

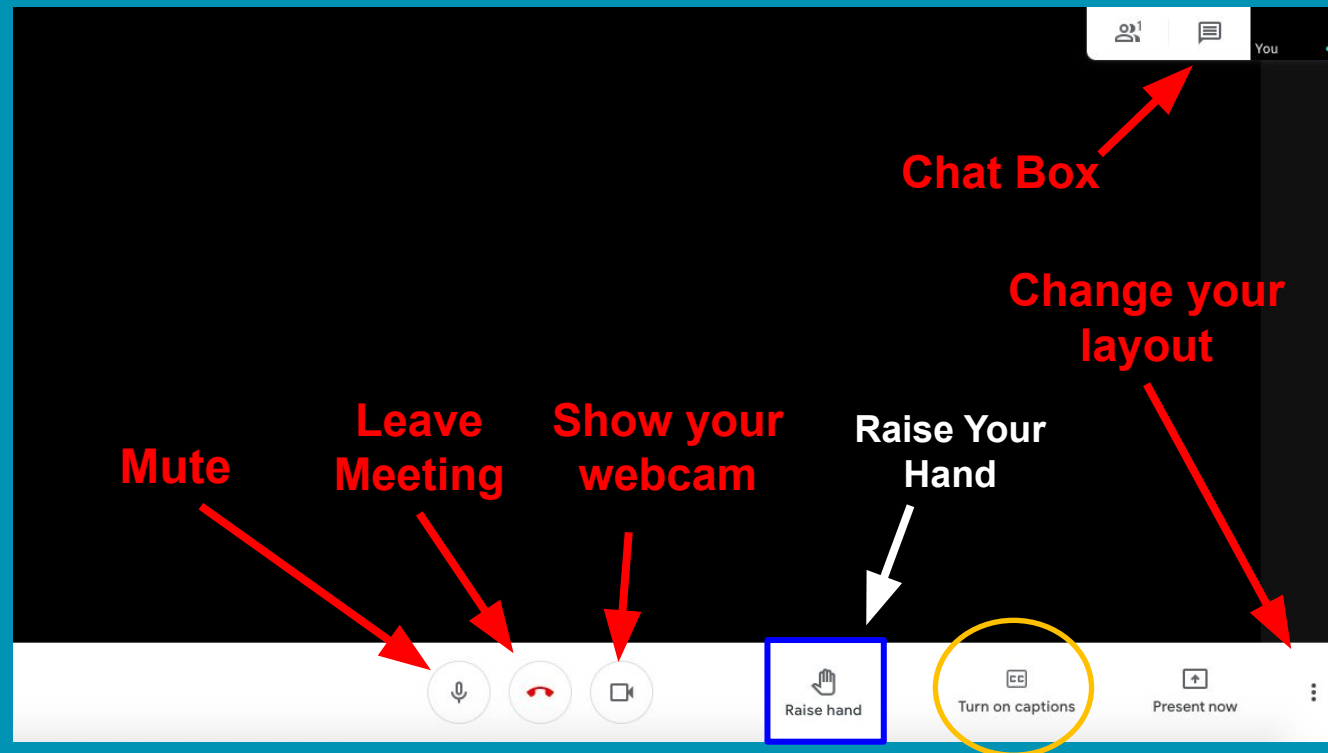
Welcome to the Dec 1st GFNMS Virtual SAC Meeting



**PLEASE MUTE
yourself to reduce
background noise.**

If you are using a
phone for audio:
Use *6 to mute and
unmute.

+1 929-324-2886
PIN: 481 572 804#



Note the option to turn on captions

Roll Call



1. Abby Mohan (Chair), Recreational Activities Primary
2. Bibit Traut (Vice Chair), Education Primary
3. Barbara Emley (Secretary), Commercial Fishing Primary
4. Sarah Bates, Commercial Fishing Alternate
5. Kris Lannin Liang, CAL SF/SM Alternate
6. George Clyde, CAL Marin Primary
7. Cea Higgins, CAL Sonoma/Mendocino Primary
8. Francesca Koe, Conservation Primary
9. Kathi George, Conservation Primary
10. Mary Miller, Education Alternate
11. John Berge, Maritime Activities Primary
12. Julian Rose, Maritime Activities Alternate
13. Ezra Bergson-Michelson, Youth Primary
14. Owen Youngquist, Youth Alternate

Government Members

15. Mark Gold, CA Natural Res. Primary
16. Michael Esgro, CA Natural Res. Alternate
17. Craig Kenkel, NPS Primary
18. Ben Becker, NPS Alternate
19. LTJG Chris Bell, USCG Primary
20. LT Lelea Lingo, USCG Alternate
21. Chris Barr, USFWS Primary
22. Gerry McChesney, USFWS Alternate
23. Jennifer Boyce, NMFS Primary

Sanctuary Representatives

24. Lisa Wooninck, MBNMS Primary
25. Dawn Hayes, MBNMS Alternate
26. Chris Mobley, CINMS Primary
27. Michael Murray, CINMS Alternate

Time	Topic	Lead
9:00-9:10	Welcome, Roll Call, Review Agenda	Abby Mohan, SAC Chair
9:10-9:30	SAC Business <ul style="list-style-type: none"> - Introduction to new Council Coordinator - Approve Aug meeting highlights (Action Item) - Swear in new members - Joint ship strike working group progress update (Julian Rose) 	Abby Mohan, SAC Chair Jordan Gorostiza, SAC Coordinator
9:30-10:00	Greater Farallones and Cordell Bank National Marine Sanctuaries Superintendent's Report <ul style="list-style-type: none"> - Cordell Bank-Greater Farallones new organizational chart - Covid-19 re-entry plans and field operations - Update on the <i>American Challenger</i> incident - Updates on sanctuary program activities - COP26 recap - ONMS 50th Anniversary rebranding - Permits 	Maria Brown, GFNMS/CBNMS Superintendent
10:00-10:10	Sanctuary Enforcement Update	Max Delaney, GFNMS Kynan Barrios, NOAA OLE Chris Bell, USCG
10:10-10:20	Monterey Bay National Marine Sanctuary Superintendent's Report	Lisa Wooninck, MBNMS Superintendent
10:20-10:30	PUBLIC COMMENT	
10:30-10:40	BREAK	
10:40-11:10	Report Back on Progress Toward Kelp Recommendations	Rietta Hohman, Greater Farallones Kelp Project Coordinator
11:10-11:40	Report Back on Abandoned and Derelict Vessel Recommendations	Max Delaney, GFNMS
11:40-12:00	BREAK	
12:00-12:30	USCG Port Access Route Study (PARS)	USCG Representative
12:30-1:30	Member Reports	
1:30	WRAP UP & ADJOURN	

The Advisory Council may take action on any of the above items on the agenda. Times of agenda items are subject to change. Public comment period will remain as advertised.

