

STAFF SUMMARY FOR DECEMBER 9-10, 2020

12. RECREATIONAL SEA URCHIN**Today's Item****Information** ☐**Action** ☒

Consider adopting proposed changes to regulations for the recreational take of sea urchin.

Summary of Previous/Future Actions

- | | |
|--|---|
| • Adopted emergency actions for unlimited take of purple sea urchin at Caspar Cove | Feb 21, 2020; Sacramento |
| • Adopted 90-day extension of emergency regulations | Aug 19-20, 2020; Webinar/Teleconference |
| • Notice hearing for Caspar Cove and Tanker Reef regulation change | Aug 19-20, 2020; Webinar/Teleconference |
| • Discussion hearing for Caspar Cove and Tanker Reef regulation change | Oct 14, 2020; Webinar/Teleconference |
| • Today's adoption hearing | Dec 9-10, 2020; Webinar/Teleconference |

Background

In Feb 2020, FGC took emergency action to temporarily remove the recreational bag limit for purple sea urchin inside Caspar Cove, Mendocino County. At its Aug 2020 meeting, FGC authorized notice to initiate a regular rulemaking to continue the take provisions for a period of three years. Additionally, in response to FGC Petition #2020-001, FGC's action authorized notice to remove the bag limit for purple and red sea urchin at Tanker Reef, Monterey County for the same time period. The three-year period is intended to support data collection to inform the state's response to the loss of kelp forests within state waters. See exhibits 1 and 2 for additional background.

The proposed actions were published in the California Notice Register on Oct 9, 2020. There are no updates to the proposed action in the initial statement of reasons (ISOR, Exhibit 3). DFW prepared a pre-adoption statement of reasons (PSOR), which includes a correction to a citation in the ISOR and provides responses to comments received during the notice period (Exhibit 4). If approved, the regulations will sunset on Apr 1, 2024. DFW will provide an overview of the proposed regulations during the meeting (Exhibit 6).

The executive director, exercising the authority delegated to her by FGC, determined that this decision is exempt from the California Environmental Quality Act.

Significant Public Comments (N/A)**Recommendation**

FGC staff: Adopt the proposed regulation as recommended by DFW.

DFW: Adopt the regulation as proposed in the ISOR.

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Exhibits

1. [Staff summary for Agenda Item 17, Feb 21, 2020 FGC meeting \(for background only\)](#)
2. [Staff summary for Agenda Item 16, Aug 19, 2020 FGC meeting \(for background only\)](#)
3. [ISOR](#)
4. [DFW transmittal memo, PSOR, and attached response to comments](#)
5. [Economic and fiscal impact statement \(STD 399\)](#)
6. [DFW presentation](#)

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the proposed changes to Section 29.06 related to recreational sea urchin regulations.

STAFF SUMMARY FOR FEBRUARY 21, 2020
For Background Purposes Only

17. RECREATIONAL TAKE OF PURPLE SEA URCHIN EMERGENCY

Today's Item

Information ☐

Action ☒

Discuss and consider adopting emergency regulations concerning recreational take of purple sea urchin at Caspar Cove, Mendocino County.

Summary of Previous/Future Actions

- | | |
|-----------------------------------|---------------------------------|
| • Adopted emergency regulations | Apr 18-19, 2018; Ventura |
| • Adopted regular rulemaking | Feb 6, 2019; Sacramento |
| • MRC vetting | Nov 5, 2019; MRC, Sacramento |
| • Today's adoption hearing | Feb 21, 2020; Sacramento |

Background

Since 2014, FGC and DFW have been tracking a combination of environmental and biological stressors in the nearshore waters across northern California. The nearshore conditions have led to the near collapse of the bull kelp forest ecosystem and significant declines in the corresponding species that the kelp ecosystem supports, including red sea urchin and red abalone. Already weakened by environmental stressors and a severely limited kelp food source, an exploding purple sea urchin population has outcompeted red sea urchin and red abalone for the remaining kelp, ultimately leading to the widespread starvation and death of abalone and the collapse of both fisheries; recovery of these fisheries will not be possible without the eventual recovery of bull kelp forests and the return of sufficient food to support survival and reproduction.

In 2018, based on a DFW findings that volatile and adverse conditions on the north coast posed an emergency situation for resident abalone populations and the kelp forest ecosystem upon which they rely, FGC adopted emergency regulations to raise the daily bag limit for purple sea urchin from 35 individual urchin to 20 gallons per person, per day, taken only while skin-diving or SCUBA diving in state waters off Sonoma and Mendocino counties. Seen as part of a broader collaborative process, the regulation helped to facilitate citizen science efforts and initiate a coordinated approach to kelp ecosystem recovery on the north coast (Exhibit 1).

In Feb 2019, FGC adopted a regular rulemaking that further increased the daily recreational take limit of purple sea urchin to 40 gallons in the waters off Sonoma, Mendocino, and Humboldt counties (Exhibit 2). The intent of the higher 40 gallons limit was to promote the continued involvement of recreational divers in efforts to restore the severely-impacted kelp forest ecosystems in northern California, and contribute more greatly to reduction efforts without adversely affecting the long-term health of the purple sea urchin population.

DFW coordinated with divers to monitor recreational harvest events in 2018 and 2019. While some events were successful at moving large volumes of purple sea urchin, DFW has reported that recreational divers often found removing and transporting 40 gallons of urchin to shore to be unattainable, and that removing that volume put diver safety at risk due to regional ocean conditions. Environmental conditions have continued to deteriorate in northern California, and

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divers remain committed to testing alternative methods that might increase the expected benefits to the kelp ecosystem and the species that rely upon it from removing larger amounts of purple urchin.

DFW is requesting that FGC take emergency action to amend Section 29.06 of Title 14 to temporarily remove the daily bag limit and expand authorized recreational take methods for purple sea urchin in a discrete geographic area in Mendocino County, specifically an area offshore of Caspar Headlands State Beach known as Caspar Cove (exhibits 3 and 4). The proposed regulations are intended to explore and evaluate whether intensified removals may promote the recovery of kelp and the associated species that it supports (Exhibit 3). Recreational take of purple sea urchin in Caspar Cove would be allowed only by hand or with manually operated handheld tools.

If adopted today, the new regulations are expected to take effect on or around Mar 2 and continue for 180 days, during which time DFW and partners intend to monitor and evaluate effectiveness by comparing ecosystem recovery in the recreational removal area to similar nearby areas with commercial take and/or no purple urchin removal efforts.

California Environmental Quality Act (CEQA)

DFW has determined that the proposed action falls within the statutory exemption under Public Resources Code Section 21080(b)(4) (Exhibit 5). The statutory exemption, which is repeated in Section 15359 of the CEQA guidelines, applies to actions necessary to prevent or mitigate an emergency. DFW has also determined that, under CEQA guidelines in Section 15061, the proposed action falls within categorical exemptions class 7 and 8 as related to agency actions to protect natural resources and the environment (exhibits 6 and 7); FGC staff agrees these exemptions are applicable.

As to the exceptions to categorical exemptions set forth in CEQA guidelines in Section 15300.2, including the prospect of unusual circumstances and related effects, FGC staff's review was guided by the Supreme Court of California's recent decision in *Berkeley Hillside Preservation v. City of Berkeley*. FGC staff has reviewed all of the available information possessed by FGC relevant to the issue and does not believe adopting the regulations poses any unusual circumstances that would constitute an exception to the categorical exemptions set forth above. Compared to the activities that fall within Class 7 and Class 8 generally, which include the given example of wildlife preservation activities such as the effort here, there is nothing unusual about the proposed regulations. In addition, even if there were unusual circumstances, no potentially significant effects on either project-specific or cumulative bases are expected.

In considering emergency action, FGC must determine the magnitude of potential harm, the existence of a crisis situation, the immediacy of the need, and whether the anticipation of harm has a basis firmer than simple speculation. All available information indicates that conditions in the kelp ecosystem have continued to decline and extraordinary measures must be taken immediately to help restore the important habitat for the benefit of a myriad species that rely upon it. DFW will provide an overview at the meeting (Exhibit 11).

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Significant Public Comments

Ten commenters submitted emails to express support for the emergency action. Representative emails are included as exhibits 8-10. In addition to supporting the emergency action, one commenter advocates for other measures to address the problem, including using drones, site selection by volunteers, and hiring unemployed commercial urchin divers for removal efforts.

Recommendation

FGC staff: Adopt the proposed emergency action as recommended by DFW, recognizing the essential nature of DFW and partner monitoring of outcomes to help determine effectiveness of the strategy.

DFW: Temporarily remove the daily bag limit for recreational take of purple sea urchin in Caspar Cove, Mendocino County.

Exhibits

1. Staff summary from Apr 18-19, 2018 FGC meeting (for background only)
2. Staff summary from Feb 6, 2019 FGC meeting (for background only)
3. DFW memo transmitting proposed emergency statement, received Feb 10, 2020
4. Draft emergency statement
5. DFW memo transmitting notice of exemption under CEQA, received Feb 10, 2020
6. Draft CEQA notice of exemption
7. CEQA notice of exemption attachment
8. Email from Madeleine Russo, received Jan 31, 2020
9. Email from Captain Dan Walsh, received Feb 5, 2020
10. Email from Doug Jung, received Feb 9, 2020
11. DFW presentation (*added Feb 18, 2020*)

Motion/Direction

Moved by _____ and seconded by _____ that the Commission determines, pursuant to Section 11346.1 of the Government Code, that an emergency situation exists and finds the proposed regulation is necessary to address the emergency.

The Commission further determines, based on the record, pursuant to sections 15061(a), 15307, and 15308 of Title 14, that the proposed action is exempt from the California Environmental Quality Act as an action necessary to prevent or mitigate an emergency and as an action to protect natural resources and the environment.

The Commission further determines, pursuant to Section 399 of the Fish and Game Code, that adopting this regulation is necessary for the immediate conservation, preservation, or protection of birds, mammals, fish, amphibians, or reptiles, including but not limited to their nests or eggs.

Therefore, the Commission adopts the emergency regulation to amend Section 29.06.

STAFF SUMMARY FOR AUGUST 19-20, 2020
For Background Purposes Only

16. RECREATIONAL SEA URCHIN

Today's Item

Information ☐

Action ☒

Consider authorizing publication of notice of intent to amend regulations concerning recreational take of sea urchin at Caspar Cove, Mendocino County and Tanker's Reef, Monterey County for a period of three years.

Summary of Previous/Future Actions

- | | |
|---|--|
| • Adopted emergency regulations to take purple sea urchin at Caspar Cove | Feb 21, 2020; Sacramento |
| • Consider 90-day extension of emergency regulations (Agenda Item 4, today) | Aug 19-20, 2020; Webinar/Teleconference |
| • Today's notice hearing for Caspar Cove and Tanker's Reef | Aug 19-20, 2020; Webinar/Teleconference |
| • Discussion hearing | Oct 14-15, 2020; Webinar/Teleconference |
| • Adoption hearing | Dec 9-10, 2020; Webinar/Teleconference |

Background

Today's Agenda Item 4 (recreational purple sea urchin) recaps the background and environmental context that led FGC to take emergency action in Feb 2020 to temporarily remove the recreational bag limit for purple sea urchin inside Caspar Cove, Mendocino County (see Exhibit 1 for additional background). The staff summary for Agenda Item 4 also highlights the need to continue the provision authorizing urchin removal at Caspar Cove, in order for DFW and partners to initiate the planned study to monitor and evaluate removal efforts. The standard rulemaking proposed under this agenda item would continue the take provisions within Caspar Cove for a period of three years only, which would support data collection to inform the state's response to the loss of the kelp forests within state waters as was intended.

