

# California Department of Fish and Wildlife's Evaluation of 2023 Decadal Management Review Marine Protected Area Petition:

## **Reclassify Duxbury Reef SMCA to an SMR and Expand the Southern and Northern Boundaries (2023-32MPA)**



### **I. PETITION SUMMARY**

CFGC Tracking Number	2023-32MPA
Petition Contact/Affiliation	Ashley Eagle-Gibbs, Environmental Action Committee (EAC) of West Marin
Number of Proposed Actions	3
Affected MPAs	Duxbury Reef SMCA
Petition Summary	Change Duxbury Reef State Marine Conservation Area (SMCA) to a State Marine Reserve (SMR), extend the southern boundary further south, and extend the northern boundary to the Double Point Special Closure.
Link to StoryMap page	<a href="#">2023-32MPA</a>



## II. CDFW RECOMMENDATIONS AND BRIEF JUSTIFICATION

*Note: If a change to the Marine Protected Area (MPA) regulations is not needed to address the proposed change, the California Department of Fish and Wildlife (CDFW) did not evaluate the proposed change using the framework. However, CDFW may recommend an alternative pathway to achieving the desired outcome of the proposed change.*

Petition Action ID and Proposed Action	Petitioner’s Stated Rationale and Brief Justification for Proposed Actions	CDFW Recommendation and Brief Justification
<p><b>2023-32MPA_1</b> Reclassify Duxbury Reef SMCA to an SMR to prohibit take.</p>	<p>The petitioner’s stated intent for the proposed change is difficulty of interpretation and enforcement of current regulations resulting in large incidence of take violations.</p>	<p><b>Deny.</b> The petitioner asserts that current regulations cause confusion and that there has been an increase in non-compliance relative to other Marin County MPAs. These claims are unsubstantiated by CDFW enforcement data. The proposed change would not result in additional regulatory protection for the rocky intertidal habitat that the current MPA was designed to protect, and it would unnecessarily eliminate established uses previously vetted during the Marine Life Protection Act (MLPA) Initiative planning process. The proposal deviates from the adaptive management recommendations of the Decadal Management Review and conflicts with the MPA’s original intent to balance habitat protection with recreational fishing. Current SMCA regulations do not present enforcement challenges for Marine Enforcement District (MED) within the existing MPA boundaries. MED has identified some enforcement challenges with people legally harvesting outside of the MPA boundaries, then traversing through the MPA to return to the main access point, however this challenge may be best addressed by the proposed boundary changes (see below). Improved signage, education, and outreach efforts at this location could be just as or more effective than a regulatory change to an SMR.</p>

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<b>Petition Action ID and Proposed Action</b>	<b>Petitioner’s Stated Rationale and Brief Justification for Proposed Actions</b>	<b>CDFW Recommendation and Brief Justification</b>
<p><b>2023-32MPA_2</b> Expand the proposed Duxbury Reef MPA by extending the southern boundary.</p>	<p>The petitioner’s stated intent for the proposed change is to increase habitat protections to fully cover the entirety of the contiguous reef habitat.</p>	<p><b>Grant in concept.</b> CDFW recommends expanding protections of the rocky intertidal habitat in a manner that does not change the existing Duxbury Reef SMCA and does not restrict existing commercial or recreational take allowances beyond new intertidal protections in the expansion area. This could be achieved by:</p> <ul style="list-style-type: none"> <li>• Designating a new SMCA to protect the southern portion of the contiguous rocky intertidal habitat of Duxbury Reef,</li> <li>• Designing take regulations for the new southern Duxbury Reef SMCA to balance the goals of expanding protections for intertidal invertebrates (except abalone when allowed) and seaweed with the goal of maintaining existing commercial and recreational take of other species from shore and by boat, and</li> <li>• Designing the SMCA boundaries to maximize alignment with Science and Feasibility Guidelines (See Attachment 1) to optimize intertidal protections and enforceability for shore-based and boat-based users.</li> </ul> <p>Duxbury Reef is the largest intertidal shale reef in North America and is a unique habitat not found elsewhere in California. Protecting the southern portion of the reef has potential to enhance biodiversity and ecosystem function at this site by protecting the connected rocky intertidal habitat. CDFW proposes to expand boundaries of the SMCA to the south to encompass the southernmost fringe of the reef that extends south of Duxbury Point. The proposed change to encompass one of the rarest</p>

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		<p>habitats in California and the largest shale reef in North America has potential to increase climate resiliency of the associated ecological community by protecting the entirety of the contiguous reef habitat. The proposed change is consistent with the intended goals of the Duxbury Reef SMCA, aligns with the original intent of this MPA, and supports adaptive management of the MPA Network.</p> <p>During the MLPA Initiative planning process, Duxbury Reef was identified as an important site for the fishing community, especially for the adjacent, rural community of Bolinas, so the California Fish and Game Commission (CFGC) approved regulations that preserved some of the recreational take popular at this site.</p> <p>Expanding the southern boundary with the current SMCA regulations or as an SMR would further restrict existing recreational and commercial fishing activities at Duxbury Reef. With a goal to protect intertidal habitat, the expanded boundaries and take regulations should be designed in a way that does not unnecessarily restrict commercial and recreational fishing that occurs beyond the reef. CDFW recognizes the importance of Duxbury Reef to the adjacent community of Bolinas and broader Marin County as a site that supports multiple uses of the marine environment. This proposed alternative pathway would meet the petitioner’s goals of protecting more of this unique rocky intertidal habitat while balancing the needs of the local community and the intent of this MPA that was established in the MLPA Initiative planning process.</p>

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Petition Action ID and Proposed Action	Petitioner’s Stated Rationale and Brief Justification for Proposed Actions	CDFW Recommendation and Brief Justification
		<p>CDFW also recommends the petitioners work with the local community of Bolinas, and other interested parties to build a comprehensive outreach and education strategy at Duxbury Reef to foster stewardship of this reef in an inclusive manner.</p>
<p><b>2023-32MPA_3</b> Expand the proposed Duxbury Reef MPA by extending the northern boundary north to Double Point Special Closure.</p>	<p>The petitioner’s stated intent for the proposed change is to increase habitat protections to fully cover the entirety of the contiguous reef habitat.</p>	<p><b>Grant in concept.</b> CDFW recommends expanding protections of the rocky intertidal habitat in a manner that does not change the existing Duxbury Reef SMCA and does not restrict existing commercial or recreational take allowances beyond new intertidal protections in the expansion area. This could be achieved by:</p> <ul style="list-style-type: none"> <li>• Designating a new SMCA to protect the northern portion of the contiguous rocky intertidal habitat of Duxbury Reef. CDFW would develop boundaries of the SMCA to extend north near Double Point/Stormy Stack Rock Special Closure, which would encompass the northern fringe of the reef,</li> <li>• Designing take regulations for the new northern Duxbury Reef SMCA to balance the goals of expanding protections for intertidal invertebrates (except abalone when allowed) and seaweed with the goal of maintaining existing commercial and recreational take of other species from shore and by boat, and</li> <li>• Designing the SMCA boundaries to maximize alignment with Science and Feasibility Guidelines (See Attachment 1) to optimize intertidal protections and enforceability for shore-based and boat-based users.</li> </ul> <p>See justification for 2023-32MPA_2 for more details.</p>

### III. BIN 2 PETITION GROUPING: IDENTIFY TRIBALLY-LED PETITIONS

The 2023 MPA Petition Companion Document (Attachment 1) includes a summary of the process for identifying Tribally-led petitions, CDFW’s outreach to all California Native American tribes<sup>1</sup> (tribes) throughout the petitions process, and a summary of outreach and engagement with Tribally-led petitioners. Tribally-led petitions were evaluated with CDFW 2023 MPA Bin 2 Petition Evaluation Framework.

