs to the region.

Exhibit 12
NOAA CD

The proposed expansion area contains nationally significant marine resources and habitats that are integral geographic components of the sanctuaries to the south, as the entire region is fueled by the upwelling center at Pt. Arena. Water, rich with nutrients, is brought to the surface during upwelling at Point Arena and flows south via wind driven currents, transporting the nutrient-rich waters to the region and into the existing national marine sanctuary boundaries. This upwelled water is the regional ecosystem driver for productivity in coastal waters of northern California supporting a marine food web made up of many species of algae, invertebrates, fish, seabirds, and marine mammals. Some species are transitory, travelling hundreds or thousands of miles to the region, such as endangered blue whales, albatross, shearwaters, king salmon, and white and salmon sharks, while others live year round in the region, such as Dungeness crab, sponges, other benthic invertebrates and many species of rockfish. Of note, the largest assemblage of breeding seabirds in the contiguous United States is at the Farallon Islands, and each year their breeding success depends on a healthy and productive marine ecosystem to allow nesting adults and fledgling young to feed and flourish.

Given that these sensitive resources are particularly susceptible to damage from human activities, including the proposed expansion area within CBNMS and GFNMS, would conserve and protect critical resources and ecosystem dynamics by preventing or reducing human-caused impacts such as marine pollution, and wildlife and seabed disturbance. In addition, the proposed action would protect significant submerged cultural resources and historical properties. ONMS believes that the expansion of the sanctuaries will enhance the sustainability of these resources and ecosystem services, which are both, in whole or in part, resources of the sanctuaries and California's coastal zone. Therefore, ONMS believes there will be a beneficial effect to California's coastal uses and resources. Please see the DEIS for additional information on any coastal effects.

ONMS has evaluated the proposed actions and determined they are consistent to the maximum extent practicable with the California Coastal Management Program. ONMS has also reviewed the State's enforceable policies found in the California Coastal Act of 1976 and believes this proposed action is consistent with the applicable enforceable policies of the California Coastal Management Program. ONMS requests that the California Coastal Management Program concur with our consistency determination.

To assist you in your review, we have enclosed a CD of the draft documents (the proposed rule, the DEIS, and the draft management plans). These documents are also posted on the internet at http://farallones.noaa.gov/manage/expansion_cbgf.html, and contain information to help answer the questions of your February 27, 2013 letter to Maria Brown.

The California Coastal Management Program's concurrence with or objection to ONMS' consistency determination should be sent to: Maria Brown, Sanctuary Superintendent, Gulf of the Farallones National Marine Sanctuary, 991 Marine Drive, The Presidio, San Francisco, CA 94129, by close of comment period on June 30, 2014.

After the public comments and the consistency finding are received and reviewed, any significant new issues are investigated, and necessary modifications are made to the DEIS, a final EIS will be published and distributed. The final EIS will contain our agency's responses to

comments received during the public comment period.

If you have any questions regarding this process or require additional information, please contact Maria at 415-561-6622 x 301. We look forward to working with you as you complete this review.

Sincerely,

William J. Douros
Regional Director

cc: Andy Gustavson, Chief Planner, County of Mendocino Planning and Building Services Department
Hunter Alexander, City Administrator/City Clerk, City of Point Arena
Jennifer Barrett, Deputy Director for Planning, Sonoma County Permit and Resource Management Department
Brian Crawford, Director, County of Marin Community Development Agency
John Rahaim, Planning Director, City of San Francisco

Enclosure: CD with proposed rule, DEIS, and the draft management plans for CBNMS and GFNMS.

4.3 Biological Resources

This section presents information on a variety of habitat types found in the study area with a broad treatment of biological communities associated with each habitat, a summary of marine flora, and discussion of specific wildlife resources including sections on fishes, marine mammals, birds, and invertebrates. This section also includes information on sensitive or special status species, and introduced species. The existing biological resources of the region are generally described, and a summary of federal, state, and local authorities pertaining to these resources is provided. The impact analysis presents the standards used to evaluate impacts on biological resources and addresses potential effects of the proposed action on these resources.

The study area for biological resources includes the existing CBNMS, GFNMS and the proposed expansion area for both sanctuaries.

4.3.1 Regional Overview of Affected Environment

Biological resources in the study area are described in several publications and additional information is available from a variety of sources. NOAA staff gathered this information for existing and future management efforts, to monitor conservation objectives, and as part of ongoing resource assessment and research. For a more detailed discussion on biological resources within GFNMS and CBNMS, please refer to the following documents: the updated draft management plans (DMPs), two biogeographic assessments (NOAA 2003 and 2007), the ecological linkages report (Airamé, et al. 2003), as well as the Sanctuary Condition Reports (ONMS 2010 and ONMS 2009, respectively). Website offerings with biological resources data include the website for the Sanctuary Integrated Monitoring Network (SIMoN) hosted by the Monterey Bay National Marine Sanctuary and resource characterizations on each sanctuary's website. In addition, Appendix G of this DEIS contains comprehensive lists of wildlife and plant species known to occur in the proposed expansion area. These lists can be considered as minimum species inventories. The updated draft management plan for each sanctuary also includes species lists that encompass both the existing and proposed sanctuary boundaries.

Some information on habitat suitability and species use of the study area is provided in the above-referenced biogeographic assessments and linkages report (NOAA 2003, NOAA 2007 and Airamé et al. 2003). The biogeographic assessments, which extend to Point Arena, address locally important species and certain special status species of invertebrates, fish, marine mammals, and birds. These assessments help determine species' use and abundance within the proposed expansion area.

The proposed expansion area of CBNMS covers offshore habitats including Bodega Canyon and GFNMS covers coastal and offshore habitats of northern California from Bodega Head, in Sonoma County, to Manchester State Beach, in Mendocino County. The study area includes unique geological and biological features but also shares many features with existing sanctuaries such as the Point Arena upwelling system, the influence of the California Current, a major eastern boundary current, and seasonal weather patterns.