SAC Business



1. Introduction to new Council Coordinator (Maria Brown)
2. Approve Aug meeting highlights (**Action Item**)
3. Joint ship strike working group progress update (Julian Rose)



GFNMS and CBNMS Superintendent's Report: Maria Brown



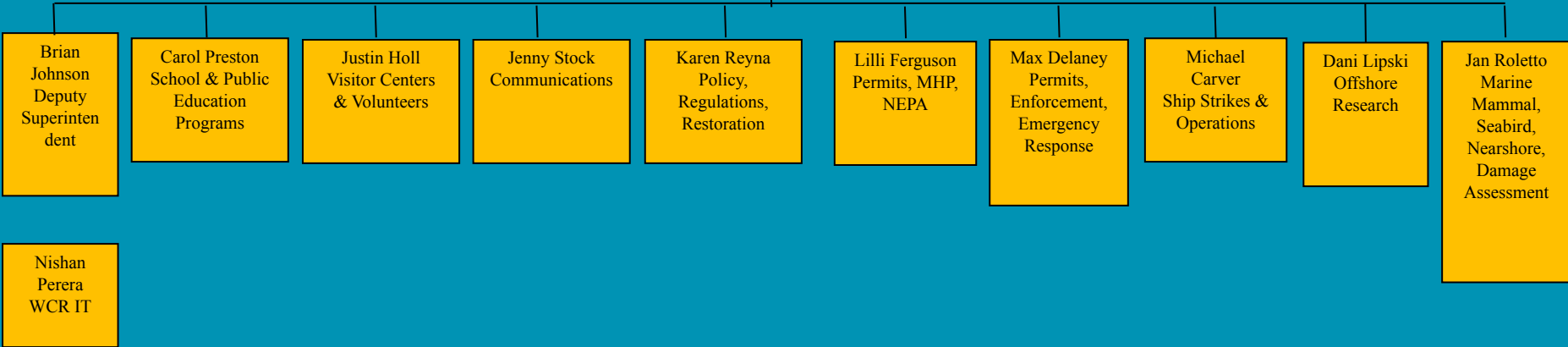
Office of National Marine Sanctuaries Updates (ONMS)

- Bipartisan National Marine Sanctuary Caucus
- Monterey Bay National Marine Sanctuary (MBNMS) selects new superintendent, Lisa Wooninck
- Notice of Intent to designate Chumash Heritage National Marine Sanctuary (CHNMS)
- Notice of Intent to designate Papahānaumokuākea (PNMM) as a national marine sanctuary

GFNMS and CBNMS Superintendent's Report: Maria Brown



Maria Brown
Superintendent



GFNMS and CBNMS Superintendent's Report: Maria Brown



Administration and Operations

- COVID-19 re-entry plans and field operations
- Completing a GFNMS facilities assessment for ONMS headquarters



GFNMS and CBNMS Superintendent's Report: Maria Brown



Conservation Science

- Graduation of 18 new volunteers for the Beach Watch Program
- Brings total to 157 volunteers who survey 67 beaches every two weeks



GFNMS and CBNMS Superintendent's Report: Maria Brown



Conservation Science

- Beyond the Golden Gate Research Symposium will be held virtually January 19-21, 2022.
- Abstracts for presentations will be accepted until December 17th, 2021.



GFNMS and CBNMS Superintendent's Report: Maria Brown



Education & Outreach

- Sharktoberfest 2021 reaches 688 screens across the globe
- Environmental volunteers explore GFNMS on virtual cruise
- 17 virtual marine science programs delivered to 368 students
- Virtual Deep Sea Soiree on Sponges fascinates audiences reaching 289 screens.



GFNMS and CBNMS Superintendent's Report: Maria Brown



Ocean Climate Program

- Farallones Climate Staff Provide Blue Carbon Webinar to 300
- GFNMS at the 26th UN Climate Change Conference (COP26)
- Farallones Climate Staff Presents at international blue carbon conference



GFNMS and CBNMS Superintendent's Report: Maria Brown



Ecosystem Protection

- Submitted comments on:
 - ◆ National Park Service Air Tour Management Plan
 - ◆ 2021 California Climate Adaptation Strategy

- Shotgun Wad Project in the news

- Seabird Protection Network Action Plan to be released soon

- GFNMS/GFA Living Shorelines RFP for Bolinas Lagoon



GFNMS and CBNMS Superintendent's Report: Maria Brown



NATIONAL MARINE SANCTUARIES

CELEBRATING 50 YEARS

<https://sanctuaries.noaa.gov/50/>

<https://sanctuaries.noaa.gov/50/toolkit.html>

GFNMS and CBNMS Superintendent's Report: Maria Brown



Sanctuary Response to SAC's Recommendations Related to Diversity, Inclusion, and SAC Recruitment:

1. New online SAC application with 2 added questions aimed at tracking outreach and assessing applicant interest in JEDI topics
 - ✓ The new SAC application will be available soon & we are committed to tracking outreach.
2. Changes to the GFNMS website: add diversity statement, more photos that reflect the diversity of the community the sanctuary serves, and start adding upcoming seats that are opening soon so that more people can anticipate if they might want to apply
 - ✓ A diversity statement has been added to the SAC webpages, we are in the process of updating pages across the website & will take photos into account, and we will begin an effort to add upcoming seat openings to the website in advance.

GFNMS and CBNMS Superintendent's Report: Maria Brown



Sanctuary Response to SAC's Recommendations Related to Diversity, Inclusion, and SAC Recruitment:

3. SAC members help identify opportunities for recruitment/outreach; if interested, make themselves available to applicants for insights
 - ✓ We will encourage members to assist with outreach; provide updated email addresses on the SAC members webpage.
4. Sanctuary staff seek community events to spread awareness about the council/recruitment; engage diverse groups
 - ✓ This has been an effort underway across ONMS, we will continue to take steps toward engaging diverse groups of stakeholders in sanctuary/SAC activities; attend events when possible.
5. Offer travel reimbursements; explore hybrid in-person/virtual meeting options
 - ✓ Travel reimbursements are available on a limited basis (see Charter). We will continue to assess options for in person/virtual council meetings.

GFNMS and CBNMS Superintendent's Report: Maria Brown



Sanctuary Response to SAC's Recommendations for Engaging Youth in Sanctuary Programs:

1. Work on creating new partnership programs or events with local community centers
 - ✓ We will continue to create new partnerships; increase these efforts pending staff capacity.
2. Create a public-facing events calendar for scheduled events and open programs; promote the event calendar on social media at the end of programs/events (e.g., on the last slide for virtual events)
 - ✓ We agree. We do have an events page on our website and will explore options for a more robust calendar/outreach pending staff capacity.
3. Create a public-facing list of potential mentorship resources for students
 - *While we like this idea, staff currently has very limited capacity & we can not recommend mentors to youth that have not been thoroughly vetted, so we will be unable to pursue this at this time.*

GFNMS and CBNMS Superintendent's Report: Maria Brown



Sanctuary Response to SAC's Recommendations for Engaging Youth in Sanctuary Programs:

4. Release a newsletter via the sanctuary to local school districts updating students on opportunities
 - *We like this idea but do not have the capacity at this time. Will revisit.*
5. Focus on potential long-term online opportunities in events & outreach, with a focus on not just the Bay Area but other geographic areas as well.
 - ✓ Are pursuing this recommendation through our online education programs.
7. Put an emphasis on interactive activities and/or software (apps that help engage participants) for online events and youth programs.
 - ✓ Are doing this as much as possible through our online programming and will continue to do so.
8. Create a variety of one-time all-age events in the style of Sharktoberfest to promote youth/teen outreach in the Bay Area and beyond if resources allow.
 - ✓ We like this idea and will pursue as much as resources allow.