Tribal Components Questions	Answer and Explanation
<p>Was the petition submitted by a California Native American tribe, representative designated by a tribe or tribal organization, or have a tribal co-sponsor? If yes,</p> <ul style="list-style-type: none"> <li>a. Does the proposed change explicitly aim to advance tribal co-management, subsistence harvesting, stewardship, and/or provide a tribal benefit through recognizing the cultural significance of an area?</li> <li>b. Is the proposed regulatory change explicitly linked to a tribe or tribes? (i.e. tribal exemption, tribal take only MPA, or new MPA for co-management).</li> </ul>	<p>No, this petition was not submitted by a tribe or representative designated by a tribe or tribal organization, and it does not have a tribal co-sponsor.</p>

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<sup>1</sup> California Native American tribe is the preferred term to use per the Governor’s Office of Tribal Affairs when generally mentioning tribes of California, both federally and non-federally recognized.

## IV. PETITION EVALUATION

The petitioner has proposed reclassifying the Duxbury Reef SMCA as an SMR and expanding its northern and southern boundaries to cover the entire contiguous rocky intertidal habitat. Duxbury Reef is the largest shale reef in North America and is a unique habitat not found elsewhere in California. It overlaps with portions of Point Reyes National Seashore, Duxbury Reef Area of Special Biological Significance (ASBS), and the Greater Farallones National Marine Sanctuary (GFNMS). The current SMCA designation allows recreational take of finfish<sup>2</sup> from shore and red abalone (*Haliotis rufescens*) (note the abalone fishery is closed until 2036) (as defined in California Code of Regulations (Cal. Code Regs.), title (tit.) 14, § 632, subdivision (subd.) (a)(2)), which the petitioner states creates public confusion regarding permitted activities and enforcement challenges that could be addressed by prohibiting all take. The petition refers to observations made by visitors and docents which suggest that seeing legal fishing leads others visiting the reef to mistakenly believe they can harvest invertebrates and seaweed from the rocky intertidal, resulting in noncompliant take. The petitioner also requests expanding the MPA's northern and southern boundaries to protect the entirety of the intertidal reef habitat to more effectively safeguard the area's rare shale reef biodiversity and overall ecosystem health.

### EVALUATION NARRATIVE AND OVERVIEW FOR 2023-32MPA\_1

The petitioner has proposed to reclassify Duxbury Reef SMCA to an SMR because of "difficulty of interpretation and enforcement of current regulations and the resulting large incidence of take violations." Currently, the recreational take of finfish from shore and abalone is allowed in this MPA. The petitioner asserts that an SMR designation at this MPA would simplify regulations, align with one or more of the MLPA Goals, and improve protection for intertidal habitat. However, given that MED data report zero citations issued in recent years, and other factors discussed below, CDFW's evaluation finds the proposed change:

- Would not result in additional regulatory protection for the rocky intertidal habitat,
- Is inconsistent with the goals of this MPA, as identified in the MLPA Initiative planning process,
- Does not align with the original intent of this MPA,
- Does not address a current or emerging MPA management challenge, and
- Does not advance management of the MPA Network.

The proposed change is inconsistent with the goals of this MPA defined during the MLPA Initiative planning process (MLPA 2008a) and presented to CFGC when the resulting MPA

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<sup>2</sup> Any species of bony fish or cartilaginous fish (sharks, skates and rays).

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was adopted into regulation. These goals remain relevant today, including protecting marine natural heritage and improving recreational opportunities. Duxbury Reef SMCA is a relatively accessible area that attracts many visitors due to its exceptional tidepooling, wildlife viewing, and recreational fishing opportunities. Despite the high rate of human visitation at Duxbury Reef SMCA, CDFW found no objective evidence substantiating the petitioner's assertions that confusion about the current SMCA regulations is causing significant illegal take from the rocky intertidal habitat within the current MPA boundaries (Table 1). The petitioner provided MPA Watch data as an attachment to the petition and notes nearly 1000 potential violations of MPA regulations between 2019 and 2024 at Duxbury Reef. MPA Watch is a statewide community science program that trains volunteers to passively observe and collect data on human activity and use of coastal marine resources both inside and outside MPAs. Data collection is standardized across the state to ensure scientifically rigorous, comparable data to examine how human uses are changing as a result of MPA implementation. While MPA Watch observations on human uses could help inform enforcement efforts in MPAs, the program is not designed to collect definitive data on violations of MPA regulations. MPA Watch volunteers may observe and/or report potential violations to MED through CDFW's CalTIP hotline (1-888-334-2258) while they are conducting their surveys at their discretion, but it is not part of the standardized data collection nor a requirement of the survey (MPA Watch Network, 2020).

In the case of the Duxbury Reef SMCA, EAC of West Marin prepares the MPA Watch reports for Marin County. The annual reports for Duxbury Reef and the petition characterize all hand collection of biota, including the handling of organisms while participating in tidepooling activities, as "potential violations<sup>3</sup>." Of the "potential violations" included in the MPA Watch reports from Duxbury Reef since 2019, between 1 and 6 were reported each year to MED and/or other enforcement partners such as Marin County Parks (EAC of West Marin 2019-2024, Table 1). Most of the "potential violations" reported to MED were offshore recreational fishing activities, which are not permitted in Duxbury Reef SMCA. Data provided by MED show that officers visit Duxbury Reef throughout the year but have not issued any citations for violating the MPA or other regulations at Duxbury Reef between 2019 and 2025 (Table 1). MED has indicated that they prioritize on the ground education regarding potential take associated with tidepooling activities and would generally only issue a citation if there is clear intention to harvest intertidal organisms for the purpose of consumption or removal of organisms from the site. Outreach and education are one of the pillars of the MPA Management Program, and MED officers in the

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<sup>3</sup> Marin County MPA Watch reports include the term "potential violations" because activities observed by MPA Watch volunteers have not been consistently reported to, or investigated and confirmed by MED.

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field are key to informing people about the MPA Network and ensuring compliance with the regulations.

While SMRs generally simplify enforcement by prohibiting all take, MED enforcement data do not indicate a unique enforcement challenge regarding compliance with the current SMCA regulations within the existing MPA boundaries at this site (Table 1). Given this, a reclassification to an SMR is not likely to effectively resolve the petitioner's concerns regarding public tidepooling practices at Duxbury Reef SMCA. Experience from other heavily visited tidepooling areas in California, research conducted in select south coast MPAs (Tydlaska and Edwards 2022), and testimonials reported from the docents conducting outreach at Duxbury Reef SMCA (EAC of West Marin, 2019-2024), indicate that targeted outreach and education can be just as, or more, effective than changes in MPA regulations. The MPA Watch data at Duxbury Reef showed a decrease in potential violations following implementation of the Duxbury Docent program in January 2021 (Table 1). The MPA Watch annual reports continue to report high visitation at Duxbury Reef SMCA relative to other MPAs in Marin County and the 2024 report mentioned attrition in the Duxbury Docent and MPA Watch programs. CDFW has partnered with local entities at comparable sites that are popular for tidepooling to implement outreach and education strategies tailored to site-specific conditions with successful outcomes. Enhanced signage and focused outreach efforts during peak low-tide periods at Duxbury Reef SMCA could continue to engage the public to improve tidepool practices and support outreach and compliance with the SMCA regulations.

The Duxbury Reef SMCA was designed during the MLPA Initiative planning process to balance resource protection with traditional recreational access (MLPA 2008a), and a No-take designation would restrict existing allowed uses that are important to the coastal heritage of the local community Bolinas. These take allowances were carefully contemplated and deliberated during the MLPA Initiative planning process. Maintaining current take allowances supports local marine resource access, allows communities like Bolinas to continue long-standing fishing practices, and fosters community stewardship. In addition, Duxbury Reef overlaps with fishing grounds used by the local commercial hook-and-line California halibut (*Paralichthys californicus*) fishery, which contributes to a local and sustainable food supply for West Marin communities (Fig. 1).

### **RECOMMENDATION FOR 2023-32MPA\_1**

Given these considerations, and the information from the evaluation below, **CDFW recommends CFGC DENY PETITON 2023-32MPA\_1** to reclassify Duxbury Reef SMCA to an SMR. CDFW also recommends the petitioners work with the local community of Bolinas, and other interested parties to build a comprehensive outreach and education strategy at Duxbury Reef to foster stewardship of this reef in an inclusive manner.