The unique combination of oceanographic patterns and undersea topography create conditions in the study area that support a rich and diverse assemblage of marine species. This includes a wide array of temperate cold-water species with occasional influxes of temperate warm-water species from the south. The species diversity is directly related to local productivity, diversity of habitats and variable oceanic

Exhibit 13
Biological Resources

conditions that are described in the following section, and the location of the study area within a broad biogeographic transition zone providing a gradient of environmental conditions in which the species composition changes from north to south.

As discussed in Section 4.2 (Physical Resources), the Point Arena region serves as an area that originates upwelled, nutrient-rich ocean waters, which are transported by wind driven currents to the existing sanctuaries over a period of five to seven days (see Figure 4.3-1) (Halle and Largier 2011). Upwelling may be widespread at times or localized at upwelling centers or "cells" (e.g., Point Arena). Upwelling offshore of Point Arena delivers deep, nutrient-rich cold water to the surface that supports high productivity along southern Mendocino and Sonoma coasts extending down to Point Reyes, Cordell Bank and the Gulf of the Farallones region. San Francisco Bay is another important source of nutrients and organic matter flowing into the Gulf of Farallones region. These nutrient rich waters support high concentrations of phytoplankton in the Cordell Bank and Gulf of the Farallones region, which in turn support zooplankton and higher trophic species such as whales, fish and birds. Seasonal streams and rivers such as Salmon Creek, Russian River, Gualala River and Garcia River are also important sources of nutrients and organic matter that support high productivity in the region.

Habitat Types

The study area is primarily in the ocean, but includes some aquatic (i.e. freshwater or brackish water), as well as terrestrial habitats along the coastline adjacent to the proposed expansion area. The study area contains a diversity of habitats, including coastal bluffs, estuaries and lagoons, intertidal, subtidal and nearshore waters, continental shelf and slope and offshore waters. The following discussion focuses on the habitats in and adjacent to the proposed expansion area.

Coastal Bluff Vegetation

Coastal bluff habitat occurs shoreward of the high tideline. Bluffs along the coast rise steeply from intertidal areas, and include vegetation growing from the higher high tide line to the bluff tops. These are harsh environments where plants must withstand strong winds with high salt content. Species within the coastal bluff vegetation are categorized according to three communities described by Holland (1986): northern foredune, central dune scrub, and northern coastal bluff scrub. Due to the prevalence of invasive nonnative species in this California habitat, much of the vegetation on the cliff top consists of nonnative plants. Upland from the coastal bluffs, areas of dense forest are interspersed with wave cut terraces, rolling grasslands and agricultural lands.

Estuaries and Lagoons

Estuaries and lagoons are very productive coastal ecosystems that play a key role as nursery habitat for many coastal invertebrates and fishes. They are also an important part of the Pacific Flyway, which hosts thousands of shorebirds and waterfowl on their migrations (Ramer 1991). Anadromous species such as salmonids and lampreys must pass through estuaries on their migration pathways (Boesch and Turner 1984). Steelhead Trout in the north-central coast spend a significant part of their juvenile phase in coastal estuaries (McEwan and Jackson 1996). Since estuaries and lagoons serve as important habitat linkages among marine, aquatic and terrestrial habitats, their condition is closely tied to the condition of the surrounding watershed. Estuaries provide critical ecosystem services such as filtering sediments and nutrients from the watershed, stabilizing shorelines, and providing flood and storm protection.