Permit Type	Organization	Project	Effect. Date
Education	David McGuire (Shark Stewards)	Greater Farallones Ecosystem and Wildlife Education (within GFNMS, at Southeast Farallon Island)	Sep 2021 to Dec 2021
Research	Bob Brodsky (San Andreas Shellfish Company)	Eelgrass Survey of Tomales Bay Aquaculture Lease Area Using Uncrewed Aerial Systems (UAS)(Within GFNMS in Tomales Bay, between between Toms Point and Lawson's Landing Pier)	Sep 2021 to Oct 2021
Research	Dr. Brent Hughes (Sonoma State University)	Restoration of Northern California Kelp Forests (Within GFNMS, at seven field sites)	Sep 2021 to Oct 2022
Research	Dr. Barbara Block (Stanford University) and Dr. Taylor Chapple (Oregon State University)	Ecology and Population Dynamics of Sharks in the Northeastern Pacific (At multiple field sites, within MBNMS and GFNMS)	Sep 2021 to Nov 2022
Research	Rietta Hohman (GFA) / Norah Eddy (TNC)	Unmanned Aerial System Surveys of Bull Kelp Canopy Along the Sonoma and Mendocino County Coastline (At multiple field sites, within GFNMS)	Aug 2021 to Nov 2022
Research	John Farrar (Woods Hole Oceanographic Institute)	National Aeronautics and Space Administration (NASA) Sub-Mesoscale Ocean Dynamics Experiment (S-MODE)(Within CBNMS, GFNMS and MBNMS)	Oct 2021 to Aug 2025
Management	Jennifer Lucchesi (State Lands Commission)	Tomales Bay Mooring Program (Within GFNMS, throughout Tomales Bay)	Nov 2021 to May 2041

Type	Organization	Project	Effect. Date
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Under Review

Research and Education	Jaclyn Schneider (Greater Farallones Association)	Long-term Monitoring Program and Experiential Training for Students (LiMPETS)(Within GFNMS and MBNMS, at multiple intertidal sites)	TBD
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Research	Dr. Mark Baumgartner (Woods Hole Oceanographic Institution)	Developing Near Real-time Passive Acoustic Whale Detection Capability for Mitigating Ship Strikes in the San Francisco Region (Within GFNMS near the Farallon Islands)	TBD
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Research	Dr. Piero Mazzini, Ph.D. (Virginia Institute of Marine Science)	Collaborative Research: River Plume-cape Interaction - Plume Separation from the Coastal Wall, Vorticity Generation and Fresh Water Retention (Within GFNMS, at 2 locations offshore of Point Reyes)	TBD
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ADDITIONAL MULTI- PERMITS ISSUED WITHIN THE GFNMS MANAGEMENT AREA (BY OTHER ONMS SITE PERMIT COORDINATORS)

Research	George Shillinger (Upwell Turtles)	Application of Uncrewed Aerial Systems (UAS) for Surveying Western Pacific Leatherbacks in Critical Foraging Habitat off the Pacific Coast, USA (Within OCNMS, GFNMS and MBNMS)	Sep 2021 to Dec 2025
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Recent incidents

American Challenger

- 90-foot vessel grounded on the Marin coast on March 5, 2021
- Response is still ongoing
- Salvage contractor to remove accessible pollution onboard and weather-proof the vessel

The Perfect Cast (Sinking Near Southeast Farallon Island)

- A 35-foot pleasurecraft sank on 8/29/21
- 4 POB rescued
- Approx. 80 gallons of fuel onboard
- Vessel sank in approx. 300 feet of water depth
- The RP was insured and cooperative



Recent incidents

F/V Marian (Sinking in Tomales Bay)

- Derelict anchored vessel sank on 9/14/21
- USCG and OSPR deployed boom
- USCG removed 150 gallons of diesel
- GFNMS funded the salvage of the vessel
- RP had a prior incident back in October 2020

Aluminum Vessel Adrift in Tomales Bay

- 20-foot-long aluminum boat broke anchor and drifted into another moored vessel
- The RP obtained a mooring lease (in 2017) but never installed a mooring

Capsized Vessel Near Tomales Bay

- 18-foot fiberglass boat with a single outboard engine
- 3 POB rescued
- USCG notified NOAA OR&R to model a drift trajectory
- Vessel has not been found

MBNMS Superintendent's Report



MBNMS identifies new Superintendent Nov 8

- Lisa Wooninck, Ph.D.
- Acting Superintendent June - Sept 2021
- WCR policy coordinator 2010 - 2021
- NMFS fishery ecologist 2001 - 2008

Published the final rule for Management Plan Review Nov 15

- 13 new and updated action plans with community input
- Minor changes to regulations
 - clarify ability to approve beneficial use of suitable dredged material for habitat protection or restoration
 - Modify four year-round MPWC zone configurations
 - Change prerequisite for MPWC zone use at seasonal zone

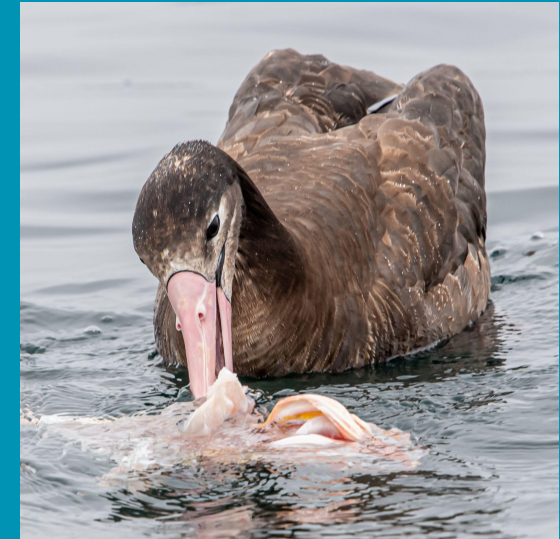
<https://montereybay.noaa.gov/intro/mp/welcome.html>

MBNMS Superintendent's Report



Resource Protection

- Seabird Protection
 - ✓ Endangered Short-tailed albatross
 - Cruises to find and observe bird
 - USFWS & International Bird Rescue
 - Social Media Posts/Messaging
- Wildlife Protection
 - ✓ MBNMS Whale Watching Guidelines released in November



PUBLIC COMMENT 10:20-10:30am

Please unmute yourself when called on to provide your verbal comment.