**EVALUATION NARRATIVE AND OVERVIEW FOR 2023-32MPA\_2 and 3**

The petitioner proposes extending the southern boundary of Duxbury Reef SMCA to the southern end of the reef and the northern boundary of Duxbury Reef SMCA to Double Point/Stormy Stack Special Closure to encompass the entirety of the contiguous rocky intertidal reef habitat. CDFW acknowledges the significant ecological importance of the shale reef at Duxbury Reef SMCA, and after careful review, finds the proposed boundary changes to protect intertidal habitat:

- Are consistent with the goals of this MPA, as identified in the MLPA Initiative planning process, and may help further advance these goals,
- Improve the overall design of the MPA,
- Align with the original intent of this MPA, and
- Advance management of the MPA Network at Duxbury Reef.

Duxbury Reef is part of the largest shale reef in North America and represents a unique geologic feature not found elsewhere in California. Prior to the MLPA Initiative planning process, the area was established by CFGC in 1971 as the Duxbury Reef Reserve and designated by the State Water Resources Control Board as an ASBS in 1974. During the MLPA Initiative planning process, alternative MPAs were considered at this location north of the existing MPA that would have included the northern portion of the rocky intertidal habitat as well as larger areas of offshore waters that would have allowed for more types of offshore take (MLPA 2008b). The Blue Ribbon Task Force did not advance these in the preferred alternative given the proposed fishing restrictions within these larger alternative SMCAs and the proximity of other proposed MPAs that would have further restricted fishing, missing the opportunity to afford protection to the rocky intertidal habitat to the north of the current MPA (MLPA 2008b). While the current onshore and offshore boundaries of Duxbury Reef SMCA include the reef from the mean high tide line out to 1,000 feet seaward of mean lower low water, the northern- and southernmost portions of the rocky intertidal habitat of Duxbury Reef are not within the current MPA boundaries. Given that this MPA was specifically designed to protect rocky intertidal habitat, the proposed actions to expand the boundaries of the MPA to both the north and south to encompass the entire rocky intertidal ecosystem at this site present an adaptive management opportunity to improve overall MPA design of Duxbury Reef SMCA. Encompassing the entire intertidal reef in a manner that does not preclude existing shore-based and offshore commercial and recreational fishing activities could increase biodiversity and ecosystem function by protecting the most extensive rocky intertidal habitat that exists in the state, and better protect a sensitive, rare habitat that is particularly vulnerable to the effects of climate change (Harley 2011, Thorner et al. 2014, Kaplanis et al. 2024).

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Expanding the northern and southern boundaries of Duxbury Reef SMCA would improve the overall design of the MPA<sup>4</sup>. Expanding the MPA to the north and south would increase the MPA's alongshore span to better align with the Science Advisory Team's (SAT) preferred threshold (6 to 12.5 miles) identified during the MLPA Initiative planning process. Expanding the alongshore span has potential to further enhance biodiversity and ecosystem function by incorporating extensive rocky intertidal habitat that is currently outside the MPA boundaries (Table 2). In addition, expanding the boundaries to include the full extent of the rocky intertidal reef would improve consistency with CDFW Feasibility Guidelines, which recommend avoiding MPA boundaries that divide continuous beach and rocky intertidal habitats, as occurs under the current MPA configuration.

CDFW recognizes the importance of Duxbury Reef to the adjacent community of Bolinas and broader Marin County as a site that supports multiple uses of the marine environment. Not only is Duxbury Reef a popular place to experience nature through tidepooling, wildlife viewing, and beach recreation, the waters offshore the reef support important recreational and commercial fishing grounds. During the MLPA Initiative planning process, the North Central Coast Regional Stakeholder Group and Blue Ribbon Task Force recognized the importance of the need for multiple uses to coexist at the reef, and recommended CFGC adopt the Duxbury Reef SMCA that aims to protect the rocky intertidal habitat while allowing some recreational uses to continue. The need to balance these multiple uses still exists today. The area proposed for the southern expansion remains an important recreational fishing ground. The area proposed for the northern expansion also supports an important local hook-and-line California halibut fishery out of the port of Bolinas. CDFW commercial fisheries block data shows that Duxbury Reef overlaps with commercial fishing block 447, which is the most valuable fishing block for the hook-and-line California halibut fishery operating out of port of Bolinas and is utilized by other San Francisco Bay Area ports (Fig. 1). Commercial fishermen report fishing within 1000 feet from shore at Duxbury Reef (outside the existing Duxbury Reef SMCA) when weather conditions permit, especially in the northern part of the reef that would be affected by the proposed northern expansion.

Since the objective of the proposed northern and southern expansions is to protect the biodiversity in the intertidal habitat of the reef, extending the boundaries with the current SMCA regulations or as an SMR would unnecessarily restrict existing commercial and

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<sup>4</sup> The petitioner states part of the rationale for extending the northern boundary is that "incorporating this northern section ensures that this unique reef habitat is fully protected in its entirety from take and disturbance to marine mammals, seabirds, intertidal and subtidal species." To clarify, extending the boundaries of the MPA (whether as an SMCA or SMR) would not change existing protections for marine mammals or seabirds or change recreational access to the area because the MPA is not/would not be a Special Closure.

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recreational take. Therefore, CDFW recommends an alternative solution to address the petitioner's intent of protecting the rocky intertidal habitat while meeting local community needs and not reducing existing protections in the MPA Network.

### RECOMMENDATION FOR 2023-32MPA\_2 and 3

Given these considerations and the information from in the evaluation below, **CDFW recommends CFGC Grant in Concept 2023-32MPA\_2 and 2023-32MPA\_3.** CDFW recommends expanding protections of the rocky intertidal habitat in a manner that does not change the existing Duxbury Reef SMCA and does not restrict existing commercial or recreational take allowances beyond new intertidal protections in the expansion areas. This could be achieved by:

- Designating two new SMCAs to protect the northern and southern portions of the contiguous rocky intertidal habitat of Duxbury Reef,
- Designing take regulations for the new northern and southern Duxbury Reef SMCAs to balance the goals of expanding protections for intertidal invertebrates (except abalone when allowed) and seaweed with the goal of maintaining existing commercial and recreational take of other species from shore and by boat, and
- Designing the SMCA boundaries to maximize alignment with Science and Feasibility Guidelines (See Attachment 1) to optimize intertidal protections and enforceability for shore-based and boat-based users.

CDFW also recommends the petitioners work with the local community of Bolinas and other interested parties to build a comprehensive outreach and education strategy at Duxbury Reef to foster stewardship of this reef in an inclusive manner.

## EVALUATION QUESTIONS

### 2023-32MPA\_1: Reclassify Duxbury Reef SMCA to an SMR prohibit take.

**QUESTION 1: DOES THE PROPOSED CHANGE SUPPORT THE MPA NETWORK IN MEETING ONE OR MORE OF THE MLPA GOALS AND ALIGN WITH MPA MASTER PLAN ADAPTIVE MANAGEMENT OBJECTIVES?**

The MLPA Goals and Master Plan objectives are inextricably linked and act as the foundational tools that CDFW utilizes for effective adaptive management of the MPA Network. Individual MPAs in the Network were not necessarily designed to address all six Goals of the MLPA but instead act as an important component of a functioning Network that was designed to holistically address the MLPA Goals as a whole. As such, CDFW has evaluated this action within the broader adaptive management framework and how the proposed action may or may not align with the MLPA Goals and advance management

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of the MPA Network. See Question 1 of Attachment 1 for the MLPA Goals and MPA Master Plan objectives.

The petitioner asserts that reclassifying Duxbury Reef SMCA to an SMR (combined with the proposed boundary expansions to the north and the south), would advance MLPA Goals 1, 2, 3, and 4 related to preserving natural diversity, sustaining marine life populations, protecting marine habitats for the intrinsic value, and improving recreational and educational opportunities.

