

# CSUC Petition 2023-14MPA

Allow the take of Red and Purple Sea urchins in 9 SMCAs

Test adaptive management for kelp recovery in some SMCAs, and support coastal fishing communities

California Fish and Game Commission –  
May 19, 2026

Point Dume SMCA

Point Vincente SMCA

Swami's SMCA

# Working with the CDFW and CFGC

- The California Sea Urchin commission was enacted by legislation to extend the work of the Directors sea urchin advisory committee (DSUAC)
- We have worked with the CDFW and the CFGC to fine tune our regulations over time as markets and ecosystems have changed
- DSUAC proposed TAE (permits and days open) and size limits to manage the fishery that were accepted by the CFGC in the 1990s
- In the early years we exported most of our product, now we compete against imported sea urchin
- CSUC is a partner in the Pacific Coast Ocean Restoration (PCOR) initiative and works with The Nature Conservancy (TNC ) and other partners by organizing commercial sea urchin removals in selected areas to promote protection for kelp restoration
- We can be a trusted partner going forward

# How I became a sea urchin harvester

- Fell in love with the ocean at 15
- NAUI dive certified at 16
- In college observed and learned about the sea urchin problem
- In 1974 the market for red sea urchins was 7 cents a pound
- Dropped out of UCI after 3 years of marine biology/chemistry
- Became a seaweed and sea urchin harvester
- 10 years full time harvesting sea urchins and seaweed
- 35 years managing up to 100 employees
- Sold my company Catalina offshore, 3 years ago, after 46 years in business
- My semi-retirement goal is to develop the market for purple sea urchins and help the kelp

# The history of San Diego Kelp Forests

- Kelp declined followed the 1957 El Niño into the 1960s
- Restoration efforts included collaboration among scientists, Kelco, and the California Department of Fish and Game & CFGC
- Quicklime was used to control red and purple sea urchins
- Commercial red sea urchin harvesting started in the early 1970s
- Divers reduced grazing pressure along kelp bed edges
- Kelp abundance reached historic highs by approximately 2013
- Now in San Diego, Kelp coverage is down inside/outside MPAs (warm water/competition)
- Sea urchin abundance is down now due to the harvest of legal size reds sea urchins, and periodic purple urchin die-off every 5-10 years
- We lost Important traditional harvesting areas to MPAs in 2013