BREAK until 10:40



Greater Farallones Kelp Recovery Project

Update on Progress Towards SAC Recommendations



Rietta Hohman

Greater Farallones Association, NOAA Affiliate

Greater Farallones National Marine Sanctuary

GFNMS SAC Meeting, December 1, 2021



Outline

Loss of Kelp Forests in
GFNMS – quick recap

SAC Recommendations and
Kelp Recovery Plan

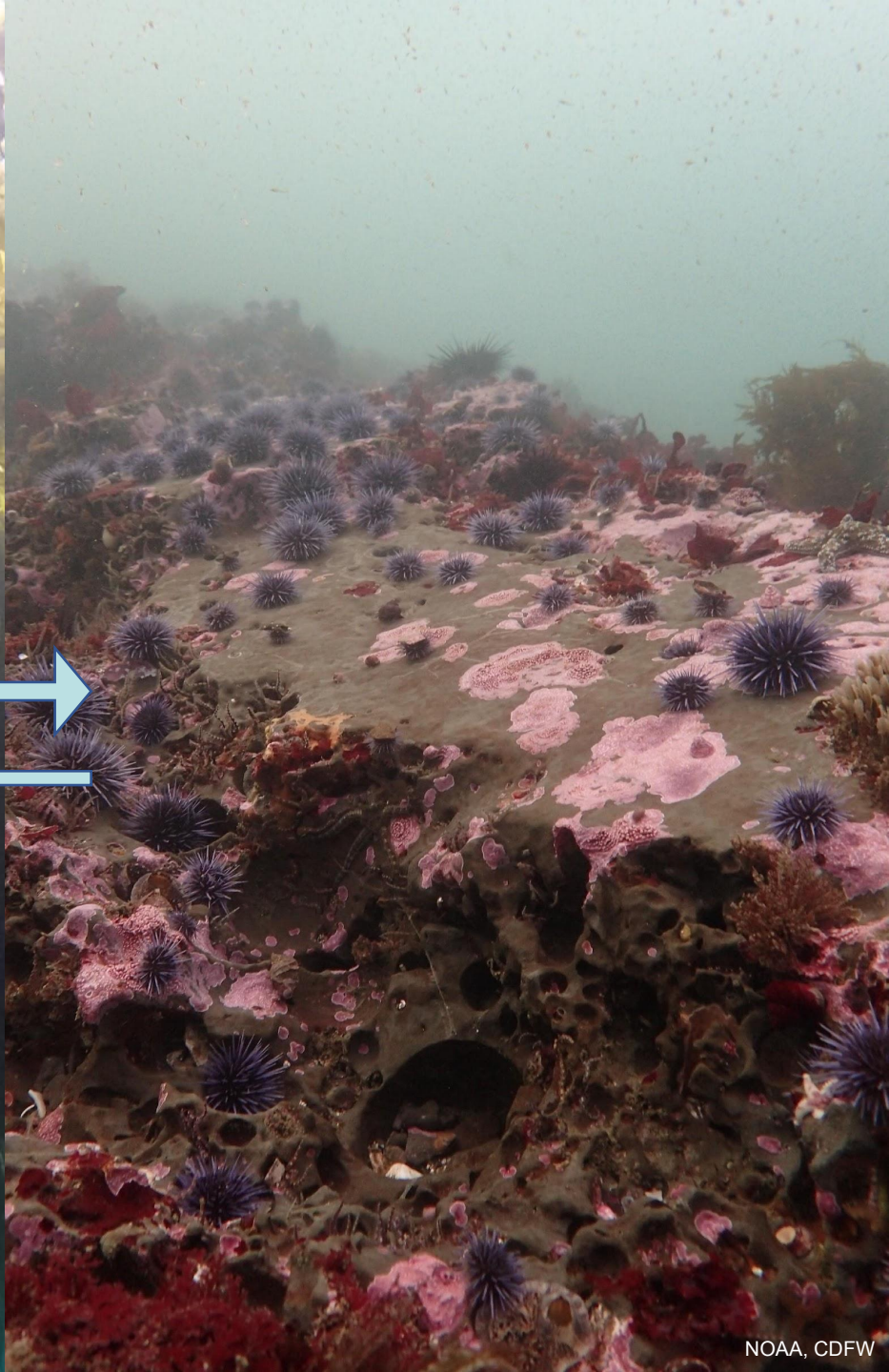
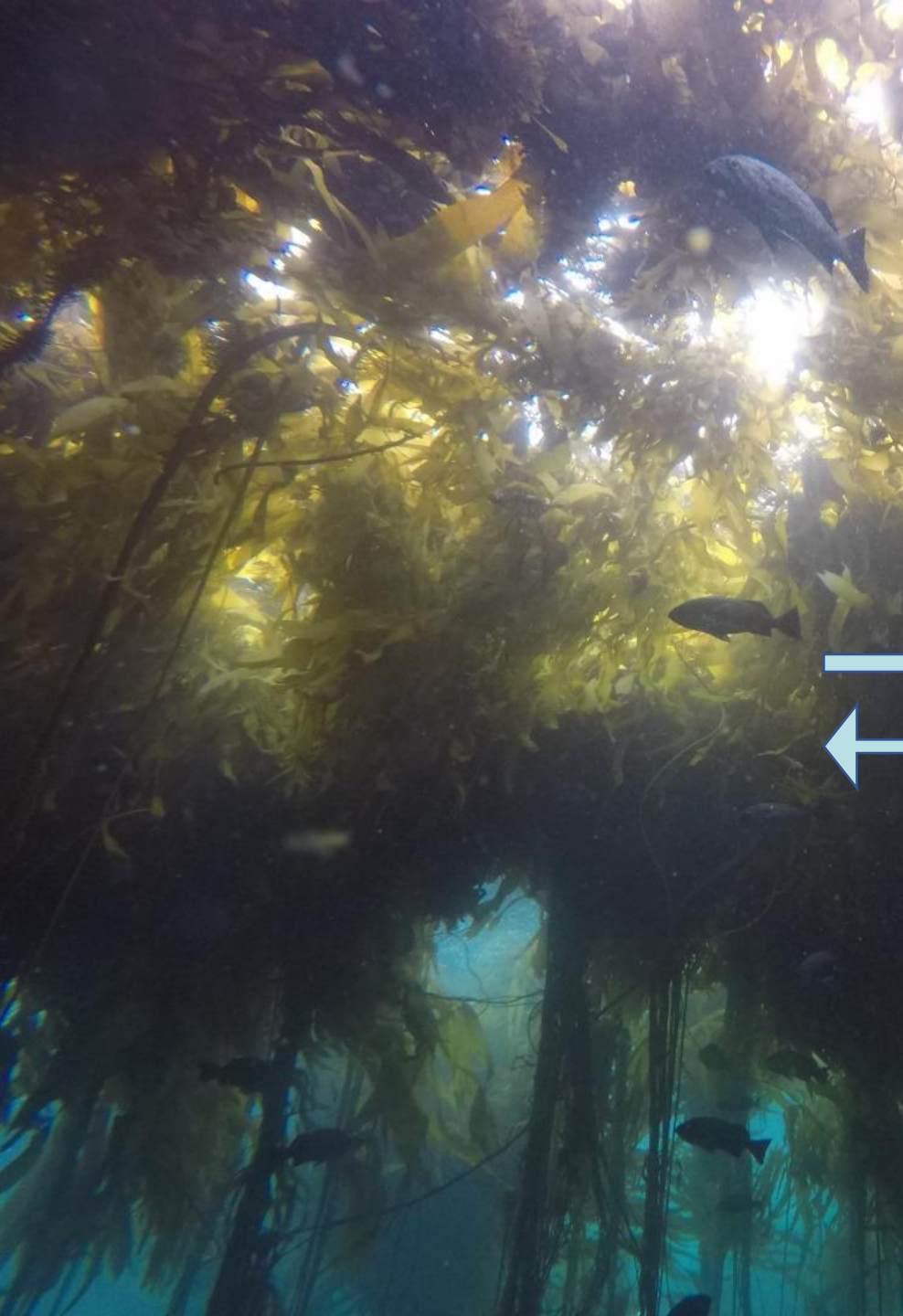
Actions towards Restoration,
Research, Monitoring and
Community Engagement