DFW additionally proposes adding a second location, Tanker's Reef in Monterey County, to the proposed regulations based on a public regulation petition (#2020-001) scheduled for action under Agenda Item 14 (this meeting; see exhibits 2 and 4 of Agenda Item 14 for the petition and DFW recommendations memo).

At its Jun 2020 meeting, FGC requested DFW work with the petitioner, Keith Rootsart, to clarify alternative options that he verbally requested. DFW reviewed the petition and subsequent informal revisions; Mr. Rootsart was responsive throughout the review process.. If FGC grants Petition 2020-001 as recommended by DFW (under Item 14), this proposed rulemaking will authorize take of red sea urchin as well as purple sea urchin at Tanker's Reef. DFW recommends that removal of the daily recreational bag limit for both red and purple urchins at Tanker's Reef may promote kelp recovery and will enable further evaluation of kelp restoration techniques. While red sea urchin is a commercial fishery in other regions, commercial harvest is minimal in the proposed area and the proposed activity is further

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bounded by a small geographic scope, the experimental nature, and the limited time frame for the authorization as a precaution.

In addition, Tanker's Reef requires a unique monitoring structure. In contrast to Caspar Cove, DFW and partners do not have capacity to also conduct the scientific monitoring and oversight they believe are necessary to support approval of such experimental efforts. DFW has worked closely with the California Ocean Protection Council (OPC) and the Marine Bay National Marine Sanctuary (MBNMS) to establish specific performance criteria to evaluate the efficacy of the proposed activity at Tanker's Reef, as well as to evaluate the impacts to the immediate environment. As indicated in significant public comments below, OPC and MBNMS conditionally do not oppose the effort.

DFW has prepared a memo outlining its request to go to notice (Exhibit 2). The initial statement of reasons for regulatory action (ISOR) is being prepared and the notice will be completed and published based on FGC action.

Significant Public Comments

DFW, OPC, and MBNMS provided a joint letter to convey conditional support for adding Tanker's Reef, provided that outcomes "explicitly inform future management" and that the petitioner (1) evaluate the efficacy of community led efforts in-water culling activities and report findings, and (2) evaluate the potential ecological impacts from such methods. Data collected from these activities are expected to be reported to DFW using specific criteria identified in the letter (Exhibit 3).

Recommendation

FGC staff: Approve request to issue notice of regulatory action as recommended by DFW to (1) authorize unlimited recreational take of purple sea urchin at Caspar Cove, Mendocino County as proposed for a period of three years, and (2) authorize unlimited recreational take of purple sea urchin and red sea urchin at Tanker's Reef, Monterey County as proposed, for a period of three years with adherence to the interagency monitoring and reporting criteria specified in Exhibit 3.

DFW: Approve request to issue notice of regulatory action to initiate a regular rulemaking to allow unlimited take of purple sea urchin at Caspar Cove and purple and red sea urchin at Tanker's Reef for a period of three years.

Exhibits

1. Staff summary from Feb 21, 2020 FGC meeting (for background purposes only)
2. DFW memo requesting authorization for notice, received Aug 5, 2020
3. Joint letter from California Ocean Protection Council, DFW and Monterey Bay National Marine Sanctuary, Aug 5, 2020

Motion/Direction

Moved by _____ and seconded by _____ that the Commission authorizes publication of a notice of its intent to amend Section 29.06, Title 14, California Code of

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Regulations, related to the recreational take of purple sea urchin at Caspar Cove in Mendocino County for three years.

AND (next page)

Moved by _____ and seconded by _____ that the Commission authorizes publication of a notice of its intent to amend Section 29.06, Title 14, California Code of Regulations, related to the recreational take of purple and red sea urchin at Tanker's Reef in Monterey County for three years.

State of California
Fish and Game Commission
Initial Statement of Reasons for Regulatory Action
(Certificate of Compliance)

Amend Section 29.06
Title 14, California Code of Regulations
Re: Recreational Sea Urchin Bag Limit Exemption

- I. Date of Initial Statement of Reasons: September 24, 2020
- II. Dates and Locations of Scheduled Hearings
 - (a) Notice Hearing
 - Date: August 19, 2020
 - Location: Teleconference
 - (b) Discussion Hearing
 - Date: October 14, 2020
 - Location: Teleconference
 - (c) Adoption Hearing
 - Date: December 9, 2020
 - Location: Teleconference
- III. Description of Regulatory Action
 - (a) Statement of Specific Purpose of Regulatory Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary

Unless otherwise specified, all section references in this document are to Title 14 of the California Code of Regulations (CCR).

The kelp assemblage along the Northern and Central California Coast has seen a sharp decline in recent years. Bull kelp (*Nereocystis luetkeana*) in Northern California has declined by more than 90% of its historical level since 2014 (Rogers-Bennett and Catton 2019). This decline has been linked to a combination of severe warm water events and an explosive increase of herbivorous sea urchins, particularly purple sea urchins (*Strongylocentrotus purpuratus*). Purple sea urchins are a native species in California; however, the species' abundance is 60 times higher than historic levels, in part due to the loss of predatory sunflower sea star (*Pycnopodia helianthoides*) from wasting disease (Harvell et al. 2019) and a large purple sea urchin recruitment event. This has led to the overgrazing and suppression of bull kelp forests on the North Coast, and a regime shift from kelp forests to urchin barrens across most of the region (Rogers-Bennett and Catton 2019).

The collapse of the kelp forests has had catastrophic cascading effects on industries that rely on the kelp forest ecosystem, such as the commercial urchin roe fishery (i.e., marketable for culinary consumption of both the male and female gonads). The physiology of sea urchins

makes them extremely resilient to death by starvation. At the same time, the lack of food places all sea urchins, including red sea urchins (*Strongylocentrotus franciscanus*) perpetually in a starved state in which they do not develop healthy gonads (Claisse et al. 2013). The lack of quality/healthy gonads makes most of the RSUs found on the North Coast unmarketable. Despite being a historically important and lucrative fishery, the RSU fishery in Northern California collapsed in 2015 prompting a federal disaster declaration (Newsom G. 2019). In addition, abundance of other grazers and predators relying on kelp for food have decreased rapidly. As a result, the recreational red abalone fishery, one of the most iconic fisheries in California, was forced to close in 2018 (Commission 2018a).

The severe kelp decline is further compounded by the annual life cycle of bull kelp, the dominant canopy species in Northern California (Springer et al. 2010). Since plants die off each year, its abundance in any given year depends heavily on the abundance of the previous year. The severely diminished spore bank thus significantly limits the capacity for broadscale recovery of the species.

In response to the declining health of the kelp forests, the Fish and Game Commission (Commission) and the Department began to consider leveraging recreational divers to help control sea urchin populations. Based on strong public support, the Commission adopted an emergency regulation in April 2018 that temporarily increased the recreational take limit of purple sea urchins in Mendocino and Sonoma County. Due to concerns over accidentally triggering spawning events and potential habitat degradations, divers were required to bring urchins back to shore. In February 2019, the Commission increased the recreational urchin limit through a standard rulemaking and expanded the higher limit to Humboldt county as well (Commission 2018b). The expected recreational effort, however, did not materialize. Following several high-profile restoration events, dive effort tapered off due to the logistical constraints of bringing large quantities of purple sea urchins back to shore.

Since the adoption of the higher purple sea urchins bag limit in the North Coast, the environmental conditions in Northern California continue to deteriorate. Recent satellite data show that the decline of kelp canopy coverage has continued well into 2019 (Figure 1). Aerial drone surveys conducted by the Nature Conservancy across 25 representative sites in Mendocino and Sonoma Counties also show a continued decline of kelp in the region (Figure 2).

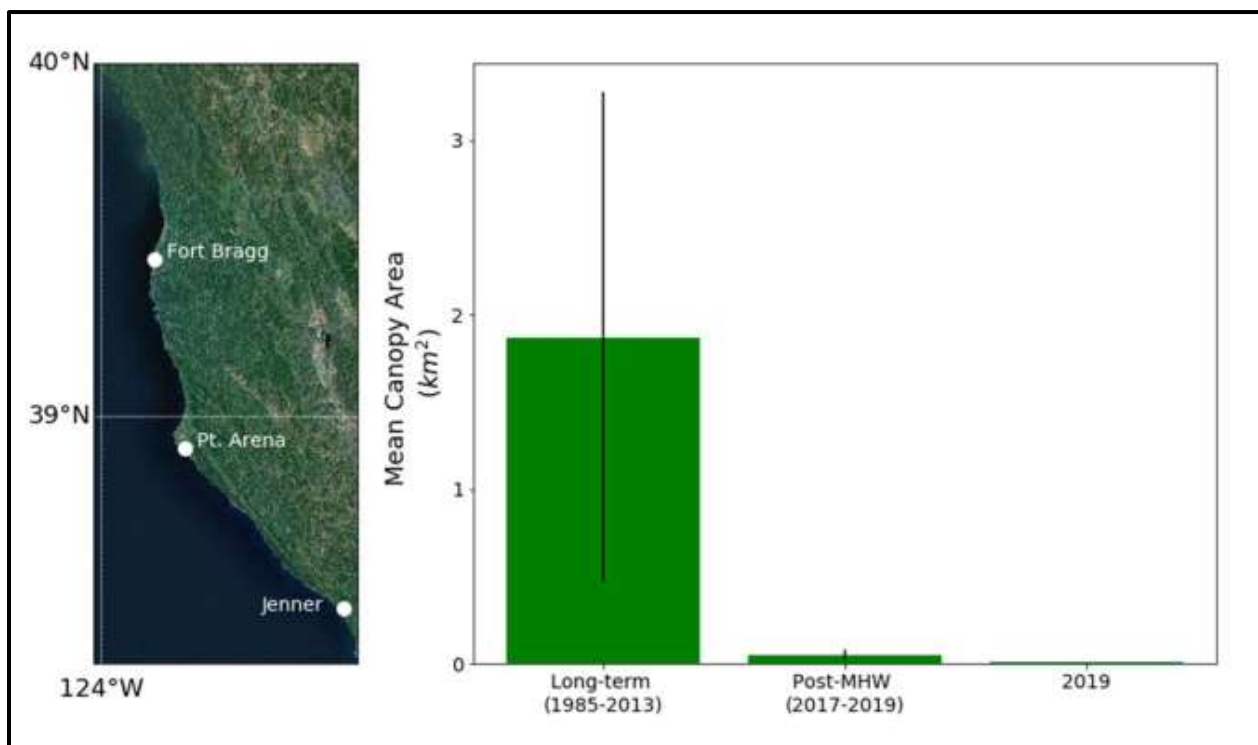


Figure 1. Mean Bull Kelp Coverage in Northern California in km² before Marine Heat Wave (MHW), after MHW, and in 2019 (Source: McPherson et al., 2020).