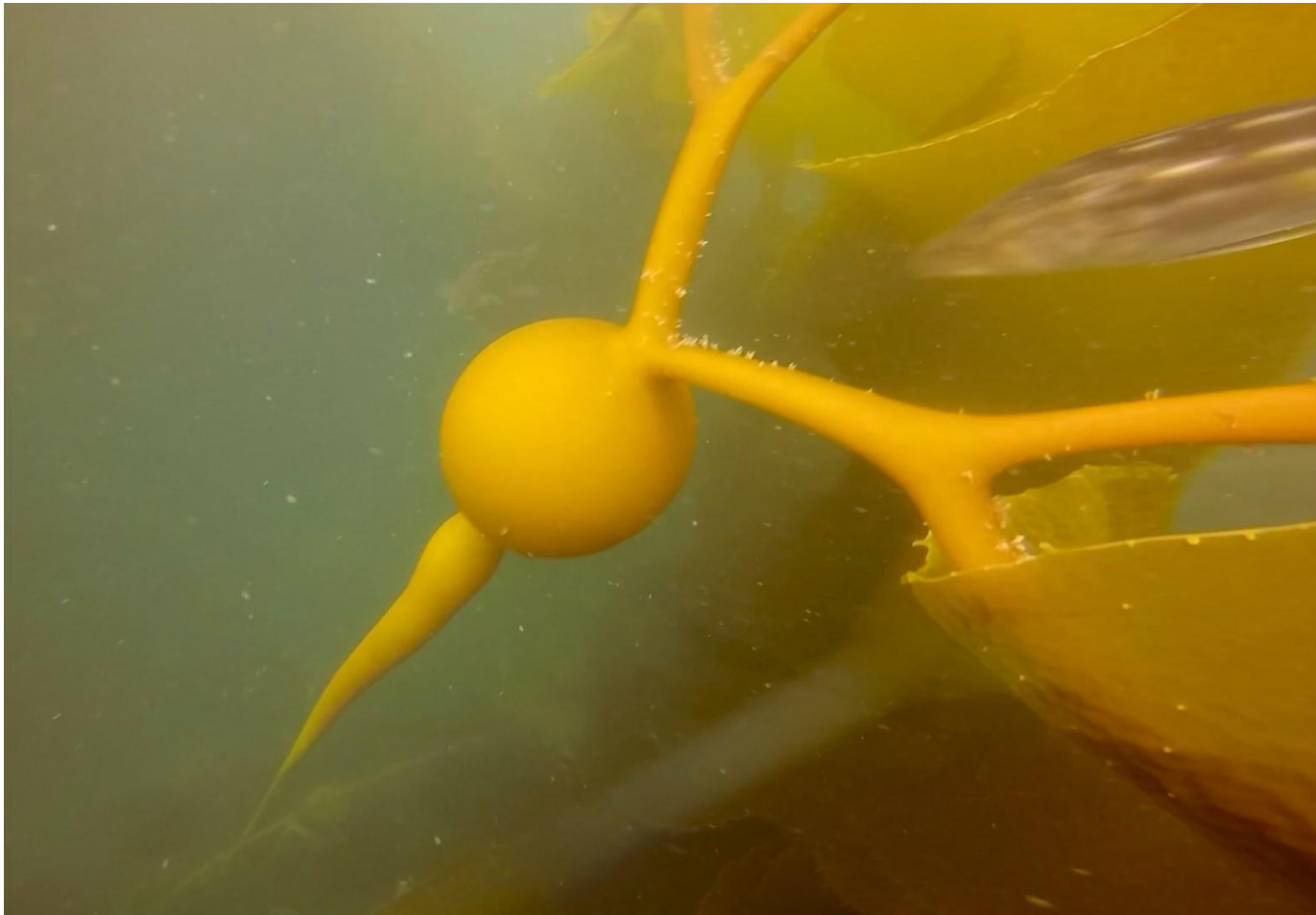
# We need more kelp

- Nor Cal Abalone famine (historic California closure )
- Red sea urchins/divers/industry decline due to lack of kelp
- Marine heat waves/El Ninos have the biggest impact on the loss of Kelp
- Recovery in La Ninas has been impacted by recent Pycnospodia pandemic and, competing kelp species like (Elk kelp)

# Elk Kelp *Plegophycus* is Expanding



This healthy habitat doesn't show  
on kelp maps (sub surface)



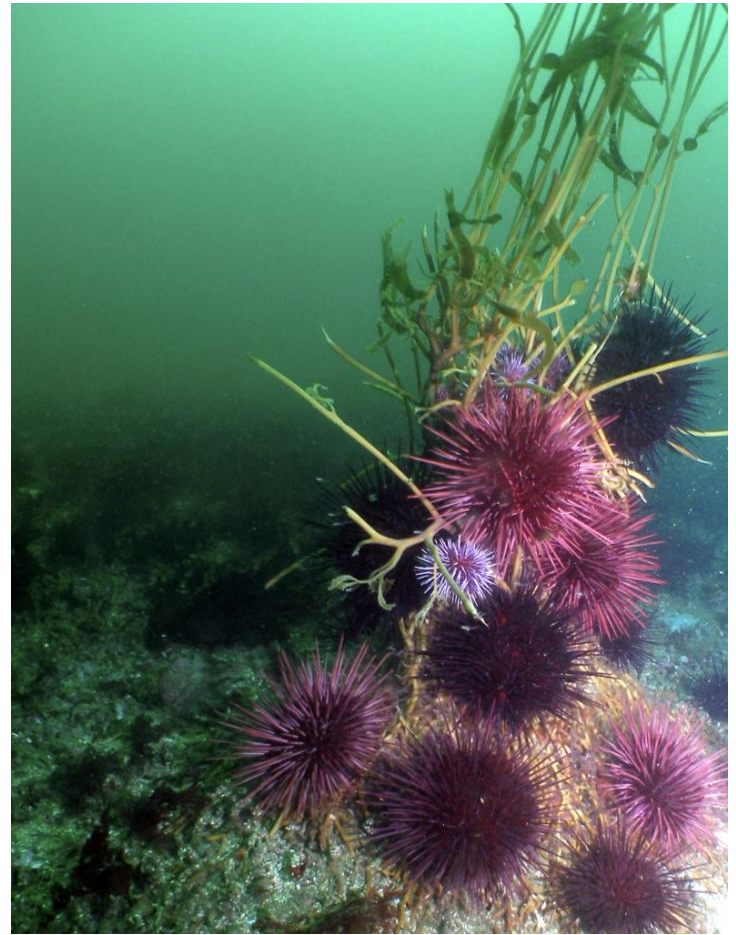
# The Feedline (edge of the food)