Duxbury Reef SMCA was designed to meet regional MPA Goals 2 and 3 “protect species while allowing traditional recreational access,” and “protect an area of important marine natural heritage.” Regarding improving recreational and educational opportunities (Goal 4), Duxbury Reef was already recognized during the MLPA Initiative planning process as an “important educational site & long term research site [that] takes advantage of long monitoring – PISCO (Multi-Agency Rocky Intertidal Network, or MARINe) sites at Duxbury Reef & Bolinas Point, educational use of Duxbury Reef, long term studies by College of Marin & GFNMS, & GFNMS planning docent program.” Thus, the proposed change would offer no change in the design of the affected MPA in terms of Goals 2, 3, or 4.

Reclassifying Duxbury Reef SMCA as a SMR would be consistent with Goal 1, however, this action would not result in additional regulatory protection for the rocky intertidal habitat. Harvest of rocky intertidal species is already prohibited within the SMCA, with limited exceptions for certain nearshore finfish that may occur in this habitat (e.g., monkeyface prickleback (*Cebidichthys violaceus*)) and abalone (red abalone has been closed since 2018 and is expected to remain closed until at least April 1, 2036, to allow populations to recover).

Long-term monitoring at Duxbury Reef indicates that the abundance of some species has increased over time, while others have declined (MARINe long-term monitoring data), patterns that are consistent with statewide trends and reflect the inherent variability of rocky intertidal populations (Miner et al. 2018, Raimondi and Smith 2022). The long-term monitoring site is located north of the most heavily visited portion of the reef, which limits the ability to assess the direct effects of human visitation on areas of highest use without a targeted study.

Based on the available information, observed ecological variability cannot be attributed to a single factor, such as human visitation or potential poaching. Accordingly, it is unclear whether reclassification to an SMR alone would provide greater benefits to biodiversity and ecosystem function than other management approaches. While the simple regulations of No-take MPAs are generally easier to enforce (Goal 5), improving

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signage and outreach efforts regarding the current MPA regulations could be just as, or more, effective than a regulatory change to redesignate the MPA to an SMR.

### QUESTION 2A: DOES THE PROPOSED CHANGE ADVANCE ADAPTIVE MANAGEMENT RECOMMENDATIONS IN THE DECADAL MANAGEMENT REVIEW?

**No.** The proposed change does not advance adaptive management recommendations from the Decadal Management Review. See Question 2a of Attachment 1 for the Decadal Management Review and adaptive management Recommendations.

### QUESTION 2B: IF NOT, DOES THE PROPOSED CHANGE ADDRESS A CURRENT OR EMERGING MPA MANAGEMENT CHALLENGE?

**No.** The proposed change does not address a current or emerging MPA management challenge. While the petitioner asserts that prohibiting take could help the growing number of people visiting the reef understand and comply with the regulations, improving signage and outreach efforts about the current regulations is likely to be just as, or more effective, than a regulatory change to an SMR. See response to Question 1 regarding the goals this MPA was designed to meet and response to Question 8 for additional information on the background and intended purpose of this MPA.

### QUESTION 3: DOES THE PROPOSED CHANGE HAVE THE POTENTIAL TO AFFECT EXISTING CFGC NON-MPA REGULATIONS, PERMITS, OR LEASES (E.G., KELP LEASES, AQUACULTURE LEASES, EXPERIMENTAL FISHING PERMITS)?

**No.** CDFW does not anticipate that CFGC would need to make conforming changes to other regulations, permits, or leases in response to the proposed change to these MPA regulations.

### QUESTION 4: DOES THE PROPOSED CHANGE HAVE THE POTENTIAL TO AFFECT EXISTING REGULATIONS, PERMITS, LEASES, OR MANAGEMENT ACTIVITIES OF ANY OTHER AGENCY OR ENTITY?

**Yes.** State Water Resources Control Board and San Francisco Bay Regional Water Quality Control Board (Water Boards): Duxbury Reef SMCA falls within an existing ASBS that has boundaries just slightly north (to Arroyo Hondo river) of the northern SMCA boundary and extending further offshore than the SMCA. It is unclear whether the proposed change would have direct or indirect effects on the management activities of the Water Boards for this ASBS. However, we do not anticipate that Marin County would need to update their Duxbury Reef ASBS Compliance Plan in response to the proposed change.

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Marin County Parks: CDFW shares jurisdiction of Duxbury Reef SMCA with Marin County Parks and would need to coordinate enforcement, updates to signage, and outreach efforts.

National Park Service: CDFW shares jurisdiction of Duxbury Reef SMCA with Point Reyes National Seashore and would need to coordinate enforcement, updates to signage, and outreach efforts.

National Oceanic and Atmospheric Administration (NOAA), Greater Farallones National Marine Sanctuary (GFNMS): CDFW shares jurisdiction of Duxbury Reef SMCA with GFNMS and would need to coordinate enforcement, updates to signage, and outreach efforts.

This list may not be exhaustive. The proposed change may have the potential to affect existing regulations, permits, leases, or management activities of Tribal governments, other agencies, and entities not identified here.

### **QUESTION 5: ARE THERE SIGNIFICANT INFORMATION GAPS THAT NEED TO BE FILLED TO INFORM THE EVALUATION OF THE PROPOSED CHANGE?**

**No.** CDFW has sufficient information to evaluate and make a recommendation on this proposal. When evaluating this petition, CDFW reviewed the information in the petition as well as information including but not limited to:

- Rocky intertidal long-term monitoring (MARINE) data,
- CDFW's enforcement and compliance data,
- MPA Watch data and annual reports for Marin County, and
- MLPA Initiative planning documents and related information (e.g., MLPA Goals and MPA Master Plan adaptive management objectives).

CDFW reviewed the available information and did not find that it supports the petitioner's assertions that there is "documented difficulty of interpretation and enforcement of current regulations" which results in a "large incident of take violations." Improving signage and outreach efforts could be just as, or more effective, than a regulatory change to convert the SMCA to an SMR. Furthermore, the information indicates the proposed action is unlikely to measurably enhance protection beyond what is currently offered, is inconsistent with the original intent of the MPA, and would unnecessarily impact recreational fishing opportunities.

**QUESTION 6: ARE THERE SIGNIFICANT MANAGEMENT GAPS THAT NEED TO BE FILLED TO INFORM THE EVALUATION OF THE PROPOSED CHANGE?**

**No.** CDFW has sufficient management information to proceed with the evaluation of this proposed change.

**QUESTION 7A: WAS THE PROPOSED CHANGE CONSIDERED DURING THE MLPA INITIATIVE PLANNING PROCESS OR THE IMPLEMENTATION PROCESS OF MPAS AROUND THE NORTHERN CHANNEL ISLANDS?**

**No.** The proposed change was not considered during the MLPA Initiative planning process. All MPA proposals set forth by the Blue Ribbon Task Force included some level of take to meet the Goals of the MLPA and the marine resource use needs of the local community (MLPA 2008b). As such, the proposed change would deviate from the original intent of the MPA (see response to Question 8 for detail regarding original intent).

One of the Regional Stakeholder Group proposals for Duxbury Reef was to designate it as a State Marine Park with the same level of take as the current SMCA (MLPA 2008b). CFGC adopted the Regional Stakeholder Group's recommendations for take for Duxbury Reef SMCA, acknowledging the desire to protect the rocky intertidal habitat while also providing local fishing communities with some continued access. Designating Duxbury Reef SMCA as a State Marine Park is under the authority and discretion of the State Parks and Recreation Commission.

**QUESTION 7B: IS THERE NEW INFORMATION AVAILABLE, CHANGING CONDITIONS SINCE THE MLPA IMPLEMENTATION PHASE, AND/OR INFORMATION PRESENTED IN THE DMR THAT WARRANTS REEVALUATION OF THE PROPOSED CHANGE?**

**No.** CDFW has not identified any critical new information that would warrant the redesignation of Duxbury Reef SMCA to an SMR.