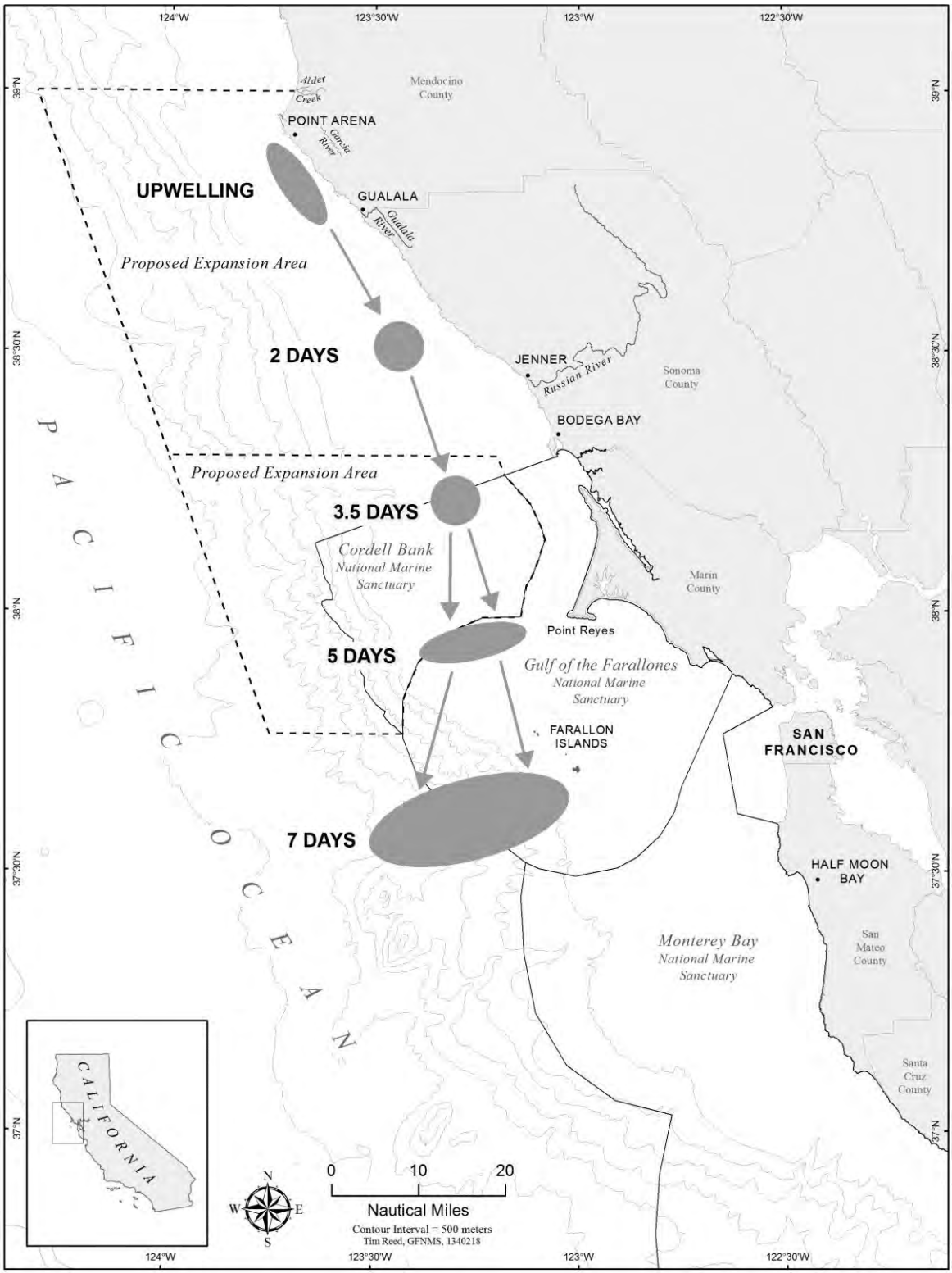


Figure 4.3-1. Southward Flow of Water from Upwelling Center at Point Arena

This schematic illustration developed by J.L. Largier from High Frequency radar observed flows (Halle and Largier 2011) shows typical surface flow patterns that transport newly upwelled water away from the perennial upwelling center at Point Arena. As the water is exposed to light, a phytoplankton bloom develops, with significant concentrations after a few days and maximum concentrations expected after about a week, when the water is in the vicinity of Cordell Bank and the Gulf of Farallones.

Estuaries at the mouth of the Garcia River (southern Mendocino County), the Gualala River (northern Sonoma County/southern Mendocino County), and the Russian River (central Sonoma County) are located in the study area. The Garcia River estuary forms behind a seasonal sandbar where the Garcia River meets the Pacific Ocean at Manchester State Beach. The Garcia River drains a mostly forested, 114-square-mile watershed where forestry, dairy farming, livestock grazing, and gravel mining take place. The Garcia River estuary hosts Steelhead and Coho Salmon and extends upriver to the confluence of Hathaway Creek.

The Gualala River drains approximately 298 sq miles of western Mendocino and Sonoma Counties and enters the Pacific Ocean at Gualala. During summer months, a sand bar typically forms across the mouth of the estuary which blocks the flow of tidewater creating a coastal lagoon (NOAA 2010).The Gualala River has small populations of Steelhead and Coho Salmon and the estuary serves as a nursery area and migration corridor for these species. Other species of fish found in the estuary include Roach, Coast Range Sculpin, Prickly Sculpin, Starry Flounder, and Pacific Staghorn Sculpin. Water quality in the watershed has suffered due to impacts from upland forestry and agriculture (Klamt et al 2002).

The Russian River drains an area of 1,485 sq miles in Mendocino and Sonoma Counties. The Russian River estuary is subject to frequent closures by the formation of a sandbar across the estuary mouth in the spring, summer, and fall. Tidal extent in the estuary can be up to 7.3 miles upriver and 800 feet wide. The closure of the estuary temporarily eliminates tidal exchange and creates ponding of the river, which results in a gradual increase of the water level in the estuary. The County of Sonoma removes a portion of the sandbar when necessary to limit property damage from flooding. Twenty-four species of fish including threatened populations of Steelhead, Chinook, and Coho Salmon, eight species of crab, and five species of shrimp are found in the Russian River estuary. This estuary also has a large harbor seal haul-out (Sonoma County Water Agency 2005).

Intertidal

Intertidal habitat, by definition, is found between the lowest and highest tidal level. This transitional area between sea and land is the strip of shore between the uppermost surfaces exposed to wave action during high tides and the lowermost areas exposed to air during low tides. Intertidal habitats vary in substrate type and the degree of exposure to surf. Bottom habitat types include fine muds, sand, gravel, shale, cobble, boulders, and bedrock. Rocky shores are found throughout the region, with a limited number of beaches. The intertidal zone represents a relatively small percent of the expansion area, but supports a diverse assemblage of marine life including sponges, tunicates, hydroids, mussels, crabs, sea stars, sea anemones, many different algae species, and many species of fishes. Surfgrass (*Phyllospadixs couleri)* is an abundant habitat forming plant found in the high-energy low intertidal and shallow subtidal rocky bottoms along exposed outer coastlines.

Subtidal Nearshore

Subtidal nearshore habitat refers to the area from the lowest low tide line to about 100 feet, the end of the photic zone where light penetrates to support photosynthetic activity (CDFG 2007). The substrate can be sand, mud, or rock providing essential habitat for a thriving biological community in the study area.

In less than 60 feet of water, the kelp forest is a prominent nearshore habitat that is defined and influenced by canopy-forest forming species of kelp (Shaffer 2002), which is predominantly bull kelp (*Nereocystis*

lutkeana). Kelp beds are a conspicuous nearshore feature in the study area and fronds from the plants cover extensive areas on the ocean surface in areas of predominantly rocky substrate. The holdfast (roots), stipe (stem) and fronds of the bull kelp create structure and habitat from the seafloor to the surface. Kelp beds are persistent over time but exhibit marked seasonal and annual changes in the extent of the canopy, primarily due to winter storm activity and changing oceanographic conditions such as El Niño events. Studies have also shown that distribution and abundance of kelp beds and successional processes are affected by climatic and oceanographic changes, as well as by grazer abundances and fishing. Grazers, such as urchins, can play a large role in the abundance and distribution of kelp and urchin populations can, in turn, be directly controlled by their predators, e.g., sea otters, and by commercial urchin fishing. Kelp forests are one of the most productive marine habitats along the coast of California and provide habitat, feeding grounds, and nursery areas for many species of fishes and invertebrates. Juveniles of many nearshore rockfish species occur in the mid-water or upper kelp canopy. Juveniles and adults of many nearshore rockfish species, as well as Cabezon, greenlings, Lingcod, and many other species, associate with bottom habitats in kelp forests (CDFG 2007). In the study area, seals, sea lions, and (rarely) sea otters utilize nearshore environments for forage, shelter, and reproduction.