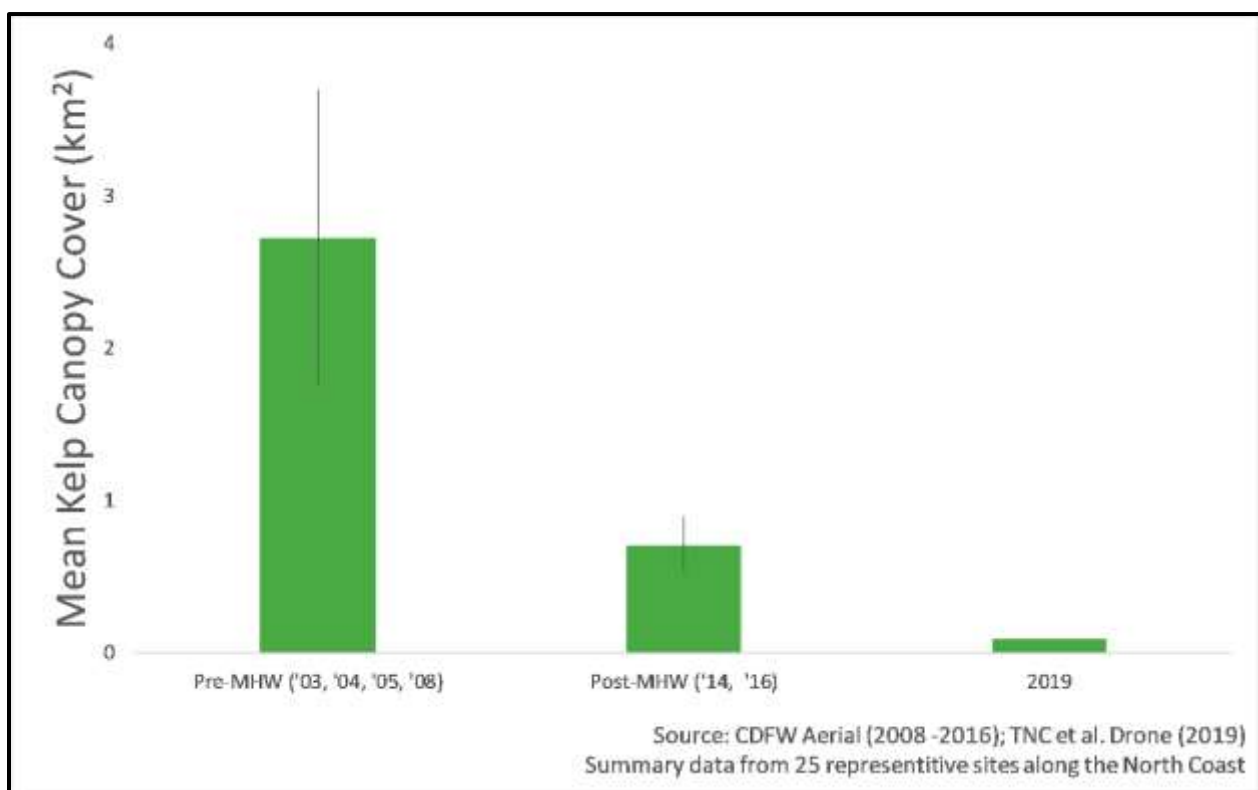


Figure 2. Bull Kelp Canopy Coverage developed from representative sites centered around Sonoma County coastline using aerial drones (Source: TNC 2019)

Towards the end of 2019, in response to further stakeholder input and worsening environmental conditions, the Department began to explore the feasibility of *in situ* take of sea urchins targeting a localized area. That strategy has shown limited potential elsewhere when removal is performed intensively, allowing for localized regeneration of kelp (Sanderson et al 2016). The density of sea urchins in a healthy kelp forest in Northern California is generally less than 2 individuals per m² (Rogers-Bennett and Catton 2019). Recently published research papers suggest that such density level is primarily kept in check by sustained and intense top-down predation pressure (Ling et al. 2019; Eisaguirre et al. 2020). If a high level of mortality can be applied to sea urchins in a small, semi-enclosed area, enough kelp stands may develop to reseed the surrounding area to facilitate the return of natural predators when ocean conditions are again favorable to kelp growth.

The Commission and Department selected Caspar Cove, Mendocino as the first test site at the end of 2019. The site is a semi-enclosed cove that delineates a naturally distinct geographical area. The areas outside the cove contained isolated stands of bull kelp occupying frequently disturbed formations that are difficult for sea urchins to access or recruit to. The area is located in the center of the urchin barren outbreak, small enough to attain an effective level of culling, and can be safely accessed by recreational divers through Caspar State Beach.

The Commission adopted an emergency regulation allowing unlimited purple sea urchin take inside Caspar Cove by recreational divers on February 21, 2020 due to concerns over the loss of the remaining kelp stands. The Department, Reef Check California, and volunteer divers were prepared to begin data collection on the planned urchin removal, and a dedicated online tool was developed to allow divers to enter the results of their dives and for Department staff to access data for analysis. However, the advent of COVID-19 pandemic significantly constrained the recreational diver community's participation in the Caspar Cove urchin control experiment, and work to date has been inadequate to assess the effectiveness of this method to help protect and restore kelp. As of August 12, 2020, only 19 dives have been conducted, with an estimated removal of 14,417 urchins. This lower than anticipated level of effort on a continuing basis is unlikely to result in meaningful kelp recovery in Caspar Cove.

In April 2020, the Commission received a request to implement a similar project at Tanker Reef in Monterey County (Commission Petition 2020-001). The Department originally intended to evaluate the efficacy of *in situ* urchin control only at Caspar Cove before potential broader application of the method. However, working with its partners at the Ocean Protection Council (OPC) and the Monterey Bay National Marine Sanctuary (MBNMS), the Department determined there was merit in also evaluating the efficacy of community-led *in situ* urchin control methods at Tanker Reef on the Central Coast. In collaboration with OPC, MBNMS, and the petitioner, a framework was developed whereby the petitioner will handle the bulk of experimental design, execution, and monitoring (Gold et al. 2020). Other partners, including the Department would provide the necessary support. This site represents a different biogeographic region dominated by Giant Kelp (*Macrocystis pyrifera*) rather than Bull Kelp, and has a higher degree of recreational diver accessibility than Caspar Cove, thereby enabling a more comprehensive evaluation of *in situ* urchin control under a broader suite of conditions.

Current Standard Regulations and Development of Emergency Regulations

Currently, under Section 29.06, recreational red sea urchins and purple sea urchins are subject to a daily bag limit of 35 animals per individual per day (subsection (a)). Under subsection (b), an individual can take up to 40 gallons of purple sea urchins when diving off the coast of Humboldt, Mendocino, and Sonoma Counties. Under subsection (c), retention of purple sea urchin, is not subject to any possession limit to ensure that individuals can collect and utilize large number of purple sea urchins taken under the higher daily bag limit in those three counties.

On March 9, 2020, the Commission filed an emergency rule adding subsection (d) to allow unlimited recreational take of purple sea urchin by hand or hand-held tools specifically inside Caspar Cove, Mendocino County with the Office of Administrative Law (OAL File 2020-0309-02E). The rule came into effect on March 17, 2020. Through Executive Orders N040-20 and N66-20, this action is extended through January 9, 2021. An additional extension is planned. On August 19, 2020, the Commission approved to go to Notice this ISOR initiating a certificate of compliance rulemaking to make standard the March 2020 emergency regulation, with some adjustments, as discussed below.

Proposed Amendment

This regulatory proposal would amend Section 29.06 to adopt the current emergency rule for Caspar Cove under subsection (d) as a standard rule. The proposal would also similarly create an exemption on recreational bag limit for sea urchin at Tanker Reef, Monterey.

The main goal of this proposal is to gather data and help inform whether recreational diver community-led *in situ* urchin control can support kelp restoration at key locations through promoting natural recovery. The Department also hopes that a successful restoration effort may directly confer ecological benefits to both Caspar Cove and Tanker Reef, such as allowing abalone to re-colonize areas previously impacted by urchin barrens.

Amend Subsections 29.06 (a): Default Daily Sea Urchin Bag Limit

The regulation will add a clarification to subsection (a) stating that the default daily bag limit of any sea urchin species is 35 individuals, consistent with the default bag limit for many marine invertebrates stated in subsection 29.05(a). Similarly, the name of Section 29.06 is also proposed for revision to remove the word “purple” to allow the section to apply to purple sea urchin, red sea urchin, or any other urchin species with respect to the 35 individual bag limit per species. This amendment is necessary for clarity purposes. In removing the specificity of “purple” to just “sea urchin,” the revision to subsection 29.06(a) removes the recreational bag limit for red sea urchin to accommodate the exemption from a take limit for red sea urchin for Tanker Reef, Monterey under subsection 29.06(d)(2). This change also clarifies that the bag limit for the purple sea urchin elsewhere in the state, and sea urchins generally, is still the default invertebrate daily bag limit of 35 individuals, except as provided in Section 29.06. While this subsection does not change the legal effect of subsection 29.05 (a), which already states

that the default recreational bag limit for marine invertebrates is 35 individuals per day, the statement clarifies it in light of the changes to that bag limit in Section 29.06.

Add Subsection 20.06 (d): Sea Urchin Bag Limit Exemption

The addition of subsection (d) adds the bag limit exemption for sea urchins in two specific locations. Subsection (d)(1) will maintain the existing exemption on take granted by emergency action under 2020-0309-02E for Caspar Cove. Proposed subsection (d)(2) will provide the exemption for Tanker Reef. Subsection (d) will start with the statement “[n]otwithstanding other parts of this Section.” This is necessary to clarify that the exemptions only apply to the two areas and only under the specific terms of the subsections.

Subsection (d) also provides for a sunset date of April 1, 2024 for both location exemptions. The sunset date is necessary to demonstrate that the removal efforts represent an experimental study, and for accountability and the integrity of the state’s management. On April 1, 2024, the proposed rule would have been in effect for 3 years. Because a Commission rulemaking process concerning recreational fishing can take up to almost an entire year, the proposed time period would give the state at least two years of data before a new round of rulemaking is considered. This is the minimum amount of time needed to observe a potential trend in environmental conditions. The experimental nature of this proposal necessitates the shortest period necessary, and a longer timeframe is thus not proposed.

Add Subsection 20.06 (d)(1): Purple Sea Urchin Bag Limit Exemption in Caspar Cove

This proposal would adopt the current emergency rule, subsection (d), as a standard rule as subsection (d)(1). The location of Caspar Cove was originally chosen for experimental urchin removal efforts due to its density of purple sea urchins, size, and ease of access for divers. The advent of the COVID-19 pandemic has greatly diminished the short-term prospect of restoring kelp in the cove. Nonetheless, the Department supports the continuation of removals at this location. The Department hopes that dive effort will return, and enough bull kelp stands will persist in the surrounding area to help reseed the cove to inform future management in other areas of the North Coast.