Next Steps

Extensive loss of kelp forest habitat in GFNMS

2008
2013
2014
2015-2019





Sonoma-Mendocino Bull Kelp Recovery Plan

For Greater Farallones National Marine Sanctuary
and California Department of Fish & Wildlife



April 2019

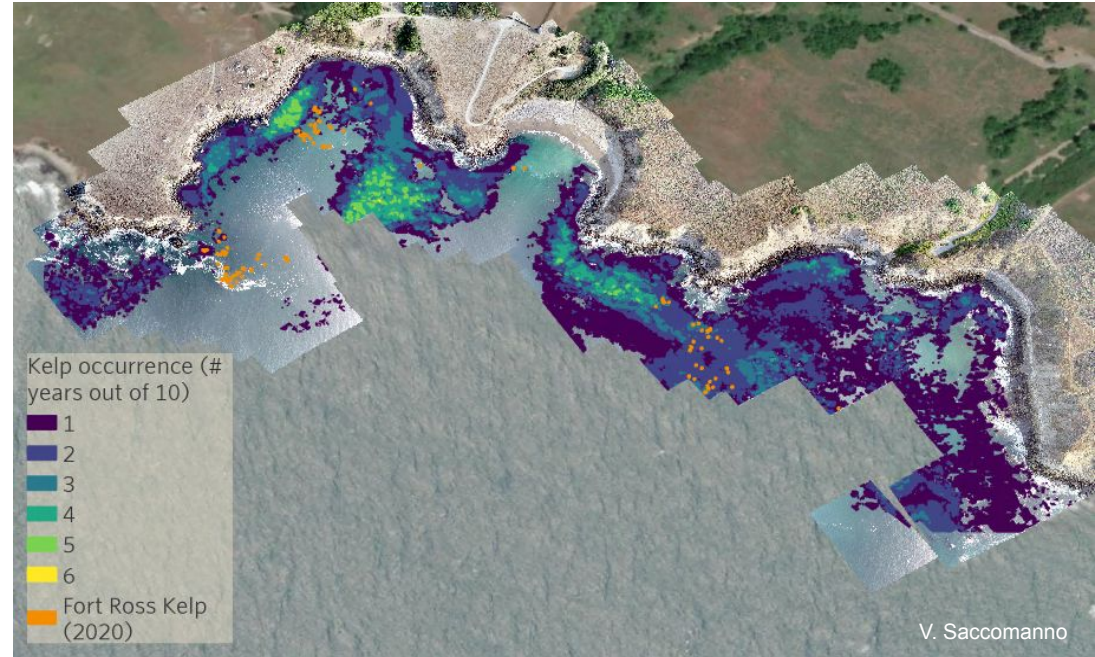
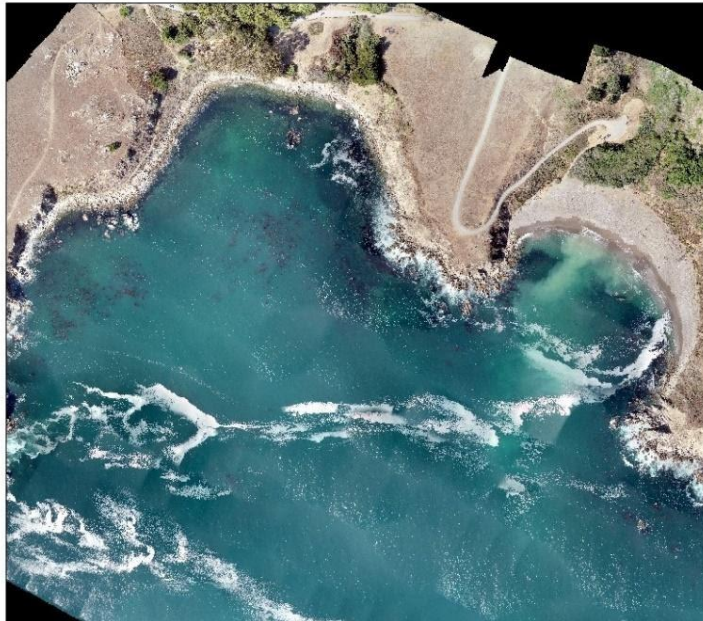
Referenced in development of
pilot kelp restoration project in
northern CA

Listed as guidance document
for CA Sea Grant Kelp
Recovery Research Program

Will serve as one of the
foundational documents in the
preparation of the statewide
Kelp Restoration and
Management Plan

Bull Kelp Recovery Plan

- Active Recovery (restoration)
 - Establish a network of kelp 'oases', or refugia at strategic locations
 - Reduce urchin grazing pressure
 - Enhance kelp (outplanting/seeding)
- Monitoring and Research
 - Development of cost-effect, long-term kelp canopy mapping program
 - Investigate characteristics that may confer resilience / persistence of kelp
- Community Engagement
 - Engage with stakeholders to raise awareness of kelp recovery efforts
 - Develop consistent messaging



Plane-based kelp surveys ceased in 2016, leaving a critical information gap on kelp persistence / resilience

2019-2021 – Mapped kelp canopy using drones at sites recommended in the Recovery Plan



Restoration Site Assessment



September 2021 –
Research Cruise on the
R/V Fulmar

Subtidal + UAS Surveys
to inform restoration
planning

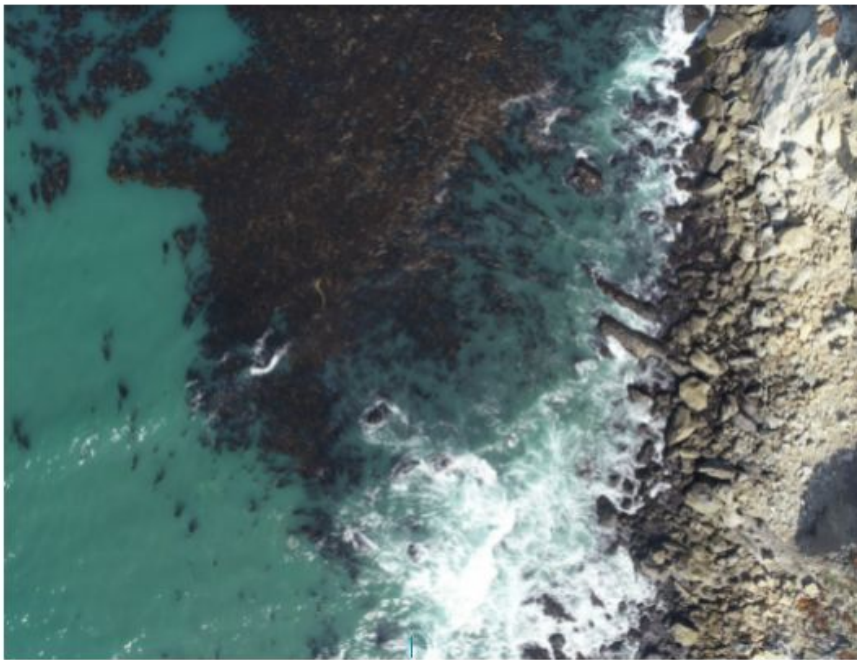


NOAA, CDFW





Assessment of Remote Sensing Tools for Kelp Forest Mapping and Monitoring in the West Coast Region