Continental Shelf and Slope

The continental shelf extends from the limit of the photic zone to the shelf break at about 328 to 656 feet (100 meters to 200 meters) deep. The shelf usually ends at a gradual slope called the shelf break, where the bottom sharply drops forming the continental slope. The continental slope together with the continental shelf is called the continental margin, which includes a variety of productive habitats. Soft sediment areas of the continental shelf and slope provide habitat for a diverse array of benthic organisms. Some areas on the shelf have dense aggregations of sea whips and brittle stars with sea pens, sea stars, and anemones also present. Dungeness crab are common residents of soft bottom shelf habitat. The continental margin makes up the majority of the study area.

The proposed expansion area consists of a broad continental shelf, which narrows to approximately 17 miles (15 nm west of Point Arena). Within the slope and shelf area are several notable geological features of hard substrate and rocky reef: the "Football" area 20 miles (17.5 nm) west of Jenner in Sonoma County; the Point Arena hard substrate area 8 miles (7 nm) west of Point Arena; the "Biogenic Area 12" 37 miles (32 nm) west of Salt Point; and the sloping edges of the continental shelf dissected by deep water canyons, such as Bodega and Arena Canyons. Not many research surveys have been conducted on these features, yet it is suspected that benthic communities on these features are similar to those found within the existing boundaries of CBNMS and GFNMS. Limited surveys of Bodega Canyon found that much of the hard substrate investigated was draped with a layer of mud so that invertebrate cover on the canyon edge was sparse. On the exposed rock substrate corals, sponges and an assortment of other benthic organisms were found (Fruh et al. 2013). Large aggregations of pelagic birds and marine mammals are often observed foraging in close proximity to Bodega Canyon. The distribution and abundance of these predators is an indication that the canyon is a very productive marine area.

Surveys of CBNMS and GFNMS have shown that deep reef areas provide critical habitat for a unique assemblage of fishes and invertebrates that are very different from shallow water assemblages. Rocky substrate areas are also known fishing spots for a variety of rockfishes and Lingcod.

Offshore Waters

Offshore waters refer to open water or pelagic areas seaward from the photic zone (CDFG 2007). Oceanographic conditions such as currents, water masses, and temperature strongly influence marine biodiversity in this open ocean environment. Variation in factors such as water temperature, upwelling and currents determine areas of productivity where krill, squid, anchovy, seabirds, and marine mammals congregate in the pelagic ecosystem (Forney, 2000; Yen et. al., 2004). Oceanographic features include fronts where two water masses meet, recirculation eddies in the lee of headlands or islands, upwelling plumes, river or bay, and outflow plumes. Many of these oceanographic features can be associated with high abundances and biodiversity hotspots (CDFG 2007, Yen et al 2004). In addition, transport patterns associated with oceanographic features can significantly affect recruitment patterns of fish and invertebrates in intertidal and nearshore communities (Farrell et al 1991; Roughgarden et al 1991; Wing et al 1995, CDFG 2007). Presence of organisms in this open water habitat is highly variable and patchy because many have limited ability to swim and generally drift with ocean currents. Gelatinous zooplankton such as ctenophores, pteropods, siphonophores, jellies and salps are a good example of this condition. In deeper water near the continental shelf break, there is a nightly migration of krill, copepods, myctophid fish and other organisms (collectively called the scattering layer) from daytime use of the deeper water column closer to the bottom up into the water column. During the day, planktonic life in the upper water column in this offshore area can be relatively sparse, but this mass migration every night transforms the upper water column into a cacophony of life as prey and predators emerge under the cover of dark. This nightly ascent into the water column is a significant migration of biomass and an important link in the ecology of offshore waters.

Marine Flora

The nutrient rich coastal waters in the proposed expansion area support a healthy community of marine flora that is a significant component of the nearshore ecosystem. A diverse array of green, brown and red algae occurs on most rock surfaces from the intertidal zone to a depth of approximately 70 feet. Throughout the proposed expansion area, at least 22 species of green algae (Division Chlorophyta), 28 species of brown algae (Division Phaeophyta), 138 species of red algae (Division Rhodophyta), and two species of vascular plant (Division Tracheophyta) are known to occur (MARINe 2013, PISCO 2013, and Roletto et al. 2013).

As described in the subtidal nearshore subsection, dense forests of bull kelp dominate the nearshore area (15 to 60 feet water depth) providing shelter and food for scores of fishes and invertebrates, providing some of the most productive habitats along the West Coast (Tegner and Dayton 2000). Below the bull kelp canopy, several species of brown algae from the Laminariaceae family form a sub-canopy 2 to 3 feet off the seafloor. Encrusting and upright articulated coralline red algae cover rock surfaces and are intermingled with a diverse array of other algae in study area kelp forests. These kelp forests provide important feeding and breeding area for a wide variety of fish and invertebrates including juvenile and adult rockfish, Cabezon *(Scorpaenichthys marmoratus)* and Lingcod *(Ophiodon elongatus)* (Foster and Schiel 1985 and Allen et al. 2006). Rocky shores at minus tides are an explosion of texture and color provided by a diversity of marine flora in this region.