- The feedline edge is where sea urchin dominated area meets marine algae
- Sea Urchin quality is only good seasonally due to food supply
- In some areas the feedline is inter-tidal
- Sometimes it is deep water
- Sometimes it's the sand edge

# San Diego 2010 Feedline



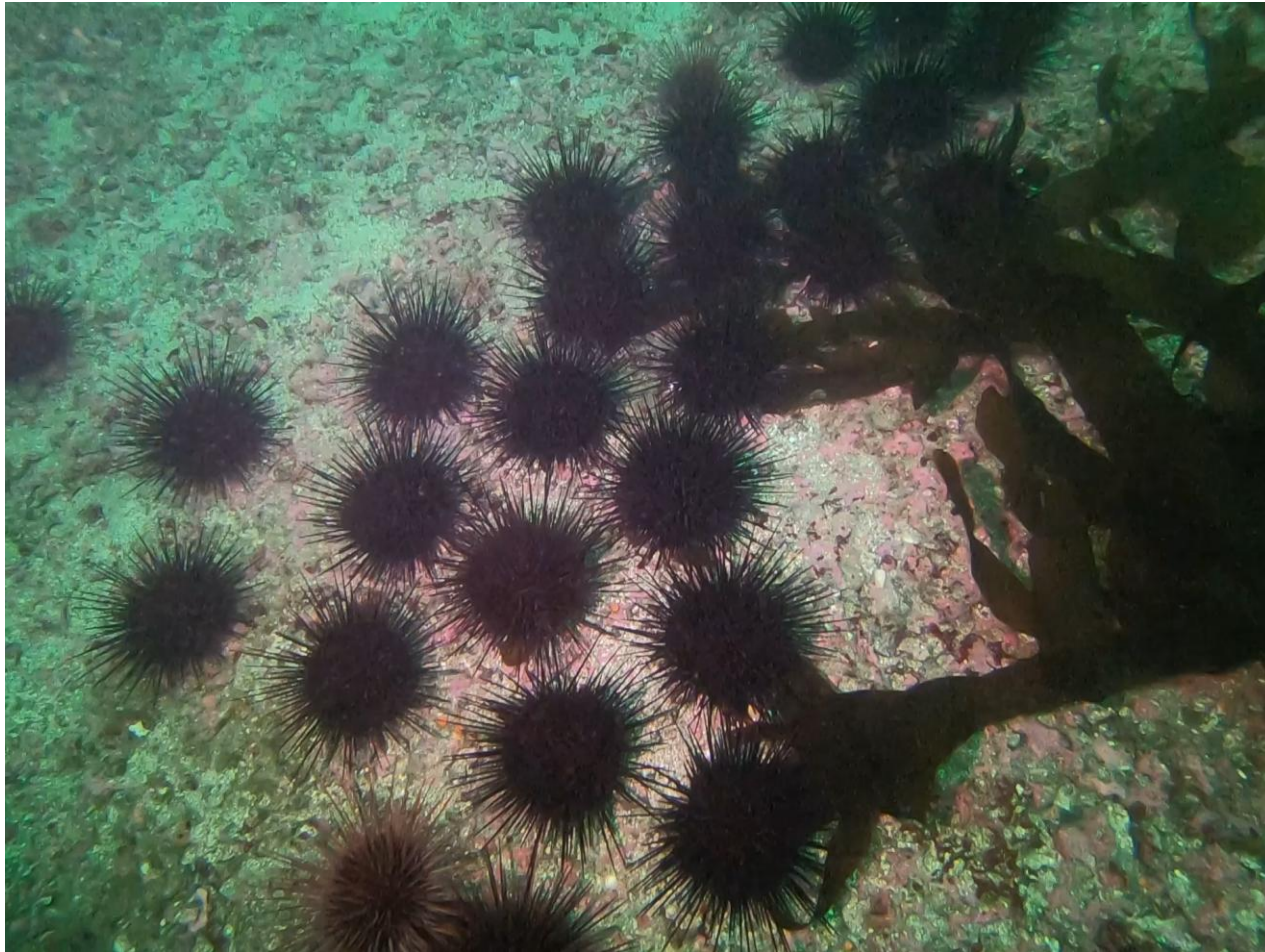
# 2010-2011 San Diego Feedline



# San Diego 2012 Feedline



# 2018 San Diego Feedline



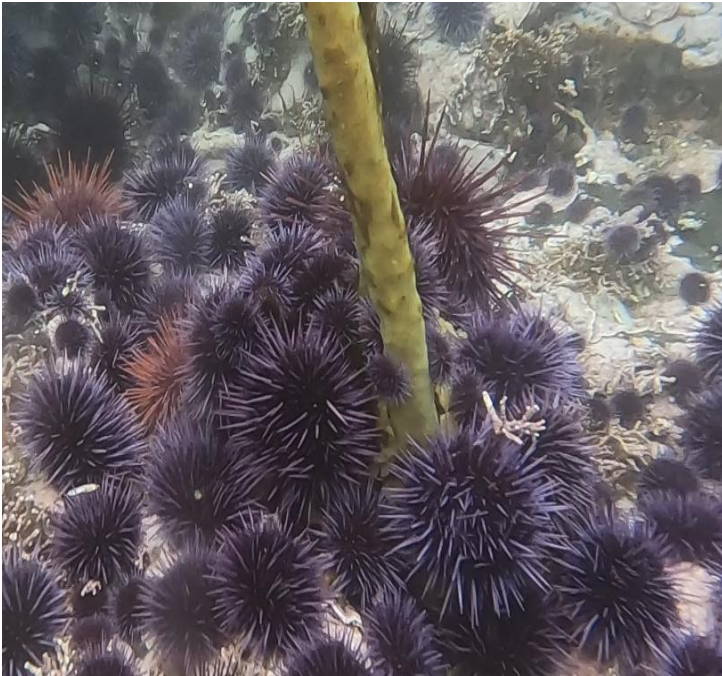
# San Diego Feedline 2019



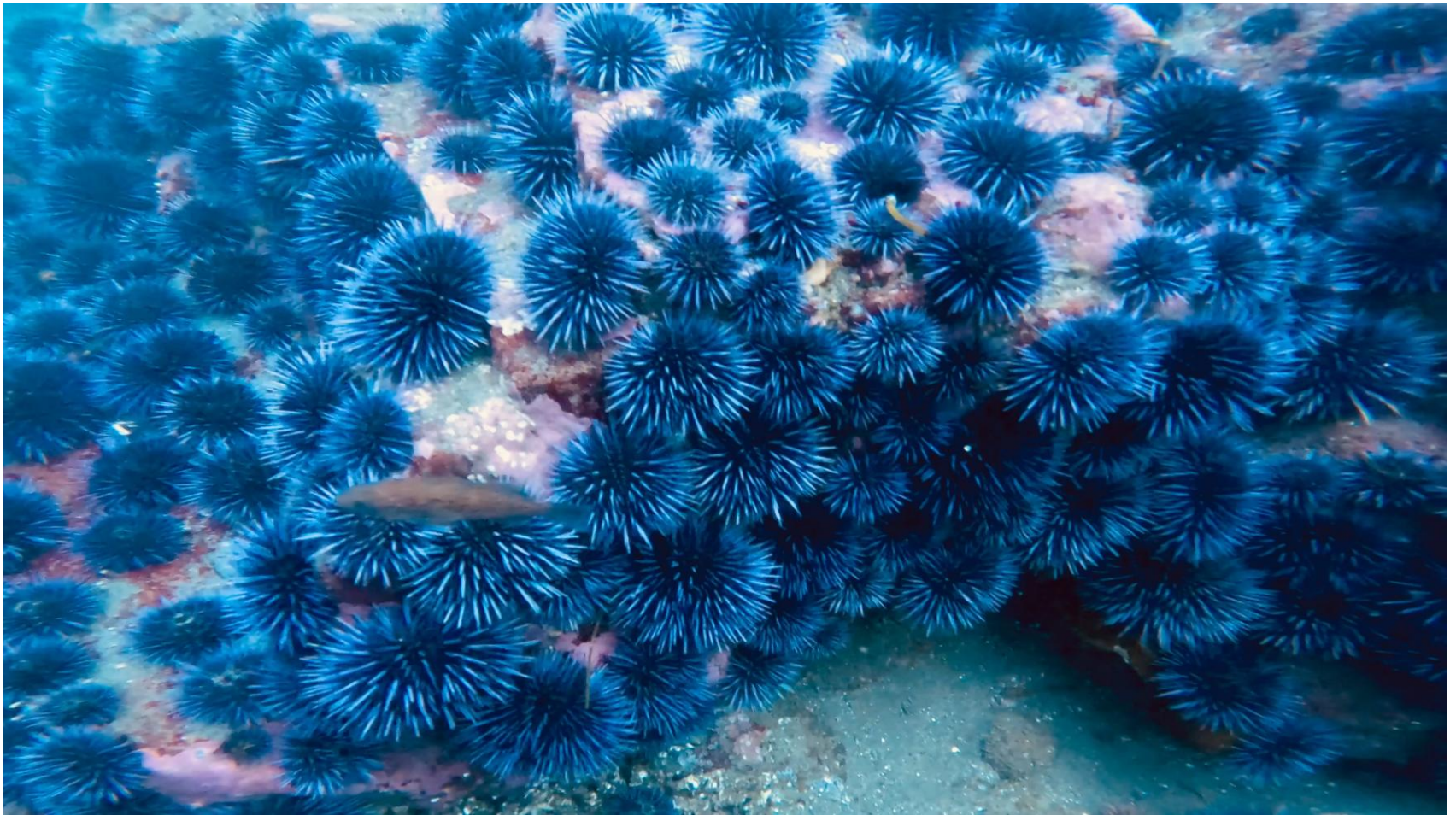
# 2024 Nor Cal Feedline



# Sea Urchin Abalone Behavior



# 2025 Nor Cal Feedline



# 2025 Nor Cal Feedline



# 2025 Nor Cal Abalone



# 2026 Nor Cal Feedline



# Pycnopodia pandemic



# Sheephead are Sea Urchin Predators



# Lobsters are Predators



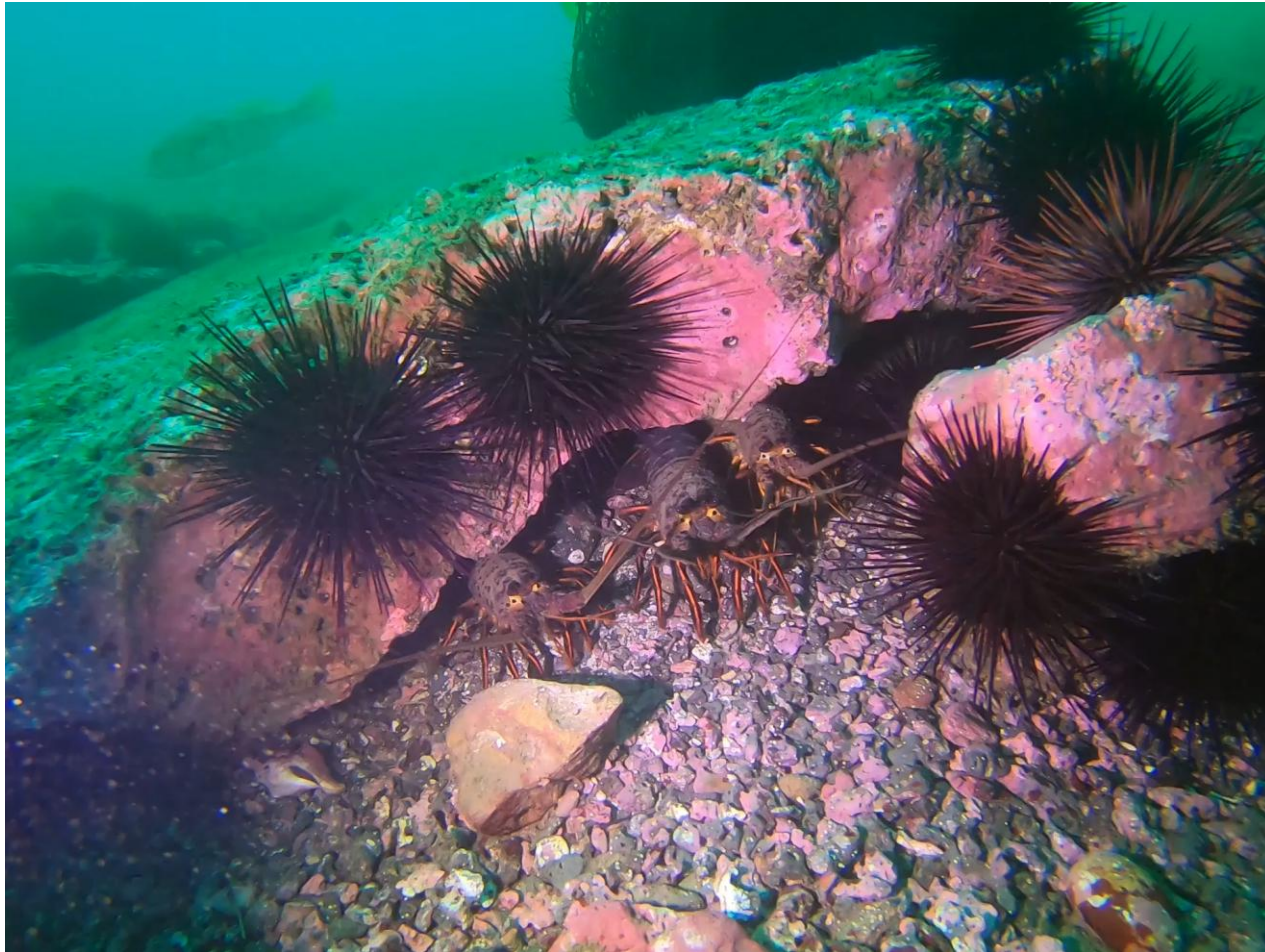
# Red Sea Urchin Predator



# We are the Guardians of the Kelp

- Sea urchin divers spend long hours under water observing and searching for urchin.
- Sea urchins gather on the edges of sea urchin dominated areas (Feedlines)