**QUESTION 8: IF THE PROPOSED CHANGE AFFECTS AN EXISTING MPA, DOES THE PROPOSED CHANGE ALIGN WITH THE ORIGINAL INTENT OF THE MPA IDENTIFIED DURING THE MLPA INITIATIVE PLANNING PROCESS OR THE IMPLEMENTATION PROCESS OF MPAS AROUND THE NORTHERN CHANNEL ISLANDS?**

**No.** The proposed change to reclassify Duxbury Reef SMCA to an SMR does not align with the original intent of the MPA as established during the MLPA Initiative planning process. The original intent was to maintain a portion of the existing MPA as a natural marine heritage site by protecting the intertidal reef while allowing for shore-based recreational fishing. Reclassification would terminate all recreational fishing, contradicting the MPA's

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original design to balance resource protection with traditional recreational fishing access.

Current regulations already prohibit the harvest of invertebrates and seaweed within the rocky intertidal habitat. Consequently, an SMR designation would offer no additional protection for these specific intertidal species. Aside from potential abalone harvest (currently under a statewide closure through April 1, 2036), the intertidal habitat is already protected from take under the existing SMCA status.

### **QUESTION 9: DOES THE PROPOSED CHANGE IMPROVE INDIVIDUAL MPA OR MPA NETWORK DESIGN SO THAT IT BETTER ALIGNS WITH OR MEETS THE MPA SCIENCE GUIDELINES?**

The MLPA requires that the design of individual MPAs and the statewide MPA Network be based on the best readily available science and that MPAs be of adequate size, number, protection level, and location to meet MLPA Goals. The science guidelines developed by the Science Advisory Team (SAT) and outlined in the Master Plan were created specifically to provide this scientific foundation and serve as the starting point for evaluating alternative MPA proposals. Alignment with these guidelines depends on Level of Protection (LOP), which is determined by allowed take, and spatial configuration. More specifically, these guidelines require that an MPA must be at least 9 square miles and meet one of the three highest LOPs (i.e., Very High, High, or Moderate-high) to contribute to ecological goals such as habitat replication and representation.

Duxbury Reef SMCA is 0.69 square miles with a moderate LOP and therefore was not designed to meet either criterion (Table 1). Reclassifying the SMCA to an SMR would not change the spatial area of the MPA but it would increase the LOP from Moderate to Very High, which would enhance alignment with the SAT guidelines.

Additionally, intertidal SMRs and SMCAs do not follow the scientific guideline which “recommends extending MPAs from shallow to deep habitats. If intertidal protection is desired, it should be in areas where offshore habitats are also protected.” The proposed action would not increase the MPA’s area to the minimum recommended size, and unlikely to improve the design of the Duxbury Reef SMCA or the MPA Network. See Question 9 of Attachment 1 for the MPA Science Guidelines and additional context.

### **QUESTION 10A: DOES THE PROPOSED CHANGE ALIGN WITH CDFW FEASIBILITY GUIDELINES?**

**Yes.** While the existing Duxbury Reef SMCA was not designed to meet all CDFW Feasibility Guidelines, the proposed change was analyzed by identifying factors relevant to a reclassification from an SMCA to SMR, which include the MPA Types and Take Regulations. The proposed change aligns with the classifications in the MPA Types

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section of the Feasibility Guidelines. The current regulations for the SMCA meet the Take Regulations feasibility guidelines, although the proposed change would further simplify the take regulations. See Question 10a of Attachment 1 for CDFW Feasibility Guidelines.

### **QUESTION 10B: IF NOT, IS THERE A RATIONALE FOR MOVING FORWARD WITH THE PROPOSED CHANGE OR AN ALTERNATIVE THAT COULD MEET THE INTENT BUT BETTER ALIGN WITH FEASIBILITY GUIDELINES?**

**No.** There is no rationale for moving forward with the proposed change or an alternative.

### **QUESTION 11: DOES THE PROPOSED CHANGE MAINTAIN OR IMPROVE ENFORCEABILITY OF MPA REGULATIONS?**

**No.** Although the proposed change to reclassify Duxbury Reef SMCA to an SMR has potential to improve enforceability at this MPA because No-take MPAs are generally easier to enforce, MED found no objective evidence that confusion about the current SMCA regulations is causing significant illegal take from the rocky intertidal habitat within the current MPA boundaries. Of the close-to 1000 “potential violations” (characterized by the petitioner as all hand collection of biota, including the handling of organisms during tidepooling activities) observed during MPA Watch surveys from 2019-2024 at Duxbury Reef, between 1 and 6 were reported each year to MED through CDFW’s CalTIP hotline (1-888-334-2258) and/or other enforcement partners. Most of these were offshore recreational fishing activities which are not permitted in Duxbury Reef SMCA. Data provided by MED show that officers visit Duxbury Reef throughout the year but have not issued any citations for violating the MPA or other regulations at Duxbury Reef between 2019 and 2024 (Table 1). MED has indicated that they prioritize on the ground education regarding potential take associated with tidepooling activities and would generally issue a citation only if there is a clear intention to harvest intertidal organisms. The petitioner’s concern regarding the public and tidepooling could be better addressed with improved outreach and signage at the site.

### **QUESTION 12: DOES THE PROPOSED CHANGE SIMPLIFY REGULATORY LANGUAGE OR ENHANCE PUBLIC UNDERSTANDING WITHOUT CHANGING THE INTENT OF THE MPA?**

**No.** Although the petitioner’s stated intent of the reclassification to an SMR is to simplify the current SMCA regulations to help enhance public understanding, the reclassification would change the original intent of the MPA, which was to provide rocky intertidal habitat protection while allowing some recreational take from shore. Additionally, it is likely that public understanding could be better addressed with improved outreach and signage at the site.

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While No-take regulations are generally easier to enforce and for the public to understand, redesignating the MPA with No-take regulations into an existing MPA where some consumptive uses are allowed has potential to introduce enforcement challenges where none currently exist.

### QUESTION 13: DOES THE PROPOSED CHANGE MAINTAIN OR ENHANCE PROTECTION OF MARINE RESOURCES?

**No.** While reclassifying Duxbury Reef SMCA to an SMR has the potential to enhance protection of recreationally caught finfishes from shore, it would only maintain (not enhance) protection for the rocky intertidal habitat, as it is already protected under the current SMCA regulations:

*"It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource, EXCEPT: Recreational take of abalone<sup>5</sup>, and finfish<sup>6</sup> from shore only, is allowed."*

The red abalone fishery has been closed since 2018 and is expected to remain closed until at least April 1, 2036. The proposed change would not enhance protection of abalone until the fishery reopens.

### QUESTION 14: DOES THE PROPOSED CHANGE PROVIDE MORE EQUITABLE ACCESS OPPORTUNITIES (E.G., FISHING, EDUCATIONAL, AND/OR OTHER RECREATIONAL OPPORTUNITIES) FOR TRADITIONALLY UNDERSERVED OR MARGINALIZED COMMUNITIES?

See Question 14 of Attachment 1.

### QUESTION 15: DOES THE PROPOSED CHANGE HAVE THE POTENTIAL TO AFFECT CONSUMPTIVE AND/OR NON-CONSUMPTIVE ACTIVITIES? IF SO, HOW?

**Yes.** Reclassification to an SMR would end recreational fishing opportunities where there are few alternative places for local fishing to occur within Marin County due to other nearby SMRs and terrain of the surrounding coastline. The proposed change would prohibit the current recreational fishing allowances that include the recreational take of finfish from shore and abalone. This has potential to impact recreational anglers, primarily those who poke pole for monkeyface prickleback, as well as users who rely on the area for subsistence fishing.

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<sup>5</sup> Please note that the abalone fishery is [closed until at least 2026](#).

<sup>6</sup> Any species of bony fish or cartilaginous fish (sharks, skates and rays).

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Non-consumptive activities are not expected to be impacted by the proposed action (e.g. access, dog walking, tidepooling, surfing, research and monitoring, etc.).