Along the shoreline in the lower intertidal zone, dense beds of the sea palm (*Postelsia palmaeformis*) occur in areas where the offshore kelp beds are sparse and high wave energy reaches the shoreline. Sea

palms are harvested in the study area. Surfgrass *(Phyllospadix scouleri)* can be abundant on intertidal and shallow subtidal rocky bottoms along exposed outer coastlines.

Wildlife Resources

The proposed expansion area hosts a wide range of fish and wildlife resources, including several special status species. Appendix G contains lists of the species that occur in the study area.

Fishes

Fish communities in the proposed expansion area are similar to those inhabiting the current GFNMS and CBNMS and described in the sanctuaries' respective condition reports (ONMS 2009, ONMS 2010), and the FEIS for the JMPR (NOAA 2008). This includes shelf and slope species complexes for soft and hard bottoms, mid-water species, and migratory species such as salmon and Albacore Tuna. Many of the near-shore species inhabiting intertidal and shallow subtidal (less than 60 feet water depth) are also similar.

More than 180 species of fish have been documented in the CBNMS (Eldridge 1994, NMFS unpubl. data, Cordell Bank sanctuary unpubl. data), with rockfish dominating the fish community in both numbers and biomass. It is probable that hard bottom areas on the continental shelf in the proposed expansion area have similar fish composition to that observed on Cordell Bank. Several rockfish species (Sebastes spp.) probably dominate in numbers and biomass near deep reef areas. Areas with rocky structure on the shelf are likely important recruitment areas for first year rockfish settling out of the water column as they move from a pelagic to benthic phase in their early life history.

Limited scientific study has been focused on the ichthyofauna of the study area's soft-bottom habitat; however, considerable information has been gathered and analyzed on the fish assemblages that inhabit the continental shelf and slope habitats of the northeastern Pacific Ocean (Allen 2006). While soft-bottom areas are predominantly the domain of flatfishes, skates, and rays, numerous fusiform (spindle-shaped) fishes such as croakers, rockfishes, sculpins and surfperches also thrive in this habitat. Fishes commonly found in the middle shelf include: Big Skate (*Raja binoculata*), Longspine Combfish *(Zaniolepis latipinnis)*, Shortbelly Rockfish *(Sebastes jordani)* and Pacific Sand Dab *(Citharichthys sordidus)*. On the outer shelf, fishes more commonly seen in research collections include the Stripetail Rockfish *(Sebastes saxicola)*, Greenstriped Rockfish *(Sebastes elongatus)* and Slender Sole *(Lyopsetta exilis)*. Beyond the shelf break in the upper slope region, fishes most commonly found include poachers, Splitnose Rockfish *(Sebastes diploproa)* and Sablefish *(Anoplopoma fimbria)*. Among the fishes that inhabit all three depth zones are Lingcod (*Ophiodon elongatus*), Spotted Cusk Eel *(Chilara taylori)*, Plainfin Midshipman *(Porichthys notatus)* and Dover Sole *(Microstomus pacificus)*.

Much of the water column habitat within the proposed expansion area overlies the continental shelf and comprises the coastal pelagic realm. Fishes which occupy the epipelagic zone (depth to 656 feet) are a mixed group of larger, slow growing, longer-lived species and active, fast growing, shorter-lived fishes (Allen and Cross 2006). Fishes commonly placed in the former group include sharks (Blue Shark *Prionace glauca*, White Shark *Carcharodon carcharias*, Thresher Shark *Alopias vulpinus*), Jack Mackerel *(Trachurus symmetuicus)*, Pacific Mackerel *(Scomber japonicus)* and Pacific Hake *(Merluccius productus)*. The latter group occupying the epipelagic zone is composed of early life history stages of many fishes (including Lingcod, rockfishes and many flatfish species) as well as the commercially important Northern Anchovy

(Engraulis mordax) and Pacific Sardine *(Sardinops sagax)*. Anchovies and sardines, which are an important prey for many coastal predators and a critical link in the coastal food web, have alternated as the most abundant fishes of the coastal pelagic realm off California throughout recent history. Abundance of these short lived fishes is related to oceanographic cycles within the region. For example, the alternating 20 to 30 year periods of cool and then warm phases in the Pacific Ocean track fluctuations in the alternating abundances of anchovies (cool periods) and sardines (warm periods) (Chavez et al. 2003). Other fishes that inhabit the epipelagic zone include species that frequent the sanctuaries on a seasonal basis, such as Albacore Tuna *(Thunnus alalunga)* and Chinook *(Oncorhynchus tshawytscha),* and Coho Salmon (*O. kisutch*). Mesopelagic fishes (those found below the epipelagic zone to depths of 3280 feet) are relatively small, slow-growing and long-lived. Representatives of this group include the lantern fishes, hatchet fishes and deep-sea smelts. Many mesopleagic fishes make nocturnal vertical migrations to feed.

As stated above, several species of rockfish settle out of the water column and spend their first year of life on rocky reefs, including those with kelp beds. Some species remain in the kelp beds, other species migrate into deeper water for the adult phase of their lives. The most common juvenile rockfish observed in kelp beds includes Blue, Black, Yellowtail and Widow Rockfish in spring and the Copper/Gopher complex in late summer. Other juvenile species regularly observed include Canary, Bocaccio and Shortbelly. Several species of adult rockfish are commonly seen in kelp beds — Blue, Black, China, Gopher, and other species and species groups include Lingcod, Cabezon, Kelp Greenling, cottids, surf perches, gobies, gunnels, and tubesnouts eel.

A small group of specialized fishes is found in tide pools of rocky intertidal habitats. Representative species include the Monkey-Face Prickleback *(Cebidichthys violaceus)*, Rock Eel *(Pholis gunnellus)*, Rockweed Gunnel *(Xererpes fucorum)*, Blackeye Goby *(Coryphopterus nicholsii)*, Dwarf Surfperch *(Micrometrus minimus)*, juvenile Cabezon *(Scorpaenichthys marmoratus)*, Tidepool Sculpin *(Oligocottus maculosus)*, Tidepool Snailfish *(Liparis florae)* and blennies (Airamé, S., et al. 2003).