As is with the current emergency rule, only purple sea urchins may be taken in unlimited number. The area is an established fishing ground for the commercial red sea urchin (Figure 3). The Department determined that allowing taking of red sea urchin in Caspar Cove would be inequitable at this time given the recent fishery collapse and federal disaster declaration. This is necessary to preserve the trust and equitable treatment of the commercial red sea urchin fishery.



Figure 3. Locations and historical red sea urchin landings in Northern California from 1971 to 2018 (Source: CDFW MLDS 2019).

The proposed regulations would also restrict the daily bag limit exemption to only recreational take by hand or hand-held tools. This is necessary to restrict disturbance to the underlying reef structure. As noted in previous rulemaking packages, the Commission and Department believe that restoration efforts must minimize environmental impact. By restricting take to only hand and hand-held tools, risk of significant environmental impact can be avoided.

Add Subsection 20.06 (d)(2): Sea Urchin Bag Limit Exemption at Tanker Reef.

This proposal would add an additional experimental site at Tanker Reef, Monterey and allow daily bag limit exemption of both red sea urchin and purple sea urchin. In addition to its proximity to a large diver population, the Tanker Reef location offers an opportunity for the Department to examine how sea urchin populations can be controlled in a very different setting compared to Caspar Cove. Unlike the North Coast, kelp abundance is diminished in the Monterey area, but the area is not saturated with urchin barrens. The type of kelp that forms

the canopy in this region, giant kelp, are perennial and could potentially respond very differently to urchin removal.

In addition, the Tanker Reef location also allows the Department to examine the effect of culling both red sea urchin and purple sea urchin in an area without commercial activities. Between 2000 and 2020, approximately 6,500 lbs of red sea urchin were taken commercially in the Central Coast area, all of which were landed in Santa Cruz or further north.

The proposed boundary for the Tanker Reef urchin removal site is described below in Figure 4. The western boundary has been angled eastward from that proposed by the petitioner in Petition 2020-001. This is necessary to avoid an established private anchorage (Figure 5). The eastern boundary of the proposed area has been extended further eastward in order to cover the entire reef. This is necessary to ensure that the result of the experiment is not affected by the confounding effect of sea urchins migrating in from any part of the reef not covered by the bag limit exemption. This change also alleviates the need for enforcement officers to determine whether divers at Tanker Reef are inside or outside the delineated boundary. The specific starting points for the eastern and western boundaries are selected because of their clear delineation by the Monterey Tides resort and the parking lot at the end of Camino El Estero, respectively. Lastly, the seaward boundary is extended to 20m to ensure that the exemption will cover the depth range of kelp and all dive activities.

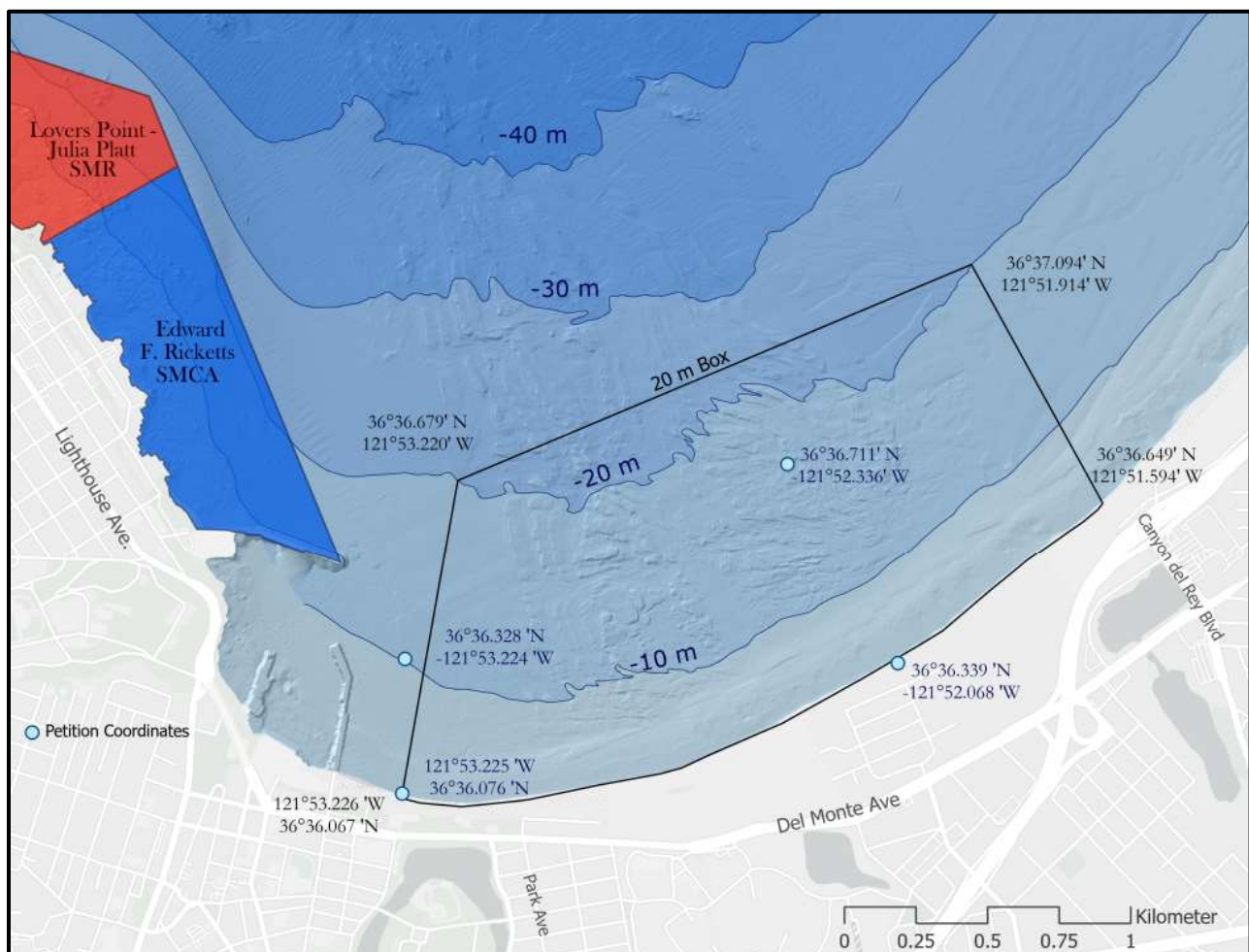


Figure 4. Proposed boundary for Tanker Reef urchin removal site, including proposed boundary in Commission Petition 2020-001.

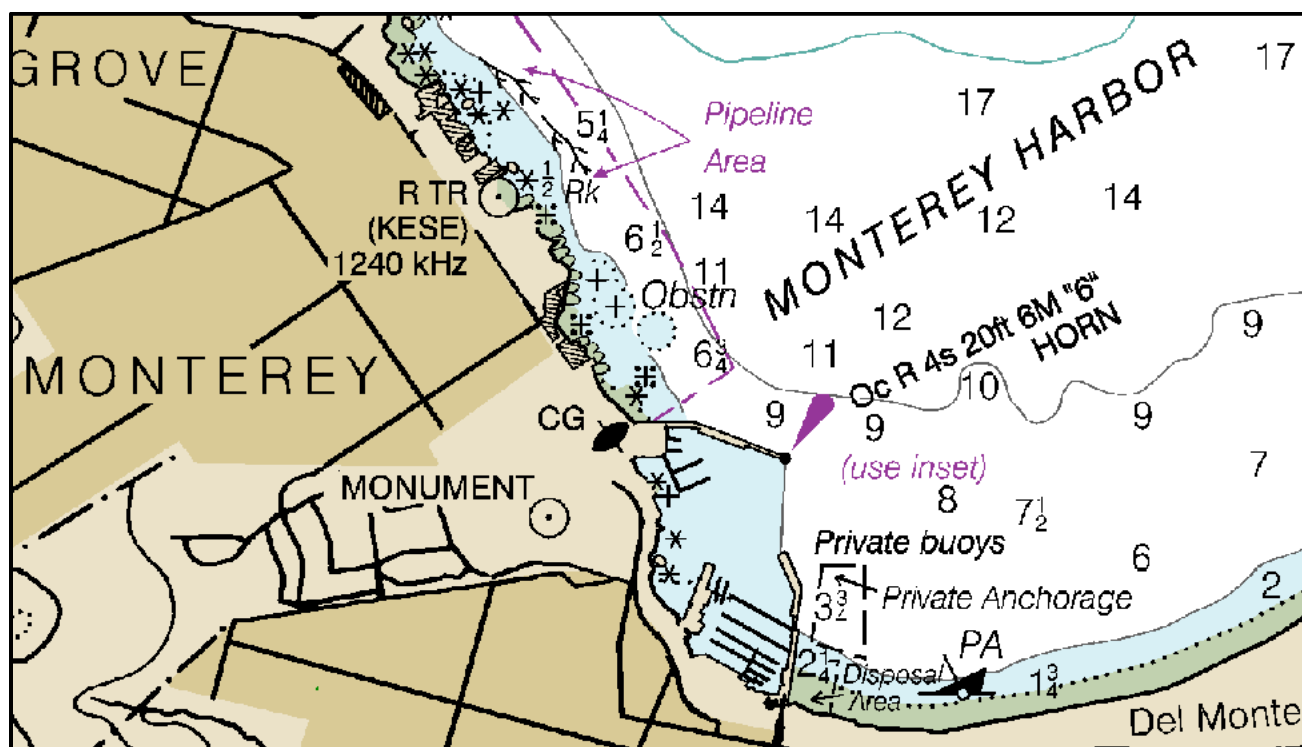


Figure 5. Close-up snapshot of eastern Monterey of NOAA navigational chart 18685 showing existing private anchorage in front of the Monterey Municipal Beach.

Consistent with the emergency rule for Caspar Cove, harvest of recreational sea urchin at Tanker Reef will be limited to take by hand or hand-held tools. This is borne out of the necessity of protecting the physical environment for the same reason as those described above for Caspar Cove.

(b) Goals and Benefits of the Regulation

The policy of this state is “to ensure the conservation, sustainable use, and, where feasible, restoration of California’s marine living resources for the benefit of all the citizens of the State” (Fish and Game Code section 7050(b)). The primary goal of this proposal is to make permanent an existing exemption on sea urchin take limits in Caspar Cove, Mendocino, and add a second test site at Tanker Reef in Monterey to test the effectiveness of kelp restoration through sea urchin removal by recreational divers. The result from the test sites will help inform future kelp restoration projects. The proposal can also potentially create kelp refuges that can directly contribute to the overall statewide kelp restoration effort.

(c) Authority and Reference Sections from Fish and Game Code for Regulation

Authority: Sections 200 and 205 Fish and Game Code

Reference: Sections 200 and 205 Fish and Game Code

(d) Specific Technology or Equipment Required by Regulatory Change

None

(e) Identification of Reports or Documents Supporting Regulation Change

Eisaguirre, J. H., Eisaguirre, J. M., Davis, K., Carlson, P. M., Gaines, S. D., & Caselle, J. E. (2020). Trophic redundancy and predator size class structure drive differences in kelp forest ecosystem dynamics. *Ecology*, 101(5), e02993. Available from: <https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.1002/ecy.2993>.