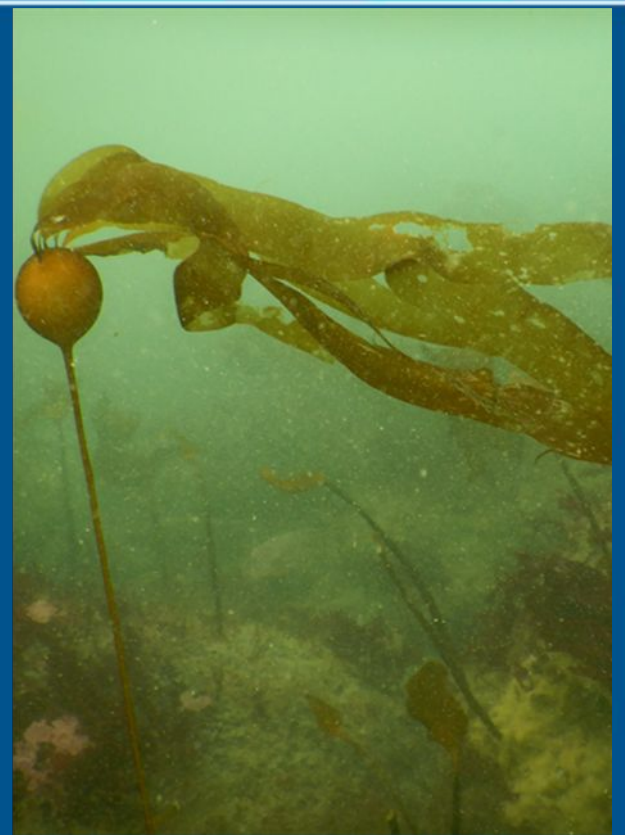
Focused on timely and comprehensive assessment of kelp canopy cover to inform decision-making process for kelp restoration and conservation

Reduce Grazing Pressure

-2021 increase in kelp cover + high urchin densities

-Working with commercial urchin divers on restoration planning





Kelp Enhancement

- Moss Landing Marine Labs + Sonoma State University
- MLML testing bull kelp culturing and outplanting methods

Community Engagement

- Host monthly calls for the Kelp Recovery Network
- Teamed up with Fisherman in the Classroom and LiMPETS programs to teach youth on the north coast about kelp restoration





Next Steps for Restoration in the Sanctuary

- Two proposals currently being developed for restoration
- \$2.5M in the Senate Commerce, Justice, Science Appropriations Bill for the Greater Farallones Kelp Recovery Project
- KELP Act - \$50M/yr to carry out projects on the conservation, restoration, or management of kelp forest ecosystems.
- Learn from current pilot restoration and research projects



Questions?

Rietta Hohman

Rietta.Hohman@noaa.gov

(415)530-5372

www.farallones.org/climate/kelp

Improving Response Capabilities to Abandoned & Grounded Vessels



Greater Farallones National Marine Sanctuary Advisory Council (SAC) Meeting

December 1, 2021

Max Delaney

GFNMS & CBNMS Emergency Response Coordinator

GFNMS SAC Recommendations



May 2021 –
GFNMS SAC resolution

10 Recommendations on
Abandoned and Derelict (ADV)
Vessels

Resolution No. SAC-167-2021

May 20, 2021

RESOLUTION of the
Greater Farallones National Marine Sanctuary (GFNMS) Advisory Council (SAC)

To adopt and forward the following recommendations to the sanctuary superintendent for improving response capabilities to abandoned & grounded vessels

Whereas, abandoned, derelict, or grounded vessels pose a threat to the environment, marine life, human health, and navigational safety; and

Whereas, abandoned, derelict, or grounded vessels can damage important ecosystems, by scouring or crushing sensitive marine habitats or by discharging oil and/or hazardous substances into the environment; and,

Whereas, abandoned, derelict, or grounded vessels have the potential to bring about direct and indirect negative impacts to Sanctuary resources; and,

Whereas, grounded vessels including the American Challenger (2021), F/V Verna A II (2016), F/V Sea Biscuit (2015), and numerous other commercial & recreational vessels have impacted Sanctuary Resources and highlighted the need to address gaps in response ability and funding for removal or abatement; and

Whereas, the National Response Team (NRT) developed jointly by 15 member agencies has published the ["Abandoned Vessel Authorities and Best Practices Guide"](#) provides guidance for the federal response

GFNMS SAC Recommendations



Key Points:

- Better agency coordination
 - oil spill response partners
 - local stakeholders/land owners
- Increased funding for salvage/removal
 - Vessel registration fees
 - Grant programs
 - Dedicated funding
- Address problem of uninsured vessel owners
 - New insurance requirements
 - Commercial and recreational
- More enforcement

Resolution No. SAC-167-2021

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Whereas, the National Response Team (NRT) developed jointly by 15 member agencies has published the "[Abandoned Vessel Authorities and Best Practices Guide](#)" provides guidance for the federal response

Vessel Incidents



Types of Incidents:

1) Abandoned / Derelict Vessels

vessels that are no longer taken care of and pose a threat to people and the environment.



2) Grounded / Sunken Vessels

vessels that have run aground or sunk within the sanctuary.



Vessel Incidents



Abandoned / Derelict Vessels

- Federal and state agencies have different definitions:
 - number of days left in place (10-45)
 - location (public vs. private lands)
 - moored vs. anchored
 - navigational hazard or not?
- GFNMS defines term deserting
- Less time sensitive



In GFNMS, most likely to occur in Tomales Bay



Vessel Incidents



Grounded / Sunken Vessels

- No legal definitions
- Extremely time sensitive
- Factors causing groundings include:
 - weather / sea state
 - operator error or negligence
 - vessel malfunctioning



In GFNMS, these incidents can occur anywhere



Responding to Vessel Incidents



GFNMS Prohibited Activities

§ 922.82(a) Prohibited or otherwise regulated activities.

(3) Discharging into the Sanctuary;

(4) Discharging (outside the Sanctuary) that enters the Sanctuary and injures a Sanctuary resource or quality;

(5) Abandoning any structure on or in the submerged lands of the Sanctuary;

(14) Deserting a vessel aground, at anchor, or adrift in the Sanctuary; and

(15) Leaving harmful matter aboard a grounded or deserted vessel in the Sanctuary.