Based on recommendations within amendment 19 of the Pacific Coast Groundfish Fishery Management Plan, NOAA's National Marine Fisheries Service (NMFS) implemented in 2006 essential fish habitat (EFH) for groundfish. See Section 4.2.2 (Regulatory Overview) for additional details regarding groundfish management.

Salmonid Species

Steelhead Trout and two species of salmon — Coho and Chinook — are considered endangered or threatened under the Endangered Species Act in the study area. The three major streams in the study area that support salmonid runs are the Garcia, Gualala and the Russian River. The Garcia and Russian River support populations of all three species while the Gualala supports runs of Steelhead Trout (CDFG 2007). Many of the smaller coastal streams likely support populations of Steelhead. The marine waters in the proposed expansion area are important for these fishes during the ocean phase of their life history, where they feed and grow to maturity before returning to coastal streams to spawn. Salmonid species originating from the various runs in California described below may spend part of their life cycles within the proposed sanctuary expansion area, as may salmonids from runs elsewhere.

Salmon. Two evolutionarily significant units (ESUs) of Chinook Salmon (*O. tshawytschus*) are listed as threatened. One is the California Coastal ESU, which includes the Russian River, where populations are

slowly increasing. The other threatened Chinook Salmon ESU is the Central Valley Spring Run ESU, which has only three wild populations left in Mill, Deer, and Butte Creeks (fish have also recently returned to Big Chico Creek), mostly due to blocked access to traditional spawning areas by dams, which impair salmon migration. The Sacramento River Winter Run ESU, which was greatly affected by the construction of Shasta Dam, is listed as endangered (CDFG 2007). One ESU of Coho Salmon *(O. kisutch*), the Central California Coast ESU, is listed as endangered. This ESU runs from Punta Gorda in the north (just south of Cape Mendocino) to the San Lorenzo River in Santa Cruz County. Of the 133 historical runs, only 56 (or 42%) are now considered occupied. The highest occupation is in Mendocino County (62% of historical runs), followed by Marin County (40%), and Sonoma County (4%). Central California Coast Coho Salmon return to major rivers and creeks in the north central coast study region for this species, including the Garcia, Gualala, and Russian Rivers, and Tomales Bay creeks, as well as numerous smaller creeks. Since 2001, the Russian River Coho Salmon Captive Broodstock Program has been re-establishing Coho in the Russian River. The program captures, rears, and spawns Coho broodstock, and young fish are released in area tributary streams. Growth and survival is monitored until they move downstream and into the Pacific Ocean (CDFG 2007a). It is likely that all of these endangered runs of salmon depend on the ocean waters of the proposed expansion area for food and shelter during the ocean water phases of the salmon's lifecycle.

Steelhead Trout. Three distinct population segments (DPS) of Steelhead Trout (*O. mykiss*) are listed as threatened in the north-central coast study region for this species. The Northern California DPS ranges from Redwood Creek in Humboldt to the Gualala River and is found in both the Garcia and Gualala Rivers. The Central California Coast DPS ranges from the Russian River, which probably hosted the largest historic population, to Soquel Creek in Santa Cruz County, and includes some tributaries in San Francisco and San Pablo Bays. Both the Northern California and Central California Coast DPSs have benefited from a prohibition of ocean harvest of Steelhead Trout enacted in 2002.

White Shark

White Sharks *(Carcharodon carcharias)* have a wide range and are known to inhabit the study area. Studies estimate the number of adult White Sharks within the northeastern Pacific area at approximately 3000 individuals (NMFS 2013). Subsisting mostly on marine mammals and scavenged large animal carcasses, White Sharks often feed off the Farallon Islands, especially during the late summer and fall. In 1994, the state of California placed White Sharks on the list of species protected in state waters and in 1997 California state law permanently prohibited take of White Sharks. In July 2013, NMFS denied a petition to list the northeastern Pacific population of White Sharks as threatened or endangered. After scientific review, it was determined that the population was considerably larger than first reported.

Marine Mammals

At least 16 species of cetaceans of which five are endangered — the Blue Whale *(Balaenoptera musculus)*, Fin Whale (*Balaenoptera physalus)*, Humpback Whale *Megaptera novaeangliae)*, Killer Whale (*Orcinus orca)*, and Sperm Whale (*Physeter macrocephalus*), six species of pinnipeds of which one is threatened — the Guadalupe fur seal (*Arctocephalus townsendi*), and two species of otters, a river otter (*Lontra Canadensis)* and the southern sea otter (*Enhydra lutris nereis)*, which is threatened, occur within the

study area (see Appendix G for species list, Pyle et al. 2005, NOAA 2007, Barlow et al. 2008, FMSA 2013, and PRBO 2013); ten of these species use the study area during their breeding season.

Gray whales *(Eschrichtius robustus)*, pass through the area during the winter and spring months on their annual migrations between Arctic feeding grounds and Mexican breeding areas. The Dall's porpoise *(Phocoenoides dalli),* Pacific white-sided dolphins (*Lagenorhynchus obliquidens),* and northern right whale dolphins (*Lissodelphis borealis)* are commonly seen in the offshore waters, along with Eastern Pacific humpback *(Megaptera novaeangliae)* and blue whales *(Balaenoptera musculus)*. Large numbers of humpback whales and blue whales feed during the summer and fall months and use the study area as a destination feeding area.

The harbor porpoise *(Phocoena phocoena)*, a species widely distributed in coastal waters but rarely seen offshore, is regularly observed within the study area. Other cetaceans observed in the Sanctuary include Risso's dolphins *(Grampus griseus)* and killer whales *(Orcinus orca)*.