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Ling, S. D., Scheibling, R. E., Rassweiler, A., Johnson, C. R., Shears, N., Connell, S. D., ... & Clemente, S. (2015). Global regime shift dynamics of catastrophic sea urchin overgrazing. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 370(1659), 20130269. Available from: <https://royalsocietypublishing.org/doi/pdf/10.1098/rstb.2013.0269>.

Ling, S. D., Kriegisch, N., Woolley, B., & Reeves, S. E. (2019). Density-dependent feedbacks, hysteresis, and demography of overgrazing sea urchins. *Ecology*, 100(2), e02577. Available from: <https://advances.sciencemag.org/content/advances/5/1/eaau7042.full.pdf>.

Rootsaert, Keith (2020). Petition to the California Fish and Game Commission for Regulation Change in re Central Coast Urchin Petition. Available from: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178429&inline>.

Sanderson, J. C., Ling, S. D., Dominguez, J. G., & Johnson, C. R. (2016). Limited effectiveness of divers to mitigate 'barrens' formation by culling sea urchins while fishing for abalone. *Marine and Freshwater Research*, 67(1), 84-95. <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.940.4906&rank=1>.

(f) Identification of Reports or Documents Providing Background Information

Claisse, J. T., Williams, J. P., Ford, T., Pondella, D. J., Meux, B., & Protopapadakis, L. (2013). Kelp forest habitat restoration has the potential to increase sea urchin gonad biomass. *Ecosphere*, 4(3), 1-19. <https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.1890/ES12-00408.1>.

Fish and Game Commission. (2018a). Initial Statement of Reasons for Regulatory Action to Amend Section 29.15, Title 14, California Code of Regulations, Re: Abalone Regulations. <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=160847&inline>.

Gold, M., Shuman, C., Michel, P., Joint Agency Comments Re: Proposed Amendments to Recreational Sea Urchin Regulations at Tanker Reef, Monterey County. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=182105&inline>.

Harvell, C. D., Montecino-Latorre, D., Caldwell, J. M., Burt, J. M., Bosley, K., Keller, A., ... & Pattengill-Semmens, C. (2019). Disease epidemic and a marine heat wave are associated with the continental-scale collapse of a pivotal predator (*Pycnopodia helianthoides*). *Science advances*, 5(1), eaau7042.

<https://advances.sciencemag.org/content/advances/5/1/eaau7042.full.pdf>.

McPherson, Finger, Housekeeper, Bell, Carr, Rogers-Bennett, & Kudela. (2020). Paper Under Review (Analyzes kelp coverage data gathered from Northern California from 1985-2019).

The Nature Conservancy. (2019) Summary Data from 25 Representative Sites along the North Coast.

Gavin Newsom, Governor of California, Letter from, to Wilbur Ross, United States Secretary of Commerce (2019). California Red Sea Urchin Disaster Request.

<https://www.fisheries.noaa.gov/webdam/download/88698465>.

Rogers-Bennett, L., & Catton, C. A. (2019). Marine heat wave and multiple stressors tip bull kelp forest to sea urchin barrens. *Scientific reports*, 9(1), 1-9.

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(g) Public Discussions of Proposed Regulations Prior to Notice Publication

The poor conditions of the Northern and Central California kelp forests are well-known, and have been discussed extensively in previous rulemakings. The subject has been discussed frequently since 2015 at various Commission meetings, primarily in meetings where the subjects of sea urchin fishing and abalone fishing were on the agenda or otherwise mentioned.

Portion of this rulemaking was developed directly in response to Commission public petition 2020-001 as submitted during the January 2020 Commission meeting and discussed at the June 2020 and August 2020 Commission meetings. As described in Gold et al. 2020, this proposal is the result of months of discussion between the state, the petitioner, and various partner organizations.

IV. Description of Reasonable Alternatives to Regulatory Action

(a) Alternatives to Regulation Change

- Tanker Reef – Do not include red sea urchin in proposed subsection 29.06(d)(2) regarding unlimited take at Tanker Reef.

The Department considered only authorizing purple sea urchin take at Tanker Reef, consistent with the provisions for Caspar Cove in subsection 29.06 (d)(1), as purple sea urchin is the species causing excessive overgrazing, and California has an active commercial red sea urchin fishery. However, recent studies suggest that even if all

purple sea urchin are removed, that red sea urchin alone still would have the potential to overgrazing a reef, which could undermine the restoration effort as intended. As the Department has determined that there is no commercial red sea urchin in the area and thus would be low risk of impact to the commercial fishery; and due to the temporary nature of the proposal established through inclusion of the sunset date, this proposal was rejected in the interest of effectively testing urchin removals for kelp recovery at Tanker Reef.

- Add a third geographic location to subsection 29.06(d) in Monterey County within a marine protected area (MPA)

The state also considered allowing recreational culling inside MPAs as a result of queries and comments made public meetings, but ultimately declined to do so in the immediate future. The state has serious concerns over the impact that large-scale culling by recreational divers may have on other living resources inside MPAs, which are protected by separate regulations in Section 632. This would require amending regulations in Section 632, would result in increased enforcement burdens, and would be inconsistent with state policy regarding take in MPAs to date. Information gathering inside nearby MPAs will be accomplished through small-scale research activities conducted by California Reef Check under the tighter control and oversight of a scientific collecting permit issued by the Department rather than unlimited recreational take without the same controls.

(b) No Change Alternative

Without the proposed regulatory change, the state will not be able to test the prospect of restoring kelp forests through recreational dive effort.

V. Mitigation Measures Required by Regulatory Action

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures needed.

VI. Impact of Regulatory Action

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states because the proposed regulatory action will extend and expand an existing kelp habitat restoration effort that will help to support and a variety of recreational sportfishing opportunities. The restoration of kelp forests is vital to the revitalization of the declining abalone sport fishery and to an array of species that benefit from the kelp forest ecosystem.

The proposed action will have no adverse impact to recreational opportunities or to species of value for commercial fisheries.

- (b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment

The Commission anticipates no impacts on the creation or elimination of jobs within the state; no impact on the creation of new businesses or the elimination of existing businesses; generalized benefits to the health and welfare of California residents; no effects on worker safety; and benefits to the state's environment. The proposed action is designed to ensure the long-term sustainability and quality of the kelp forest ecosystem in Central and Northern California, as well as the coastal economy that relies on it. Small increases in recreational urchin diving opportunities may result in an increase in visits to the affected areas that will bring some additional local expenditures to businesses that support ocean diving activities. However, the increase in visits are not likely to be substantial enough to spur the creation of new jobs, new businesses, or the expansion of businesses.

- (c) Cost Impacts on a Representative Private Person or Business

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

- (d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State

No change in administration or enforcement costs are anticipated by CDFW or other State agencies. Consideration was given to keep administrative and enforcement costs within existing budgets. No impact in federal funding to the State is anticipated.

- (e) Nondiscretionary Costs/Savings to Local Agencies

None. The proposed action has been designed to ensure that there are no nondiscretionary cost impacts to local law enforcement or emergency response services.

- (f) Programs Mandated on Local Agencies or School Districts

None.

- (g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code

None.

- (h) Effect on Housing Costs

None.

VII. Economic Impact Assessment

The primary aim of the proposed action is to make permanent an existing exemption on sea urchin recreational take limits in Caspar Cove, Mendocino, and to add a second experimental test site at Tanker Reef in Monterey to test the effectiveness of kelp restoration through sea urchin removal by recreational divers. The result from the test sites will help inform future kelp restoration projects. The proposal is also intended to help to ensure the long-term sustainability and quality of the kelp forest ecosystem in Central and Northern California, as well as the coastal economies that rely on productive kelp forest ecosystems.

The Commission anticipates no impacts on the creation of jobs, businesses or the elimination of existing businesses within the state because the proposed action is for increased recreational sea urchin take that is not likely to involve a substantial consistent increase in diver numbers or spending. Some urchin removal events have been organized in Northern California and may continue to occur, however the continuation of organized dive events and turnout numbers are not entirely predictable, given current COVID-19 closures in some areas as well as a multitude of other unknown intervening factors that could affect turnout.

Some small positive economic impacts to businesses that serve ocean divers and other visitors drawn to the vicinity to provide shore support are anticipated. Based on the purple sea urchins removal events in Northern California in 2019 and early 2020, between 30 to 100 people may participate in each organized urchin removal event, as well as and smaller group trips, in the Northern California location and at the new Tanker Reef location in Monterey County.

Expenditures on purchases or rentals of wetsuits, SCUBA tanks and oxygen refills, fuel, food, and accommodations are the some of the types of spending that may be increased due to this regulation change. The most common recreational methods used to take sea urchins are SCUBA and free-diving that may spur a small increase in local spending on diving equipment rentals and/or purchases. Additionally, these recreational urchin divers are often accompanied by shore support and other friends and family, who are also likely to spend locally on fuel, food, and for those who travel larger distances, also accommodations.

The proposed action also increases the recreational take of red sea urchins in Monterey County (Tanker Reef). Red sea urchins are a commercial target species, but historically red sea urchins have not been commercially landed in Monterey Area ports since a small landing in 2015 as shown in Table 1. Additionally, stressed RSU have reduced commercial value due to tissue deterioration. These two factors support the expectation of no adverse impact to commercial red sea urchin diving businesses.

Table 1. California Red Sea Urchin Pounds Landed by Port Area: 2014-2020

PORT AREA	2014	2015	2016	2017	2018	2019	2020 Jan- July	Area Total
Fort Bragg Area	3,598,497	1,272,085	546,495	461,011	215,114	49,248	75,449	6,217,899
Bodega Bay Area	92,237	111,570	583	1,570	8,136	1,040	1,099	216,235
San Francisco Area	13,068	10,739	14,835	23,542	11,704	6,506	6,738	87,132
Monterey Area	0	176	0	0	0	0	0	176
Eureka Area	186	3,737	0	0	0	0	0	3,923
NORTH TOTAL	3,703,988	1,398,308	561,914	486,123	234,954	56,794	83,286	6,525,365
Los Angeles Area	1,355,543	1,106,258	644,046	839,811	905,226	947,855	238,244	6,036,983
Morro Bay Area	1,481	1,919	0	359	658	0	0	4,417
Santa Barbara Area	6,932,102	5,517,715	4,473,453	2,782,120	1,981,761	1,027,377	518,939	23,233,466
San Diego Area	516,727	457,751	204,671	87,549	107,005	344,822	152,964	1,871,489
SOUTH TOTAL	8,805,853	7,083,642	5,322,170	3,709,839	2,994,649	2,320,054	910,147	31,146,355

Source: CDFW Marine Landings Database

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State

The Commission anticipates no impacts on the creation or elimination of jobs within the state because the proposed action is for increased recreational purple sea urchin take that is not likely to involve a substantial increase in diver visits or area expenditures. At recent Northern California removal events the most common dive methods used were SCUBA and free-diving that may spur a small increase in local spending on diving equipment rentals and/or purchases. The proposed action also increases the recreational possession of red sea urchins (in Tanker Reef). Red sea urchins are a commercially targeted species, but historically red sea urchins have not been regularly commercially landed in Monterey County, as shown in Table 1. Additionally, stressed red sea urchins, as occur in the urchin barrens, have reduced commercial value due to gonad tissue deterioration. These two factors support the expectation of no job impacts to the commercial red sea urchin fishery.