- Harvesting sea urchins near the edges defends the kelp as divers remove grazing sea urchins from kelp holdfasts (saving the entire plant)

# Filling the Bag



# Catch of the Day - Reds



# Red Sea Urchin Uni Tray



# Purple Sea Urchin Predator



# Harvesting for the Market



# Catch of the Day - Purples



# Plump Purple Sea Urchin - Uni



# Often Served in the Shell (Test)



# Purple sea urchin uni tray



# CSUC Petition 2023-14MPA

- We propose to harvest both purple and red sea urchins
- Need to determine site specific ratios of purple/red for removal
- Focus on economic recovery and ecosystem recovery
- 80% drop in SU landings since 2013 (loss of kelp and key habitat)
- CSUC is open to refining areas under consideration
- CSUC is open to pilot-scale implementation and cooperation with other entities (Tribes, scientists, local communities, NGOs etc.)
- Please support the revitalization of the blue economy with this restorative dive fishery.
- This petition aligns with the CFGC Coastal Fishing Communities (CFC) policy
- Proposal also aligns with some of the MLPA goals

# 2023-14 MPLA Goals Alignment

- Defending the kelp by harvesting the edges helps protect the natural diversity and abundance of marine life, and the structure, function, and integrity of kelp ecosystems
- Reducing grazing pressure of sea urchins helps the kelp, and may help sustain, conserve, and protect marine life populations, including those of economic value, and helps rebuild those that are depleted, such as abalone in NorCal
- Improve educational and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity, by allowing this petition/experiment to proceed

# Our request

- If you can't approve Petition 2023-14MPA due to CDFW advice:
- Direct our petition to the CDFW to explore the use of the Restoration Management Permit (RMP) to conduct kelp restoration within the selected MPAs

# Thank You for Listening



Sea urchin harvesting can help the kelp

The CSUC is committed to collaborative, science-based adaptive management.

Our proposal can be win-win for the environment and the economy

# Science papers and links

- <https://www.int-res.com/articles/meps/77/m077p049.pdf>
- <https://esajournals.onlinelibrary.wiley.com/doi/10.1002/eap.70181>
- <https://pubmed.ncbi.nlm.nih.gov/34190357/>
- <https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1002/ecy.2625>
- <https://www.sandiegouniontribune.com/2026/03/12/a-profound-shift-study-sheds-light-on-decades-of-kelp-health-and-decline-near-la-jolla/>

# Bio



## **Dave Rudie**

Dave Rudie founded Catalina Offshore Products as a sea urchin and seaweed harvesting company and over the years transformed it into a seafood processing and distribution company. Although he turned the management over to new owners in 2024, Dave still remains highly involved in the seafood industry. He is a partner at Pacific Rim Seafood, the Chair for the California Sea Urchin Commission, and the Chair for the highly migratory species advisory subpanel to the Pacific fisheries management council. He remains active as a sea urchin harvester off California.