Responding to Vessel Incidents



Challenges

- No Single Responsible Lead Agency
- Location of Incident
- Jurisdiction / Enforcement Authority
- Weather / Sea State
- Type of Vessel (small recreational vs fishing vessel)
- Lack of Insurance Requirements
- Lack of Responsible Party (RP) Cooperation
- Lack of Salvage Funds Available / Contracting Delays



GFNMS Response to SAC Recommendations



Preventing and responding to vessel incidents is beyond the scope of what GFNMS can do as a stand-alone federal agency

Vessel incidents are complex and solutions are statewide or national in scope

Regional / national coordination necessary (within ONMS and with local, state and federal partner agencies)

Many of the solutions require legislative changes (insurance, dedicated funding sources, agency authorities)

Opportunities exist for the public to work on vessel issues

Recommended Next Steps



1) GFNMS SAC Subcommittee process:

- Provide recommendations to raise awareness with local, state, and federal stakeholders about current limitations to address ADVs, grounded or sunken vessel removal.
- Provide recommendations for ways to improve coordination and preparedness (RRT, ADV Work Group)
- Review known issues with ADVs in GFNMS and advise GFNMS staff if regulations are sufficient
- Identify opportunities for expanded and new federal funding sources (OSLTF) and state funding (SAVE)
- GFNMS / ONMS WCRO can provide incident case studies / data about costs and impacts
- Laws and regulations in Washington state can be useful for California to consider

2) Individual action:

- SAC members (as members of the public) can contact local and state legislators (insurance / registration requirements and funding sources for salvage)

GFNMS Contact



Max Delaney

Emergency Response Coordinator

Greater Farallones and Cordell Bank National Marine Sanctuaries

991 Marine Drive

San Francisco, CA 94129

max.delaney@noaa.gov

BREAK back at 12pm





Presentation: USCG Port Access Route Study (PARS) USCG Representative



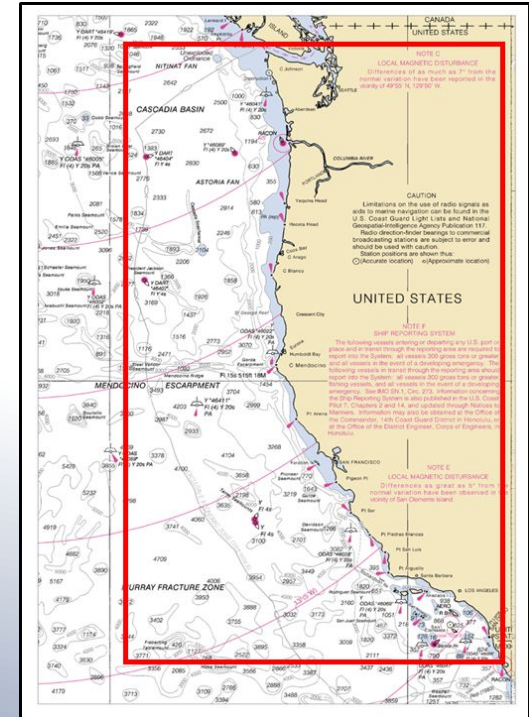
PACIFIC COAST PORT ACCESS ROUTE STUDY (PAC-PARS)



U.S. Coast
Guard
District

What is the Pacific Coast Port Access Route Study?

- Port and Waterways Safety Act (PWSA)
 - 46 USC 70003
- Requirements:
 - Required before establishing new or adjusting existing FAIRWAYS and/or TRAFFIC SEPARATION SCHEMES.
 - Coordinate with stakeholders for safe routes.
- Coast Guard Responsibility
 - Federal Regulations manage routes with:
 - Fairways
 - Traffic Separation Schemes
 - Channels
 - Aids to Navigation
 - Navigation Safety Risk Assessment





U.S. Coast
Guard
District

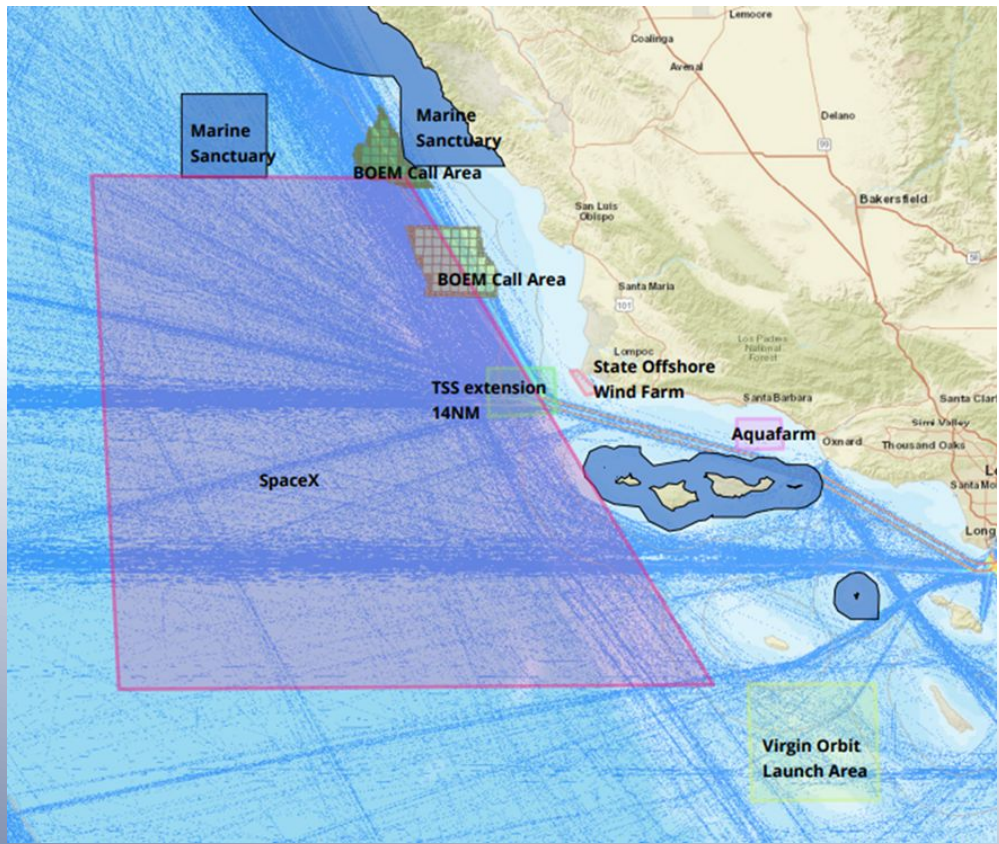
Where is the Study?

- Off the coast of Washington, Oregon, and California.
- Focus on traffic separation scheme approaches/departures, coastal routing, and offshore transits.
 - Major ports such as: San Diego, CA, Los Angeles/Long Beach, CA, San Francisco, CA, Humboldt Bay, CA, Coos Bay, OR, Yaquina Bay, OR, Astoria, OR, Grays Harbor, WA, and Seattle/Puget Sound, WA.
- The scope of this study does not cover inner-port transits.



What is prompting the PAC-PARS study?