The harbor seal *(Phoca vitulina)* is the most abundant pinniped in the study area, with numerous breeding and haul-out areas along the coast. The largest rookeries are located at Goat Rock and the mouth of the Russian River, Fort Ross, and The Sea Ranch (NOAA 2007). California sea lions (*Zalophus californianus*) do not breed within the study area but use the numerous offshore rocks and sea stacks dotting the coastline of the study area. The largest haul-out areas for California sea lions are found at Fort Ross and Fish Rocks. Northern fur seals *(Callorhinus ursinus)* are also abundant in the offshore areas in late fall and winter during their foraging season. Prior to their local extirpation by Russian fur traders in the 1800s, northern fur seals bred along offshore islands and rocks along northern California. Since 1996, a small breeding colony has reestablished at the Farallon Islands (Pyle et al. 2001). Most of the year, fur seals are pelagic and only come to shore during their summer breeding season at the Channel and Farallon Islands.

Steller sea lions *(Eumetopias jubatus)* decreased drastically in California during the 1950-1980s, but the breeding rookeries at Año Nuevo Island and the Farallon Islands have been stabilizing for the past ten years (Pitcher et al. 2007). Steller sea lion populations in the California, Oregon and Washington area were delisted from the threatened species list in late 2013. Fish Rocks, Northwest Cape Rocks, and Russian River Rock are important rookeries and haul-outs for Steller sea lions within the study area. The sea lions' winter haul-out grounds include Point Reyes and offshore rocks along the Sonoma County coast. Guadalupe fur seals *(Arctocephalus townsendi)* are a threatened species that are rarely found within the study area. The main populations of Guadalupe fur seals are in southern California and Guadalupe Island off of Baja, Mexico. There are no known rookeries for elephant seals *(Mirounga angustirostris)* within the study area. Juvenile elephant seals will occasionally haul out at Goat Rock and are occasionally observed offshore. Southern sea otters (*Enhydra lutris nereis*) were once abundant along the entire northern coast of California including the study area. Russian fur traders extirpated all sea otters from the northern California coast and now only a few sea otters are rarely seen north of San Mateo County (Stewart and Praetzellis 2003).

Birds

The waters throughout the proposed expansion area provide valuable habitat for a variety of seabirds and coastal birds. At least 149 species of seabirds and coastal birds, of which one endangered species and three threatened species, occur throughout the study area (Pyle et al. 2005, NOAA 2007, Barlow et al.

2008, FMSA 2013, and PRBO 2013). Approximately a third of these species use the expansion area during their breeding season. The study area includes important habitat for numerous shorebird species. Shorebirds commonly seen foraging along the shoreline include Marbled Godwits *(Limosa fedoa)*, Western Sanderlings *(Calidris alba)*, and Black Oystercatchers *(Haematopus bachmani)*. Another bird found in the area is the Western Snowy Plover (*Charadrius alexandrinus nivosus*), whose threatened status has resulted in significant resource management actions including restrictions on access or types of use in some shoreline areas.

The Marbled Murrelet *(Brachyramphus marmoratus)* is another bird species found in the study area that is listed as threatened under the Endangered Species Act. The Marbled Murrelet is a unique seabird because it nests inland on the branches of coastal, old growth coniferous trees, often over a hundred feet above the ground (Leet et al. 2001).

Large offshore rocks and coastal bluffs are nesting areas for several seabirds such as cormorants, Western Gulls (*Larus occidentalis*), and Pigeon Guillemots (*Cepphus columba*). Fish Rocks is one of the top breeding colonies in the study area, supporting nine breeding seabird species (NOAA 2007). Other locations within the study area significant to breeding seabirds include Gualala Point Island, Russian Gulch, and Arched Rock located along the Sonoma Coast State Beaches.

Migrant seabirds come to the area in the summer and late fall to feast on zooplankton (krill and copepods) and fishes that thrive in the productive upwelled waters. One of the most abundant seabird species, the Sooty Shearwater *(Puffinus griseus)*, comes through California waters by the hundreds of thousands, mostly from New Zealand breeding colonies. Large numbers of Black-footed Albatross *(Phoebastria nigripes)* visit the region from their nesting colonies in Hawaii (Leet et al. 2001). An individual Laysan albatross *(Phoebastria immutabilis)* frequents the harbor at Arena Cove, which is unusual for this normally pelagic species. The study area is also a significant foraging region for the Rhinoceros Auklet *(Cerorhinca monocerata)*, the Northern Fulmar *(Fulmarus glacialis)*, various storm-petrel species (family Hydrobatidae), phalaropes (family Scolopacidae), and many species of gulls (family Laridae). Bald Eagles *(Haliaeetus leucocephalus)* and Osprey *(Pandion haliaetus)* may occur year-round hunting the waters, cliffs, sand dunes, and beaches within the study area.

Researchers from Point Blue Conservation Science (formerly PRBO Conservation Science) developed habitat association models for 16 species of seabirds using information from at-sea surveys carried out over a 12-year period and found persistent important seabird habitat "hotspots" within the study area, including off Point Arena (Nur et al. 2011).

Invertebrates

The intertidal community contains a diverse array of invertebrates competing for space including sponges, tunicates, hydroids, abalone, barnacles, limpets, mussels, sea anemones and sea urchins. Mobile invertebrates, such as sea stars, snails, and crabs, often hide in crevices or under rocks, emerging to graze on algae or prey on other animals (ONMS 2010).

Sonoma and Mendocino coasts support healthy populations of red abalone *(Haliotis rufescens)*. This slow-growing mollusk is an important part of the intertidal and subtidal community living to water depths of about 100 feet. It takes an abalone an average of ten years to reach a diameter of seven inches. A die-off

of abalone and other marine invertebrates associated with a harmful algal bloom (red tide) occurred in late August 2011 along the Sonoma County coast. Concern over the impact of the die-off on abalone populations prompted an intensive monitoring effort by the California Department of Fish and Wildlife. Survey results show a 60 percent decline in density from Sonoma County study sites; low densities at the Fort Ross site are of particular concern (CDFW 2012). Population numbers of red abalone in the study area are comparatively higher because their natural predators, sea otters, are rarely found north of San Francisco. Their main predators currently are recreational free divers who avidly harvest red abalone.