### QUESTION 16: IS THE PROPOSED CHANGE CONSISTENT WITH CFGC JUSTICE, EQUITY, DIVERSITY AND INCLUSION POLICY?

See Question 16 of Attachment 1.

### QUESTION 17: IS THE PROPOSED CHANGE CONSISTENT WITH CFGC COASTAL FISHING COMMUNITIES POLICY?

The following analysis was prepared by CFGC staff. See Question 17 of Attachment 1 for additional context on CFGC's response. The proposed change would reduce fishing access, which may cause harm to communities dependent upon fishing access, including the coastal fishing communities of:

- Bolinas (~3 nautical miles (nm) away from area of proposed change) and
- San Francisco (~14 nm away from area of proposed change).

The action is anticipated to impact the commercial small boat hook-and-line fishery homeported in the Bolinas fishing community.

### QUESTION 18: DOES THE PROPOSED CHANGE INTERACT WITH OR HAVE THE POTENTIAL TO AFFECT PROPOSED CHANGES IN OTHER 2023 MPA PETITIONS?

**No.** The proposed change does not interact with or have the potential to affect proposed changes in other 2023 MPA petitions.

**2023-32MPA\_2, 3: Expand the MPA by extending the southern and northern boundaries.**

### QUESTION 1: DOES THE PROPOSED CHANGE SUPPORT THE MPA NETWORK IN MEETING ONE OR MORE OF THE MLPA GOALS AND ALIGN WITH MPA MASTER PLAN ADAPTIVE MANAGEMENT OBJECTIVES?

The MLPA Goals and Master Plan objectives are inextricably linked and act as the foundational tools that CDFW utilizes for effective adaptive management of the MPA Network. Individual MPAs in the Network were not necessarily designed to address all six Goals of the MLPA but instead act as an important component of a functioning Network that was designed to holistically address the MLPA Goals. As such, CDFW has evaluated this action within the broader adaptive management framework and how the proposed

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action may or may not align with the MLPA Goals and advance Network management. See Question 1 of Attachment 1 for the MLPA Goals and Master Plan objectives.

The rocky intertidal habitat at Duxbury Reef is part of the largest shale reef in North America that is a rare habitat that exists no place else in California. The existing northern boundary of Duxbury Reef SMCA does not include the northern portion of the reef, and to the south, the offshore boundary of the MPA (1,000 feet seaward of mean lower low water), does not extend far enough offshore to encompass the southernmost extension of the reef off Duxbury Point.

Expanding the southern and/or northern boundaries to encompass the contiguous intertidal shale reef habitat is consistent with MLPA Goal 4 "To protect marine natural heritage, including protection of representative and unique marine life habitats in north central California waters, for their intrinsic value" and would do more to protect this important marine natural heritage site.

The proposed boundary expansions also have potential to enhance enforceability by extending similar regulations across the entire habitat, which is also aligned with Goal 5, "To ensure that north central California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines."

This MPA was already designed to meet Goals 2 and 3 (see response to Question 1 under 2023-32MPA\_1 for details on the specific goals).

### **QUESTION 2A: DOES THE PROPOSED CHANGE ADVANCE ADAPTIVE MANAGEMENT RECOMMENDATIONS IN THE DECADAL MANAGEMENT REVIEW?**

**No.** The proposed change does not advance adaptive management recommendations from the Decadal Management Review. See Question 2a of Attachment 1 for the Decadal Management Review and adaptive management recommendations.

### **QUESTION 2B: IF NOT, DOES THE PROPOSED CHANGE ADDRESS A CURRENT OR EMERGING MPA MANAGEMENT CHALLENGE?**

Visitation at Duxbury Reef SMCA has increased since the COVID 19 pandemic and the potential effects of climate change, such as sea level rise, threaten rocky intertidal habitats statewide. Due to the significant challenge that climate change presents in California and globally, especially to coastal marine environments (Mach et al. 2017, Smith et al. 2023), CDFW remains committed to managing the MPA Network through the lens of climate resilience (Hoffman et al. 2021). The proposed change to encompass one of the rarest habitats in California, and the largest shale reef in North America, within the Duxbury Reef SMCA, has potential to

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increase climate resiliency of the associated ecological community by protecting the entirety of the contiguous reef habitat.

### **QUESTION 3: DOES THE PROPOSED CHANGE HAVE THE POTENTIAL TO AFFECT EXISTING CFGC NON-MPA REGULATIONS, PERMITS, OR LEASES (E.G., KELP LEASES, AQUACULTURE LEASES, EXPERIMENTAL FISHING PERMITS)?**

**No.** However, Both proposed boundary expansions have the potential to overlap with three current Experimental Fishing Permits (EFPs) operating between the California/Oregon border and Point Conception. The EFPs prohibit operation within MPA boundaries so changes to the permits would not be needed. The recommended alternative pathway would not interact with existing EFPs.

### **QUESTION 4: DOES THE PROPOSED CHANGE HAVE THE POTENTIAL TO AFFECT EXISTING REGULATIONS, PERMITS, LEASES, OR MANAGEMENT ACTIVITIES OF ANY OTHER AGENCY OR ENTITY?**

**Yes.** State Water Resources Control Board and San Francisco Bay Regional Water Quality Control Board (Water Boards): Duxbury Reef SMCA falls within an existing ASBS that has boundaries just slightly north (to Arroyo Hondo river) of the northern SMCA boundary and extending further offshore and south than the current SMCA boundaries. The proposed boundary changes would not align with the ASBS boundaries either. It is unclear whether the proposed change would have direct or indirect effects on the management activities of the Water Boards. However, we do not anticipate that Marin County would need to update their Duxbury Reef ASBS Compliance Plan in response to the proposed change.

Marin County Parks: CDFW shares jurisdiction of Duxbury SMCA with Marine County Parks and would need to coordinate enforcement, updates to signage, and outreach efforts.

National Park Service: CDFW shares jurisdiction of Duxbury Reef SMCA with Point Reyes National Seashore and would need to coordinate enforcement, updates to signage, and outreach efforts.

NOAA, GFNMS: CDFW shares jurisdiction of Duxbury SMCA with GFNMS and would need to coordinate enforcement, updates to signage, and outreach efforts.

This list may not be exhaustive. Tribal governments, and/or other agencies and entities may have overlapping jurisdictions with CDFW in the area that could be affected by the proposed change.

**QUESTION 5: ARE THERE SIGNIFICANT INFORMATION GAPS THAT NEED TO BE FILLED TO INFORM THE EVALUATION OF THE PROPOSED CHANGE?**

**No.** CDFW has sufficient information to evaluate and make a recommendation on this proposal. When evaluating this petition, CDFW reviewed the information in the petition as well as information including but not limited to:

- Rocky intertidal long-term monitoring (MARINe) data,
- Enforcement and compliance data,
- MLPA Initiative planning documents and related information (e.g., MLPA Goals and MPA Master Plan adaptive management objectives), and
- Commercial California halibut landings.

**QUESTION 6: ARE THERE SIGNIFICANT MANAGEMENT GAPS THAT NEED TO BE FILLED TO INFORM THE EVALUATION OF THE PROPOSED CHANGE?**

**No.** CDFW has sufficient management information to proceed with the evaluation of this proposed change.

**QUESTION 7A: WAS THE PROPOSED CHANGE CONSIDERED DURING THE MLPA INITIATIVE PLANNING PROCESS OR THE IMPLEMENTATION PROCESS OF MPAS AROUND THE NORTHERN CHANNEL ISLANDS?**

**No.** The proposed change to encompass the northern and southern boundaries of Duxbury Reef SMCA was not specifically considered during the MLPA Initiative planning process as proposed. The Blue Ribbon Task Force and Regional Stakeholder Group contemplated various shapes and sizes of an SMCA that would have protected the northern portion of the rocky intertidal habitat (MLPA 2008b), but the Blue Ribbon Task Force did not advance these in the preferred alternative given the proposed fishing restrictions within these larger alternative SMCAs and the proximity of other proposed MPAs that would have further restricted fishing (MLPA 2008a,b). The integrated preferred alternative that was adopted in 2012 used the boundaries from the then existing Duxbury Reef Marine Reserve (MLPA 2008b).