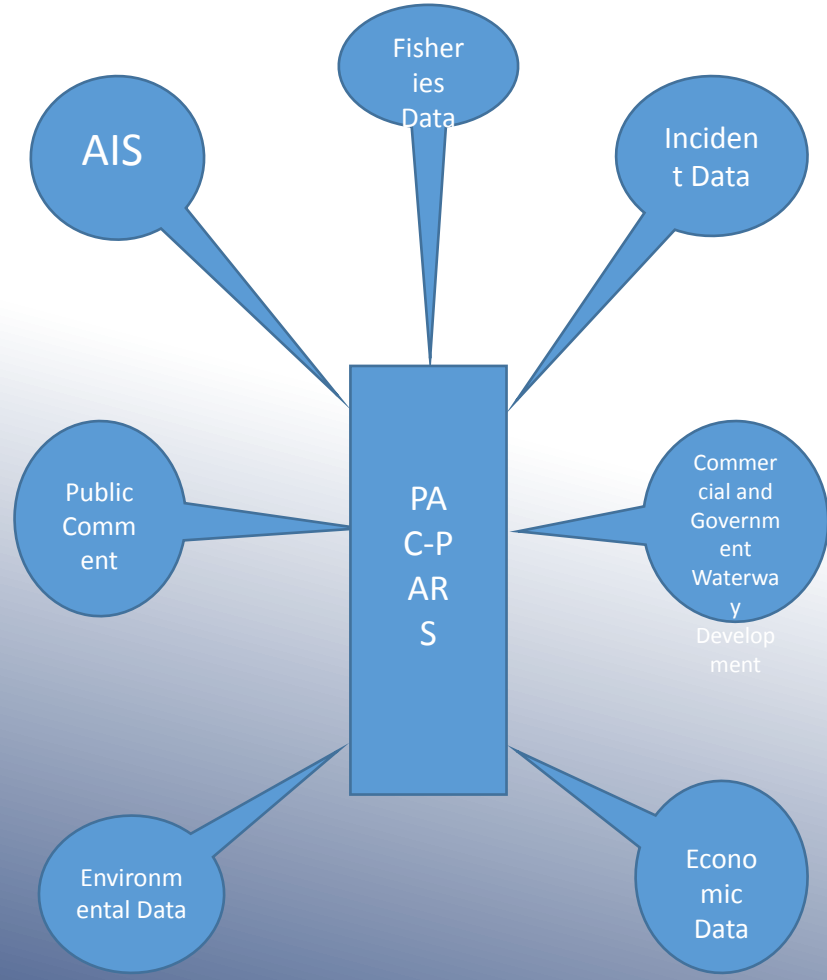
- NOAA proposed Area to be Avoided expansion around Channel Island.
- BOEM Call Areas
- Proposed Chumash Heritage National Marine Sanctuary
- New development of offshore infrastructure like:
 - Offshore Renewable Energy Platforms
 - Aquafarms
 - Commercial & Government Space Activities
 - Increased shipping
 - Military Exercises
 - Military Tests





Phase 1 – Data Gathering

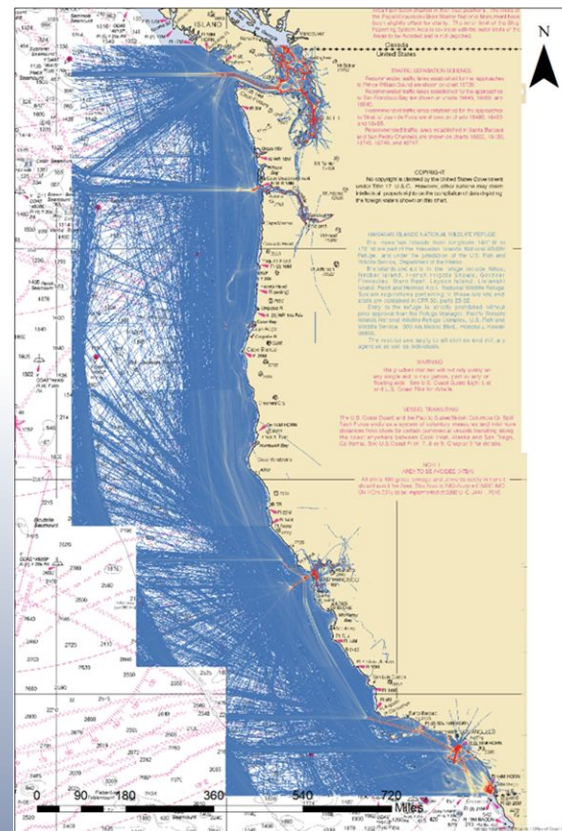
- **Determine Shipping Routes Based on AIS**
 - Data will be used to produce density plots by vessel type.
- **Stakeholder & Public Outreach**
 - Local, regional, national, and international port stakeholders are encouraged to comment.
 - Open communications with towing vessel industry and fisheries through public forums and federal register comments.
- **Gather Marine Transportation System Data**
 - Dive into the economic benefits of coastal industries.
- **Planning Guidelines & Recommendations**
 - Previous studies were reviewed for past comments and recommendations.





Phase 2 – Applying Suitability Criteria

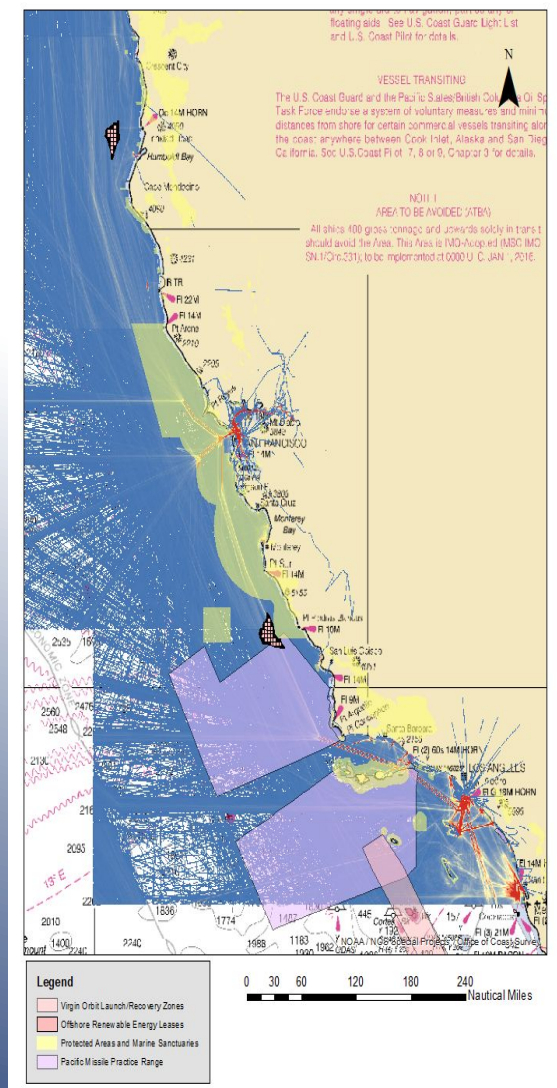
- Analyze the AIS data to determine existing shipping routes.
- The **Red-Yellow-Green** methodology:
 - To determine where there are high, medium, or low conflict areas of the study area.
 - Apply risk criteria to the area, and again to any proposed changes.
 - Assess if mitigating measures can be implemented to decrease risk.





Phase 3 – Modeling & Analysis

- Develop a GIS model to show all current and future developments and traffic data.
- Evaluate options if new routing measures are necessary.
- Identify navigation safety corridors from recommended routes and traffic data.
 - Develop recommendations from the model.





U.S. Coast
Guard
District

Questions?

- Flyers for info and access will be distributed.
- A shared mailbox was created for the study:
 - PACPARS@USCG.MIL
- Docket “USCG-2021-0345”

Member Reports