Red sea urchins *(Strongylocentrotus franciscanus)* are subtidal herbivores that play an important ecological role in the structure of kelp forest communities. In northern California urchins feed on bull kelp and other algal species. Tagging studies reveal that red urchins are long-lived; reaching 50 years. Large individuals may be older than 100 years (Leet 2001).

Rocky features and ridges in the study area may be thickly covered with sponges, anemones, hard and soft corals, hydroids, tunicates, holothurians, and gastropods. Soft bottom habitats also support a thriving community of benthic invertebrates. Adapted to life in and on a shifting substrate, these animals are either buried in the sediment, like polychaete worms and clams, or are mobile on the surface, such as sea stars and Dungeness crabs *(Cancer magister)*(ONMS 2009). Dungeness crab are an important commercial and recreational fishery in the proposed expansion area. The west coast Dungeness crab fishery is considered the most sustainable large-scale commercial crab fishery in the world (NOAA 2008).

The continental slope and canyon systems in the study area support deep-sea corals and sponges among other deep water species. A broad-scale characterization of deep-sea coral and sponge habitats and communities was conducted in Bodega Canyon and on the nearby continental slope during summer of 2011 using an autonomous underwater vehicle. Nine taxa of sponges and eight taxa of corals were observed. The most abundant corals encountered included mushroom corals *(Anthomastus ritteri)* and various fan-like gorgonians (*Parastenella* spp. and *Plumerella* spp.). The most abundant sponges were branching and vase sponges (Fruh et al. 2013). Deep-sea corals and sponges are long-lived, slow growing, fragile animals; characteristics that make them particularly vulnerable to physical disturbance such as bottom contact fishing gear and effects from climate change and ocean acidification. Additionally, the complex structures and forms of deep-sea coral and sponges have shown these species are of potential value for commercially important fishes and other invertebrates as habitat for protection from predators and for enhanced feeding opportunities.

A myriad of gelatinous zooplankters inhabit the pelagic water column, including moon jellies *(Aurelia aurita)* and sea nettles *(Chrysaora fuscescens)*, as well as more obscure invertebrate creatures such as hydromedusae, ctenophores, siphonophores, pteropods, and heteropods. These animals feed and are preyed upon in the water column of the study area (ONMS 2009). These gelatinous invertebrates are an important food source for fishes and leatherback sea turtles *(Dermochelys coriacea)*.

Two species of krill (*Thysanoessa spinifera* and *Euphausia pacifica*) are important trophic links in the study area ecosystem. These small, shrimp-like crustaceans are referred to as “keystone” species because they are critical prey for many other species. Each spring and summer, massive swarms of krill provide food for many species in the study area ecosystem including seabirds, fishes and whales (ONMS 2009).

Introduced Species

Introduced species (also known as non native, or exotic species) are present in the marine and estuarine environments and can be a major environmental threat to living resources and habitats in the proposed expansion area. Human introduction of non native species (also sometimes called aquatic nuisance species or fouling organisms) into waters where they are not already established is an issue that has received much attention in recent years. Once introduced to marine ecosystems to which they are not native, introduced species can pose a significant threat to water quality and are capable of disrupting the ecosystems.

The ONMS uses the term "introduced species" to describe a non-native species or any organism that has been genetically modified. Introduced species are known to threaten the diversity or abundance of native species (especially threatened and endangered species), alter species composition, and interfere with the ecosystem's function, often threatening the ecological stability of the infested waters. They may cause local extinction of native species either by preying on them directly or by out-competing them for prey. For example, the European green crab, now found in Bolinas Lagoon, Tomales Bay, Estero de San Antonio, Estero Americano, and Bodega Harbor, preys on the young of valuable species (such as oysters and Dungeness crab) and competes with them for prey and suitable habitats. Introduced species may also cause changes in physical habitat structure.

Presently, there are no reports of known introduced species along the outer coast of Sonoma and Mendocino Counties within the study area; this may reflect a low presence of estuarine habitat, marinas, docks, or piers (MARINe 2013, PISCO 2013, and UCD 2013),[15] or relatively little searching for such species from trained scientists. Introduced species are known to occur in the coastal dune habitat adjacent to the study area. Introduced dune plants limiting native dune species include hottentot fig *(Carpobrotus edulis)*, sea fig *(Carpobrotus chilensis)*, Uruguayan pampas grass *(Cortaderia selloana)*, and European beachgrass *(Ammophila arenaria)*. Even though these species are not within the boundary of the proposed expansion area, they do have negative impacts on the sandy beach ecosystem by changing the availability of foraging, roosting and nesting areas for shorebirds, deposition of beach wrack, and long shore sediment transport (UCD 2013).

Along the outer coasts of Sonoma and Mendocino Counties, commercial vessels would be the most likely future contributor of introduced species, from ballast water and fouling organisms on vessel hulls. Other possible future sources of introduced species in the study area could be from commercial and recreational vessels transiting the study area after having been in such locations as Bodega Harbor, San Francisco Bay or Monterey Harbor, where introduced species are known to exist and colonize on vessel hulls.

Once established, introduced species can be extremely difficult to control or to eradicate. Throughout the nation, hundreds of federal programs, state organizations, international organizations, and non-profit organizations have established databases, community outreach, monitoring, eradication, research and education programs, but none of these programs are operative within the study area. Future dune restoration programs to eradicate invasive dune plants could improve sandy beach habitat.

[15] Arena cove contains a pier and other harbor facilities; it is included in one boundary alternative, but is excluded from the proposed action boundary.