**QUESTION 7B: IS THERE NEW INFORMATION AVAILABLE, CHANGING CONDITIONS SINCE THE MLPA IMPLEMENTATION PHASE, AND/OR INFORMATION PRESENTED IN THE DMR THAT WARRANTS REEVALUATION OF THE PROPOSED CHANGE?**

**Yes.** Visitation at Duxbury Reef SMCA has increased since the COVID 19 pandemic and the effects of climate change, such as sea level rise, threaten rocky intertidal habitats statewide. Due to the significant challenge that climate change presents in California and globally, especially to coastal marine environments (Mach et al.

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2017, Smith et al. 2023), CDFW remains committed to managing the MPA Network through the lens of climate resilience (Hoffman et al. 2021).

The proposed change to encompass one of the rarest habitats in California, and the largest shale reef in North America, within the Duxbury Reef SMCA, has potential to increase climate resiliency of the associated ecological community by protecting the entirety of the contiguous reef habitat (Bates et al. 2019, Anderson et al. 2023).

### **QUESTION 8: IF THE PROPOSED CHANGE AFFECTS AN EXISTING MPA, DOES THE PROPOSED CHANGE ALIGN WITH THE ORIGINAL INTENT OF THE MPA IDENTIFIED DURING THE MLPA INITIATIVE PLANNING PROCESS OR THE IMPLEMENTATION PROCESS OF MPAS AROUND THE NORTHERN CHANNEL ISLANDS?**

The original intent of the Duxbury Reef SMCA identified during the MLPA Initiative planning process was to maintain a portion of the existing MPA as a natural marine heritage site by protecting the intertidal reef while allowing for shore-based recreational fishing.

The proposed boundary extensions partially align with the original intent as they would protect the entire shale reef rocky intertidal habitat but would impact fishing activities that were deliberately retained during the MLPA Initiative planning process. The recommended alternative pathway would more closely align with the original intent identified during the MLPA Initiative planning process.

### **QUESTION 9: DOES THE PROPOSED CHANGE IMPROVE INDIVIDUAL MPA OR MPA NETWORK DESIGN SO THAT IT BETTER ALIGNS WITH OR MEETS THE MPA SCIENCE GUIDELINES?**

The MLPA requires that the design of individual MPAs and the statewide Network be based on the best readily available science and that MPAs be of adequate size, number, protection level, and location to meet MLPA Goals. The science guidelines developed by the Science Advisory Team and outlined in the Master Plan were created specifically to provide this scientific foundation and serve as the starting point for evaluating alternative MPA proposals. Alignment with these guidelines depends on LOP, which is determined by allowed take, and spatial configuration. More specifically, these guidelines require that an MPA must be at least 9 square miles and meet one of the three highest LOPs (i.e., Very High, High, or Moderate-high) to contribute to ecological goals such as habitat replication and representation.

Duxbury Reef SMCA is 0.69 square miles with a Moderate LOP and therefore does not meet either criterion (Table 1). Extending either the northern or southern boundary or both would increase the area protected within the MPA, which would improve the design of this individual MPA. However, because the proposed changes would not increase the MPA's LOP, implementation would not improve the design of the MPA Network as defined

by the science guidelines. See Question 9 of Attachment 1 for the MPA Science Guidelines and additional context.

**QUESTION 10A: DOES THE PROPOSED CHANGE ALIGN WITH CDFW FEASIBILITY GUIDELINES?**

**No.** As proposed, neither boundary extension aligns with CDFW Feasibility Guidelines that recommend MPA boundaries be well marked, recognizable, clear and simple, consider multiple users (including shore-based and offshore users), and facilitate effective enforcement.

Additionally, the proposed northern boundary aligns with the Double Point/Stormy Stack Rock Special Closure, which uses distance from shore and does not align with a whole line of latitude. However, see response to 10b below regarding enhancing feasibility of the proposed boundaries. See Question 10a of Attachment 1 for CDFW Feasibility Guidelines.

**QUESTION 10B: IF NOT, IS THERE A RATIONALE FOR MOVING FORWARD WITH THE PROPOSED CHANGE OR AN ALTERNATIVE THAT COULD MEET THE INTENT BUT BETTER ALIGN WITH FEASIBILITY GUIDELINES?**

**Yes.** The northern and southern boundaries can be refined to (1) protect the entirety of the rocky intertidal shale reef without unnecessarily eliminating established uses previously vetted during the MLPA Initiative planning process, and (2) optimize enforceability for shore-based and boat-based users. The boundary expansions do aim to include the extent of the rocky reef which would improve consistency with the guidelines that recommend avoiding MPA boundaries that divide continuous beach and rocky intertidal habitats. Including the entire extent of the reef inside the MPA boundaries could improve enforceability by applying similar regulations to the entire habitat (see response to Question 11 for enhancing enforceability of the proposed boundaries).

**QUESTION 11: DOES THE PROPOSED CHANGE MAINTAIN OR IMPROVE ENFORCEABILITY OF MPA REGULATIONS?**

The northern and southern boundaries and take restriction proposed in the petition may present enforcement challenges. CDFW recommends granting the extended boundaries in concept but would design the boundaries and take restrictions to maximize alignment with Science and Feasibility Guidelines, which would optimize and potentially improve enforceability.

**QUESTION 12: DOES THE PROPOSED CHANGE SIMPLIFY REGULATORY LANGUAGE OR ENHANCE PUBLIC UNDERSTANDING WITHOUT CHANGING THE INTENT OF THE MPA?**

**Not applicable.** The proposal to expand the southern and northern boundaries was not intended to simplify or clarify the current regulatory language for Duxbury Reef SMCA. The proposed alternative could enhance understanding of the boundaries by including the extent of the rocky intertidal reef habitat within the MPA without impacting the majority of existing commercial and recreational fishing activities in the expanded areas.

**QUESTION 13: DOES THE PROPOSED CHANGE MAINTAIN OR ENHANCE PROTECTION OF MARINE RESOURCES?**

**Yes.**

**2023-32MPA\_2:** Expanding the southern boundary would protect an additional 0.48 square miles of area and 0.36 square miles of nearshore hard bottom habitat (Table 2).

**2023-32MPA\_3:** Expanding the northern boundary would protect an additional 0.77 square miles of area, 0.59 square miles of nearshore hard bottom habitat, and 3.25 linear miles of rocky intertidal habitat (Table 2).

Both expansions would enhance protection of intertidal marine organisms (except abalone when the fishery is open and finfish). Other commercial and recreational fishing currently occurs in these areas and would continue under CDFW's proposed alternative.

**QUESTION 14: DOES THE PROPOSED CHANGE PROVIDE MORE EQUITABLE ACCESS OPPORTUNITIES (E.G., FISHING, EDUCATIONAL, AND/OR OTHER RECREATIONAL OPPORTUNITIES) FOR TRADITIONALLY UNDERSERVED OR MARGINALIZED COMMUNITIES?**

See Question 14 of Attachment 1.

**QUESTION 15: DOES THE PROPOSED CHANGE HAVE THE POTENTIAL TO AFFECT CONSUMPTIVE AND/OR NON-CONSUMPTIVE ACTIVITIES? IF SO, HOW?**

**Yes.** As proposed in the petition, extending either the southern or northern boundaries of Duxbury Reef SMCA with the existing take regulations would prohibit any take of marine resources except for recreational take of finfish from shore and recreational take of abalone. Reports from the local community of Bolinas note that this could affect boat-based take by both recreational and commercial fisheries that fish offshore of the reef when conditions allow. This area lies within CDFW Fishing Block 447, which is heavily used by commercial hook-and-line California halibut fishermen stationed in Bay Area ports, especially the port of Bolinas (Fig. 1).