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses Within the State

The Commission anticipates no impacts on the creation new businesses or the elimination of existing businesses within the state because the proposed action is for increased recreational sea urchin take that is not likely to involve a substantial increase in the number of diver visits or area expenditures. The most common methods used are SCUBA diving and free-diving that may spur a small increase in local spending on diving equipment rentals and/or purchases. The proposed action increases the recreational take of red sea urchins (in Tanker Reef). Red sea urchins are a commercial target species, but historically red sea urchins have not been commercially landed in Monterey County, since a small quantity in 2015 (see Table 1.). Additionally, stressed red sea urchins reduces the commercial value of the harvest due to tissue deterioration. These two factors support the expectation of no impact to the commercial red sea urchin fishery and/or associated businesses.

(c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State

The Commission anticipates no impacts on the expansion of businesses currently doing business within the state because the proposed action is for increased recreational purple sea urchins take that is not likely to involve a substantial increase in diver numbers or spending. The most common methods used are SCUBA diving and free-diving that may spur a small increase in local spending on diving equipment rentals and/or purchases. The proposed action also increases the recreational take of red sea urchins (in Tanker Reef). Red sea urchin are a commercial target species, but historically red sea urchins have not been commercially landed in Monterey County. Additionally, stressed red sea urchins reduces the commercial value of the harvest due to tissue deterioration. These two factors support the expectation of no impact to the commercial red sea urchin fishery and/or associated businesses.

(d) Benefits of the Regulation to the Health and Welfare of California Residents

The Commission anticipates generalized benefits to the health and welfare of California residents with increased recreational sea urchin take and because the program is an effort to restore vital kelp forests that support diverse species and healthier marine ecosystems which many residents value and that may also benefit coastal economies.

(e) Benefits of the Regulation to Worker Safety

The Commission anticipates no impacts on the worker safety because the proposed action does not have any bearing on to working conditions.

(f) Benefits of the Regulation to the State's Environment

The Commission anticipates benefits to the State's environment by contributing to the restoration of vital kelp forest ecosystems.

Informative Digest/Policy Statement Overview

The Fish and Game Commission (Commission) and the Department of Fish and Wildlife (Department) are proposing to amend Section 29.06 of Title 14, California Code of Regulations (CCR). The proposed regulations would establish two areas for kelp restoration and information collection efforts aided by recreational divers. The proposal is the state's most recent attempt to help restore depleted and diminishing kelp forests in Central and Northern California following warmer than normal ocean conditions and the loss of predatory sea stars to wasting disease. Many former kelp forests are now urchin barrens, and new kelp stands cannot be reestablished due to overgrazing by sea urchins.

Best available studies suggest that sea urchin density can be controlled only if sufficient mortality can be incurred. This proposal puts forth Caspar Cove in Mendocino County and Tanker Reef in Monterey County as two sites where recreational divers will be able to test the feasibility of controlling sea urchin populations through recreational diving efforts. It is hoped that kelp refuges can be created at these sites and when ocean conditions are again favorable for kelp growth and return of natural predators, these areas can provide the necessary spore banks to reseed the coast.

Under the proposed regulations, recreational divers are allowed to take unlimited purple sea urchins in Caspar Cove and unlimited purple sea urchins and red sea urchins at Tanker Reef. Take of red sea urchin will not be allowed in Caspar Cove because of an active commercial red sea urchin fishery in the area. Take must be conducted by hand or with hand-held tools due to the risks that automated or pressurized machines pose to the hard substrate of the reefs. The primary purpose of the proposed regulations is to collect data and gather information; the regulations will sunset on April 1, 2024. Upon the expiration of the proposed regulations, the Commission and the Department will work to implement the next step of its adaptive management based on information gathered.

Benefits of the Regulations

The primary goal of this proposal is to test the effectiveness of kelp restoration through sea urchin control by recreational divers at two test sites. The results from the test sites will help inform future kelp restoration projects. The proposal can also potentially contribute to the overall statewide kelp restoration effort.

Consistency and Compatibility with Existing Regulations

The Legislature has delegated authority to the Commission to promulgate recreational fishing regulations (Fish and Game Code, sections 200 and 205); no other state agency has the authority to promulgate such regulations. The Commission has conducted a search of Title 14, CCR and determined that the proposed regulation is neither inconsistent nor incompatible with existing state regulations and that the proposed regulations are consistent with other recreational fishing regulations and marine protected area regulations in Title 14, CCR.

Proposed Regulatory Language

Section 29.06 is amended, as follows:

§ 29.06. Purple-Sea Urchin.

- (a) Except as provided in this section, the daily bag limit for ~~purple~~-sea urchin is 35 individuals for each species.
- (b) The daily bag limit for purple sea urchin is forty (40) gallons when taken while skin or SCUBA diving in ocean waters of the following counties: Humboldt, Mendocino, and Sonoma.
- (c) There is no possession limit for purple sea urchin.
- (d) Notwithstanding other parts of this Section and until April 1, 2024:

(1) In ocean waters seaward of Caspar Headlands State Beach commonly referred to as Caspar Cove, in Mendocino County, in the area eastward of a straight line connecting points between 39° 22.045' N. lat. 123° 49.462' W. long. and 39° 21.695' N. lat. 123° 49.423' W. long., purple sea urchins may be taken in any number for the purpose of restoring the kelp ecosystem. Purple sea urchins may only be taken by hand or with manually operated hand-held tools.

(2) In ocean waters seaward of Fort Ord Dunes State Park commonly referred to as Tanker Reef, in Monterey County, in the area eastward of a straight line connecting points between 36° 36.076' N. lat. 121° 53.225' W. long. and 36° 36.679' N. lat. 121° 53.220' W. long., westward of a straight line connecting points between 36° 36.649' N. lat. 121° 51.594' W. long. and 36° 37.094 N. lat. 121° 51.914 W. long., and shoreward of a straight line connecting points between 36° 36.679' N. lat. 121° 53.220' W. long. and 36° 37.094' N. lat. 121° 51.914' W. long., red sea urchins and purple sea urchins may be taken in any number for the purpose of restoring the kelp ecosystem. Red sea urchins and purple sea urchins may only be taken by hand or with manually operated hand-held tools.

Note: Authority cited: Sections 200 and 205, Fish and Game Code.

Reference: Sections 200 and 205, Fish and Game Code.

Memorandum

Date: November 30, 2020

To: Melissa Miller-Henson
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Submission of Pre-Adoption Statement of Reasons to Amend Section 29.06, Title 14, CCR, RE: Recreational Sea Urchin Bag Limit Exemption**

Please find attached the Pre-Adoption Statement of Reasons (PSOR) for the amendment to Section 29.06, Title 14, CCR. The amendments create a limited-term bag limit exemption for recreational divers taking purple sea urchins in Caspar Cove, as well as both red and purple sea urchins at Tanker Reef, until April 1, 2024. No changes were made to the original proposed regulations.

If you have any questions or need additional information, please contact Dr. Craig Shuman, Marine Regional Manager at (805) 568-1246.

cc: Stafford Lehr, Deputy Director
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State of California
Fish and Game Commission
Pre-Adoption Statement of Reasons for Regulatory Action
Amend Section 29.06
Title 14, California Code of Regulations
Re: Recreational Sea Urchin Bag Limit Exemption

I. Dates of Statements of Reasons

- (a) Initial Statement of Reasons Date: August 26, 2020
- (b) Pre-Adoption Statement of Reasons Date: December 9, 2020

II. Dates and Locations of Scheduled Hearings

- (a) Notice Hearing
 - Date: August 19, 2020 Location: Teleconference
- (b) Discussion Hearing
 - Date: October 14, 2020 Location: Teleconference
- (c) Adoption Hearing
 - Date: December 9, 2020 Location: Teleconference

III. Description of Modification to the Initial Statement of Reasons (ISOR)

No changes have been made to the originally proposed regulatory language. A request was made by a stakeholder to correct the citation to Figure 2, which forms part of the background information for this rulemaking. The dataset itself has not changed, and the update to citation does not change the regulatory language or any of its underlying justifications. The figure is updated to the following:

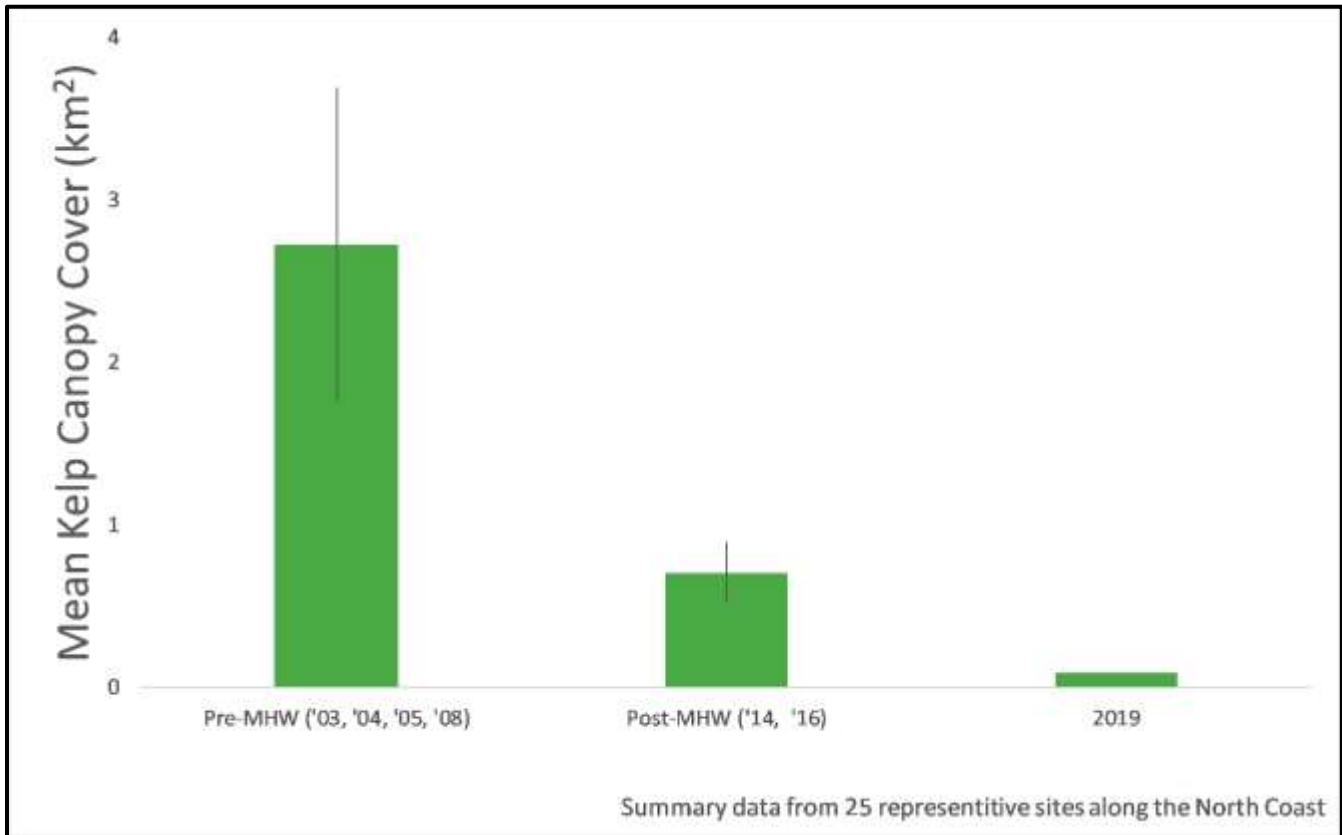


Figure 2. Bull Kelp Canopy Coverage developed from representative sites centered around Sonoma County coastline using aerial drones (Source: Soccomanno et al. 2020).