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However, the recommended alternative would meet the petitioner's goals of protecting more of this special rocky intertidal habitat while minimizing further impacts to consumptive users.

Granting either the proposed southern or northern boundary extension in addition to the reclassification to an SMR (**2023-32MPA\_1**) would impact existing consumptive activities.

Non-consumptive activities are not expected to be impacted by either boundary extension (e.g. access, dog walking, tidepooling, surfing, research and monitoring, etc.).

### **QUESTION 16: IS THE PROPOSED CHANGE CONSISTENT WITH CFGC JUSTICE, EQUITY, DIVERSITY AND INCLUSION POLICY?**

See Question 16 of Attachment 1.

### **QUESTION 17: IS THE PROPOSED CHANGE CONSISTENT WITH CFGC COASTAL FISHING COMMUNITIES POLICY?**

The following analysis was prepared by CFGC staff. See Question 17 of Attachment 1 for additional context on CFGC's response. The proposed change would reduce fishing access, particularly for shore-based hook-and-line anglers and the commercial small boat hook-and-line fishery homeported in the coastal fishing communities of:

- Bolinas (~3 nm away from area of proposed change) and
- San Francisco (~14 nm away from area of proposed change).

The impacts of this proposed change are anticipated to be exacerbated if coupled with reclassification as proposed in action 2023-32MPA\_1 of this petition.

### **QUESTION 18: DOES THE PROPOSED CHANGE INTERACT WITH OR HAVE THE POTENTIAL TO AFFECT PROPOSED CHANGES IN OTHER 2023 MPA PETITIONS?**

**No.** The proposed change does not interact with, or have the potential to affect, proposed changes in other 2023 MPA petitions.

## **V. SUPPLEMENTAL ANALYSES, DATA AND INFORMATION, AND CITATIONS**

### **TABLES AND FIGURES**

**Table 1:** MPA Watch data on human visitation at Duxbury Reef reported in the program's annual reports from 2019-2024 and MPA Watch observations classified by the petitioner as "potential violations" that include hand collection of biota and boat-based consumptive activities. MPA Watch data reports for the full calendar year of 2025 are not

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currently available. CDFW MED total number of visits and enforcement citations issued at Duxbury Reef SMCA for 2019-2025. MED did not start reporting number of officer visits to MPAs until 2023 so there is no data available from 2019-2022.

Year	MPA Watch observations	MPA Watch observations identified as "potential violations"	MPA Watch observations of offshore (boat-based) consumptive activities	CDFW enforcement visits	CDFW enforcement citations issued
2019	842	40	3	No data	0
2020	2,380	299	6	No data	0
2021	1,557	126	2	No data	0
2022	2,593	151	0	No data	0
2023	2,552	259	4	24	0
2024	1,750	130	2	17	0
2025	No data	No data	No data	3	0

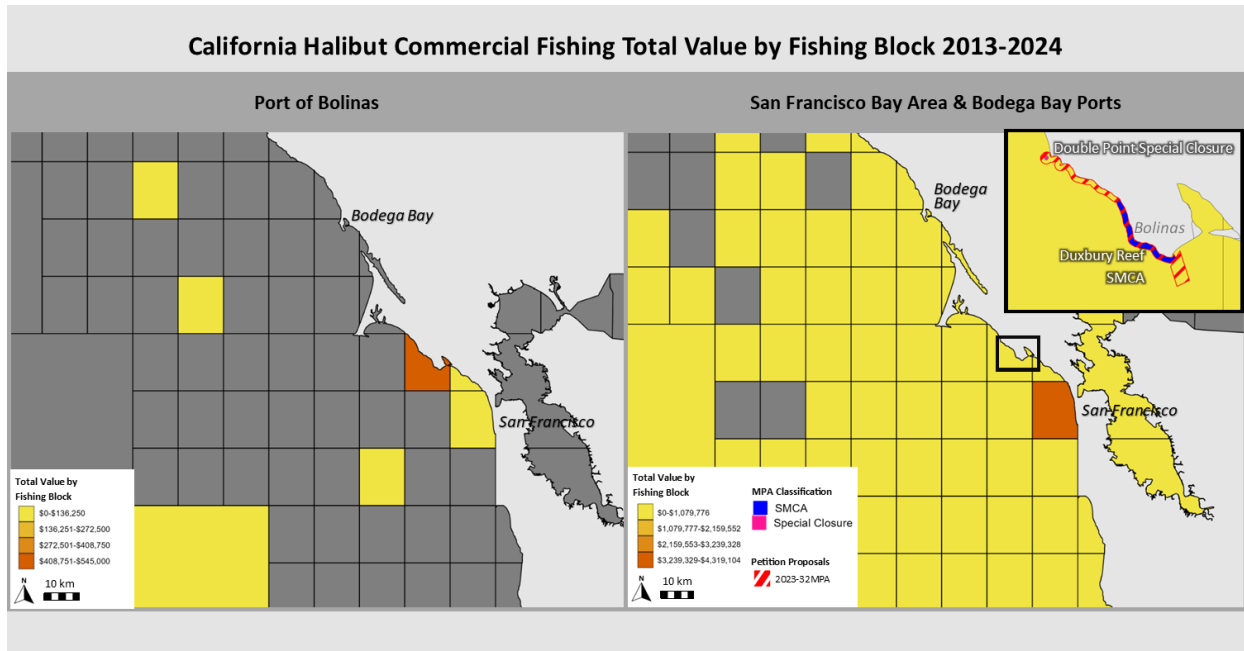
**Table 2:** MPA attributes (area, LOP, depth range, and habitat extent) of the existing Duxbury SMCA and as proposed in petition 2023-MPA32. A dash (—) indicates that the MPA does not contain the habitat type. Habitat extent may be reported in linear miles or square miles, depending on data availability and Science Advisory Team (SAT) guidance.

Values shown in **bold** indicate that the MPA attribute meets the relevant science guideline established by the SAT during the MLPA Initiative planning process. An MPA contributes to habitat replication only if it first meets the minimum size (>9 sq mi) and LOP (Very High, High, or Moderate-High) criteria (i.e., first two rows must be bold). Duxbury Reef currently has an LOP of Moderate; the LOP would be Very High if it were reclassified to an SMR as proposed.

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	Existing	Proposed North Expansion	Proposed South Expansion	Total Proposed Plus Existing
MPA Area (sq mi)	0.69	0.77	0.48	1.94
Level of Protection	Moderate			Moderate
Min Depth (m)	0	0	0	0
Max Depth (m)	5.7	21.4	11.2	21.4
Eelgrass (sq mi)	—	—	—	—
Kelp (mi)	0.02	<b>0.95</b>	<b>0.36</b>	<b>1.33</b>
Beach (mi)	<b>3.02</b>	<b>3.45</b>	<b>0</b>	<b>6.48</b>
Rocky Intertidal (mi)	<b>3.03</b>	<b>3.25</b>	<b>0</b>	<b>6.27</b>
Estuaries (sq mi)	—	—	—	—
Hard Substrate				
0-30 m (sq mi)**	0.58	0.59	0.36	1.52
30-100 m (sq mi)	—	—	—	—
100-200 m (sq mi)	—	—	—	—
>200 m (sq mi)	—	—	—	—
Soft Substrate				
0-30 m (sq mi)**	0.06	0.18	0.12	0.36
30-100 m (sq mi)	—	—	—	—
100-200 m (sq mi)	—	—	—	—
>200 m (sq mi)	—	—	—	—

\*\*Note that nearshore substrate measurements are in square miles rather than linear miles.



**Figure 1.** Total value (in millions of \$US) of commercially caught (by hook-and-line) California halibut from 2013–2024 by California Department of Fish and Wildlife fishing blocks for the San Francisco Bay Area. The left panel depicts the fleet fishing out of the Port of Bolinas. The right panel depicts the fleet fishing out of all Bay Area Ports from San Francisco Bay to Bodega Bay. The inset depicts the commercial fishing block 447 that overlaps with the proposed boundary expansions and redesignation of Duxbury Reef SMCA.

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