The citation “The Nature Conservancy. (2019) summary Data from 25 Representative Sites along the North Coast.” under section (f) of the Initial Statement of Reasons is updated to “Saccomanno, V.R., Eddy, N.E., Hohman, R., Klausmeyer, K.R., Cavanaugh, K.C., Bell, T.W., Hewerdine, W., et al. (2020). Manuscript in preparation.”

The Department is recommending the adoption of the proposed regulatory language as described in the ISOR.

IV. Reasons for Modification to the ISOR

The modification is to correct and update a citation that forms part of the background information for the proposed regulatory language. The change is being made in response to request by the author of the reference. The underlying dataset has not changed, thus no substantive change to the regulatory language is warranted.

V. Summary of Primary Considerations Raised in Support of or Opposition to the Proposed Actions and Reasons for Rejecting Those Considerations

Several instances of support are noted. Some commenters expressed concern with the inclusion of red urchins at Tanker Reef and support for the lack of an exemption for red urchin take in Caspar Cove, while others expressed concern for the exclusion of red urchin take in Caspar Cove. The Department considered the inclusion of red urchins at Caspar Cove and, pursuant to the rationale provided in the ISOR, declined to include it in the proposal. Department has also been contacted by the Tolowa Dee-ni' Nation, which does not oppose the proposal but requests further information regarding Department's plan to monitor the effects of the proposal. See Attachment 1 for details.

Proposed Regulations

The regulatory proposal remains unchanged from the ISOR. Take of purple sea urchin by hand while diving in Caspar Cove and at Tanker Reef would be exempted from daily bag limit, while take of red sea urchin by hand while diving at Tanker Reef would be exempted from daily bag limit as well. The exemptions would sunset on April 1, 2024.

UPDATE

No modifications were made to the originally proposed regulatory language in the Initial Statement of Reasons. There have been no changes in applicable laws or to the effect of the proposed regulations from the laws and effects described in the Notice of Proposed Action. In response to stakeholder input, the citation "The Nature Conservancy. (2019) summary Data from 25 Representative Sites along the North Coast." is updated to "Saccomanno, V.R., Eddy, N.E., Hohman, R., Klausmeyer, K.R., Cavanaugh, K.C., Bell, T.W., Hewerdine, W., et al. (2020). Manuscript in preparation." All in-text citations, including citation for Figure 2, are updated. The change is not substantive.

Attachment 1

Commenter Name, Format, Date	Comment	Response
Responses to unique Comments received during September 29-November 1, 2020. <i>Comments are paraphrased from the commenters for succinctness.</i>		
1 Leann McCallum Mail dated 9/21/2020	a. Commenter acknowledges the ecological conditions in the north coast and approves of the temporary unlimited urchin take as proposed.	a. Support noted
	b. Commenter is concerned over the long-term impact of unlimited sea urchin take and incidental impact from potentially increased access, and requests further information on future monitoring plan.	b. Recommendations for a robust monitoring plan are currently being collaboratively developed by staff from the Department, the Ocean Protection Council, the Monterey Bay National Marine Sanctuary, California Sea Grant, and the recreational dive community. Monitoring will compare differences between treatments (in-water culling) and control (no culling) areas before and after the treatment application and will focus on the following questions: <ul style="list-style-type: none"> • Can recreational divers operating under sea urchin sport harvest regulations reduce sea urchin densities to levels expected to facilitate kelp regrowth (<2 urchins/m²) via in-water urchin culling? • Does reduction of sea urchin grazing pressure via in-water urchin culling facilitate natural kelp regrowth? • Can monitoring detect negative impacts associated with in-water urchin culling (e.g. bycatch, damage to underlying reef structure, disturbance to marine mammal populations)?
2 John Holcomb Email dated 10/11/2020	Commenter argues that not exempting red sea urchin take in Caspar Cove from recreational bag limit is a mistake. There is a huge number of malnourished red sea urchins in Caspar Cove that are preventing kelp from growing back, and their malnourished state makes them unharvestable. There is no active commercial red sea urchin fishery at the moment, and complaints against a red sea urchin bag limit exemption in Caspar Cove are absurd.	The state recognizes the risk of not subjecting red sea urchin take to the bag limit exemption. However, in the case of Caspar Cove, the nature of the ecological emergency is in conflict with the socioeconomic emergency of a fishery that is currently undergoing a federally recognized disaster. Over 20,000lbs of red sea urchins have been taken from block 262 (which contains Caspar Cove) so far this year. While this is not a high number, especially in the context of historical landings, it does show that the red sea urchins in that area are still being targeted by fishery participants in this difficult time. In addition, part of the advantage of applying different treatments to Caspar Cove and Tanker Reef is to help facilitate a limited adaptive-management

Attachment 1

			process. If diver participation can materialize, and disparities between the two efforts can be accounted for, the difference in red sea urchin treatment can help guide future management effort as the state grapples with maintaining healthy kelp forests and supporting a robust urchin fishery.
3	Downie Grant Email dated 10/11/2020	Commenter supports not exempting red sea urchin take in Caspar Cove. Commenter attests that he has taken 400lbs of red sea urchin from Caspar Cove earlier in September.	Comment noted
4	Nancy Caruso Email dated 10/12/2020	Commenter argues that not exempting red sea urchin take in Caspar Cove is not logical. Commenter's past experience restoring kelp forests in Orange County included removal of both purple sea urchin and red sea urchin.	See Response to Comment 2 above.
5	Dave Rudy Commission Meeting 10/14/2020	Commenter is concerned over the take of red sea urchin. State should consider moving red sea urchin or feed them in place.	The State is cognizant of the commercial importance of red sea urchin. The proposal allowing unlimited red sea urchin take at Tanker Reef is primarily experimental, and is being contemplated explicitly because no commercial red sea urchin has occurred in the area historically.
6	Keith Rootsart Commission Meeting 10/14/2020	Commenter updates the Commission on the recent development of the monitoring plan. Also provides general support for the proposed regulation.	Comment and support noted
7	Paul Michelle Commission Meeting 10/14/2020	Commenter speaks to the collaborative nature of the planning process.	Comment noted
8	Dennis Lynch Commission Meeting 10/14/2020	General support for the proposal.	Support noted

STATE OF CALIFORNIA — DEPARTMENT OF FINANCE

**ECONOMIC AND FISCAL IMPACT STATEMENT
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

ECONOMIC IMPACT STATEMENT

DEPARTMENT NAME Fish and Game Commission	CONTACT PERSON Margaret.Duncan	EMAIL ADDRESS @wildlife.ca.gov	TELEPHONE NUMBER 916-704-3215
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400 Amend Section 29.06, Title 14, CCR: Re: Recreational Sea Urchin Bag Limit Exemption			NOTICE FILE NUMBER Z

A. ESTIMATED PRIVATE SECTOR COST IMPACTS *Include calculations and assumptions in the rulemaking record.*

1. Check the appropriate box(es) below to indicate whether this regulation:

- | | |
|--|---|
| <input checked="" type="checkbox"/> a. Impacts business and/or employees | <input type="checkbox"/> e. Imposes reporting requirements |
| <input checked="" type="checkbox"/> b. Impacts small businesses | <input type="checkbox"/> f. Imposes prescriptive instead of performance |
| <input type="checkbox"/> c. Impacts jobs or occupations | <input checked="" type="checkbox"/> g. Impacts individuals |
| <input type="checkbox"/> d. Impacts California competitiveness | <input type="checkbox"/> h. None of the above (Explain below): |

*If any box in Items 1 a through g is checked, complete this Economic Impact Statement.**If box in Item 1.h. is checked, complete the Fiscal Impact Statement as appropriate.***Fish and Game Commission**2. The Fish and Game Commission (Agency/Department) estimates that the economic impact of this regulation (which includes the fiscal impact) is:

- ☒ Below \$10 million
- ☐ Between \$10 and \$25 million
- ☐ Between \$25 and \$50 million
- ☐ Over \$50 million *(If the economic impact is over \$50 million, agencies are required to submit a [Standardized Regulatory Impact Assessment](#) as specified in Government Code Section 11346.3(c))*

3. Enter the total number of businesses impacted: >300 indirectlyDescribe the types of businesses (Include nonprofits): Ocean diving eqt. rental and supporting services may have increases in businessEnter the number or percentage of total businesses impacted that are small businesses: 80%4. Enter the number of businesses that will be created: 0 eliminated: 0Explain: This regulation increases the bag and possession limit for an existing recreational fishery5. Indicate the geographic extent of impacts: ☐ Statewide☒ Local or regional (List areas): Mendocino and Monterey Counties6. Enter the number of jobs created: 0 and eliminated: 0Describe the types of jobs or occupations impacted: n/a

7. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here?

☐ YES☐ NO

If YES, explain briefly:

**ECONOMIC AND FISCAL IMPACT STATEMENT
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

ECONOMIC IMPACT STATEMENT (CONTINUED)**B. ESTIMATED COSTS** *Include calculations and assumptions in the rulemaking record.*1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? \$ 0*a. Initial costs for a small business: \$ 0 Annual ongoing costs: \$ 0 Years: 3**b. Initial costs for a typical business: \$ 0 Annual ongoing costs: \$ 0 Years: 3**c. Initial costs for an individual: \$ _____ Annual ongoing costs: \$ _____ Years: 3**d. Describe other economic costs that may occur: *No costs impacts incurred for compliance. See Addendum** Regulation is proposed to sunset April 1, 2024, three years after the effective date.2. If multiple industries are impacted, enter the share of total costs for each industry: n/a3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements.
Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted. \$ n/a4. Will this regulation directly impact housing costs? ☐ YES ☒ NO

If YES, enter the annual dollar cost per housing unit: \$ _____

Number of units: _____

5. Are there comparable Federal regulations? ☐ YES ☒ NOExplain the need for State regulation given the existence or absence of Federal regulations: Critical kelp habitat destruction is within State waters.

Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: \$ _____

C. ESTIMATED BENEFITS *Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment: Health and welfare of CA residents may benefit from increased recreational take of sea urchin. Worker safety not affected. Benefits to the State's environment are anticipated through the restoration of kelp forest habitats to foster and support a diverse balance of species.2. Are the benefits the result of: ☐ specific statutory requirements, or ☒ goals developed by the agency based on broad statutory authority?Explain: FGC code section 200 provides the "Commission's Power to Regulate Taking of Fish and Game"3. What are the total statewide benefits from this regulation over its lifetime? \$ difficult to monetize4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: No impact on the expansion of businesses is anticipated.Some dive shops may have some increase in business, but since small numbers of new divers expected, no expansion.**D. ALTERNATIVES TO THE REGULATION** *Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: _____

1) Only allow take of Purple Sea Urchin at Tanker Reef (no Red Sea Urchin); 2) Expanded Tanker Reef western boundary.See Addendum for details.

**ECONOMIC AND FISCAL IMPACT STATEMENT
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

ECONOMIC IMPACT STATEMENT (CONTINUED)

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation: Benefit: \$ * Cost: \$ 0Alternative 1: Benefit: \$ < proposed Cost: \$ 0Alternative 2: Benefit: \$ < proposed Cost: \$ 0

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives:

*Difficult to monetize benefits of possible habitat restoration that may or may not be successful will be influenced by unknown contingencies.

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs?

☐ YES☐ NOExplain: Management of sea urchins affect on kelp forest restoration is more readily implemented and enforced with prescriptive regulations.**E. MAJOR REGULATIONS** *Include calculations and assumptions in the rulemaking record.**California Environmental Protection Agency (Cal/EPA) boards, offices and departments are required to submit the following (per Health and Safety Code section 57005). Otherwise, skip to E4.*1. Will the estimated costs of this regulation to California business enterprises exceed \$10 million? ☐ YES ☐ NO*If YES, complete E2. and E3**If NO, skip to E4*

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: _____

Alternative 2: _____

(Attach additional pages for other alternatives)

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation: Total Cost \$ _____ Cost-effectiveness ratio: \$ _____

Alternative 1: Total Cost \$ _____ Cost-effectiveness ratio: \$ _____

Alternative 2: Total Cost \$ _____ Cost-effectiveness ratio: \$ _____

4. Will the regulation subject to OAL review have an estimated economic impact to business enterprises and individuals located in or doing business in California exceeding \$50 million in any 12-month period between the date the major regulation is estimated to be filed with the Secretary of State through 12 months after the major regulation is estimated to be fully implemented?

☐ YES ☒ NO*If YES, agencies are required to submit a Standardized Regulatory Impact Assessment (SRIA) as specified in Government Code Section 11346.3(c) and to include the SRIA in the Initial Statement of Reasons.*

5. Briefly describe the following:

The increase or decrease of investment in the State: Proposed regulation will not impact investment incentives in the State.The incentive for innovation in products, materials or processes: Proposed regulation will not provide incentives for innovation in products, materials or processes.The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency: Benefits to the State's environment with the restoration of kelp forest habitats that foster and support a diverse balance of species.

**ECONOMIC AND FISCAL IMPACT STATEMENT
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

FISCAL IMPACT STATEMENT**A. FISCAL EFFECT ON LOCAL GOVERNMENT** *Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

- ☐ 1. Additional expenditures in the current State Fiscal Year which are reimbursable by the State. (Approximate)
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ _____

- ☐ a. Funding provided in _____
Budget Act of _____ or Chapter _____, Statutes of _____

- ☐ b. Funding will be requested in the Governor's Budget Act of _____
Fiscal Year: _____

- ☐ 2. Additional expenditures in the current State Fiscal Year which are NOT reimbursable by the State. (Approximate)
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ _____

Check reason(s) this regulation is not reimbursable and provide the appropriate information:

- ☐ a. Implements the Federal mandate contained in _____
- ☐ b. Implements the court mandate set forth by the _____ Court.

Case of: _____ vs. _____

- ☐ c. Implements a mandate of the people of this State expressed in their approval of Proposition No. _____

Date of Election: _____

- ☐ d. Issued only in response to a specific request from affected local entity(s).

Local entity(s) affected: _____

- ☐ e. Will be fully financed from the fees, revenue, etc. from: _____
Authorized by Section: _____ of the _____ Code;

- ☐ f. Provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each;

- ☐ g. Creates, eliminates, or changes the penalty for a new crime or infraction contained in _____

- ☐ 3. Annual Savings. (approximate)

\$ _____

- ☐ 4. No additional costs or savings. This regulation makes only technical, non-substantive or clarifying changes to current law regulations.

- ☐ 5. No fiscal impact exists. This regulation does not affect any local entity or program.

- ☒ 6. Other. Explain Increases in diver visits may result in small increases in local sales tax (estimated \$6,250); and in TOT tax (estimated \$20,000) received by governments in the affected coastal areas, but also to other areas enroute.

STATE OF CALIFORNIA — DEPARTMENT OF FINANCE

**ECONOMIC AND FISCAL IMPACT STATEMENT
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

FISCAL IMPACT STATEMENT (CONTINUED)**B. FISCAL EFFECT ON STATE GOVERNMENT** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ _____

It is anticipated that State agencies will:☐ a. Absorb these additional costs within their existing budgets and resources.☐ b. Increase the currently authorized budget level for the _____ Fiscal Year☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ _____

☐ 3. No fiscal impact exists. This regulation does not affect any State agency or program.☒ 4. Other. Explain Increases in diver visits may result in small increases in state sales tax (estimated \$36,250). CDFW may have a small increase in sportfishing license sales (estimated \$51,020).**C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*☐ 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ _____

☐ 2. Savings in the current State Fiscal Year. (Approximate)

\$ _____

☐ 3. No fiscal impact exists. This regulation does not affect any federally funded State agency or program.☐ 4. Other. Explain _____

FISCAL OFFICER SIGNATURE

 **Farrell, Dennis@Wildlife**Digitally signed by Farrell, Dennis@Wildlife
DN: DC=Gov, DC=Ca, DC=Dfg, DC=AD, OU=DFG Divisions, OU=AD, OU=Users, CN="Farrell, Dennis@Wildlife"
Reason: I am approving this document
Location: your signing location here
Date: 2020-10-02 08:50:18
Full (PhantomPDF) Version: 9.6.0

DATE

October 2, 2020

The signature attests that the agency has completed the STD. 399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or departments not under an Agency Secretary must have the form signed by the highest ranking official in the organization.

AGENCY SECRETARY

 **Bryan Cash**

DATE

10/27/2020

10/2/20

Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD. 399.

DEPARTMENT OF FINANCE PROGRAM BUDGET MANAGER



DATE



Amendments to Recreational Sea Urchin Regulations for Caspar Cove and Tanker Reef

California Fish and Game Commission Meeting
December 9, 2020

Sonke Mastrup
Environmental Program Manager
Marine Region

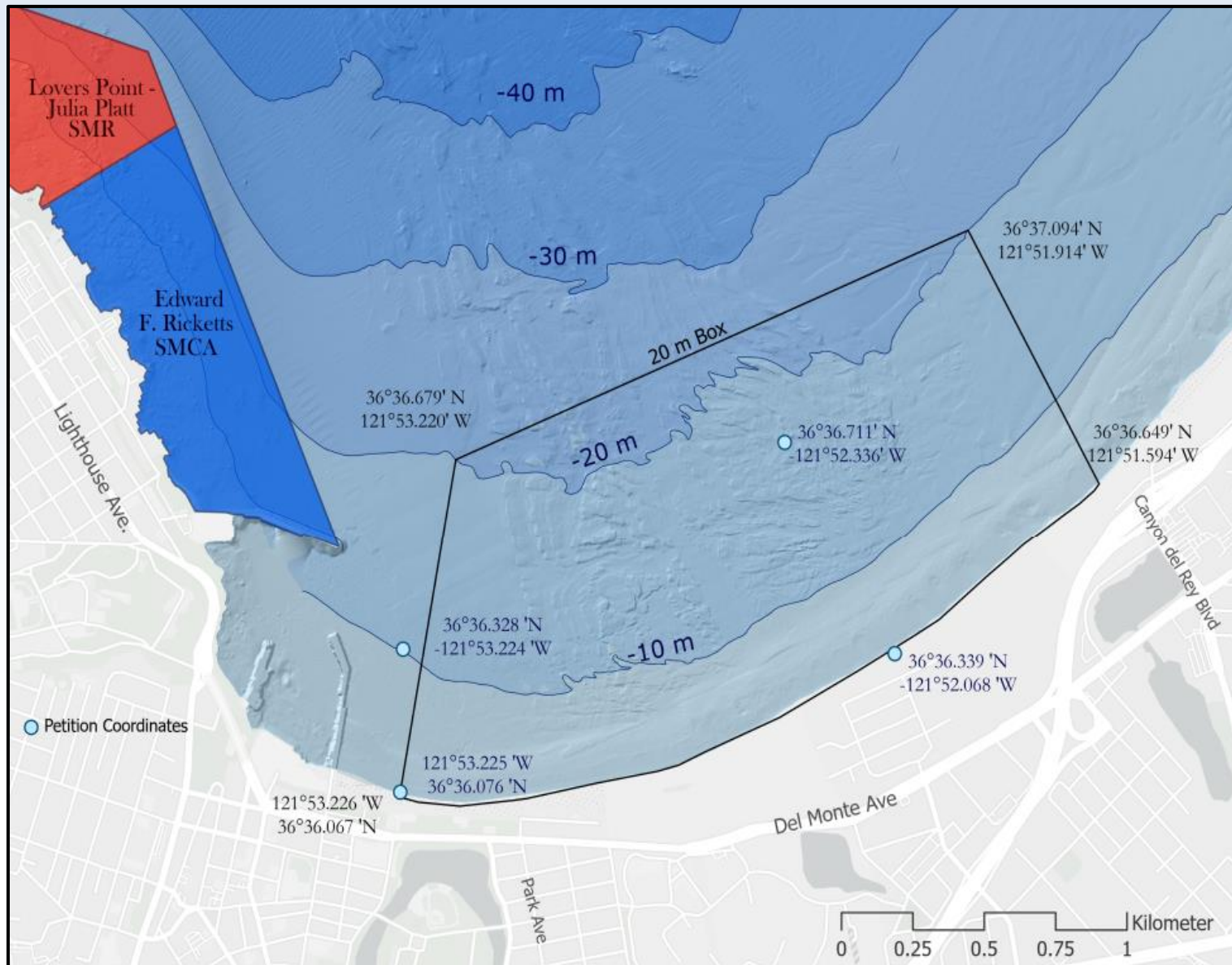


Proposed Amendments

- Proposed Amendments:
 - Extend the Caspar Cove regulations
 - Add Tanker Reef
 - Community led project
 - Project Area
 - Purple and Red Urchin
 - Sunset Date: April 1, 2024



Proposed boundary for Tanker Reef restoration site





Timeline

- August 2020 – Notice
- October 2020 – Discussion
- December 2020 – Potential adoption

Thank You

Sonke Mastrup
Environmental Program Manager
Sonke.Mastrup@Wildlife.ca.gov

