UNITED STATES COAST GUARD

Pacific Coast
Port Access Route Study

Final Report

Docket Number USCG-2021-0345

PAC-PARS Workgroup

May 2023

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Table of Contents

List of Enclosures

List of Appendices

A. Executive Summary

The Pacific Coast Port Access Route Study (PAC-PARS) was initiated in 2021 to determine whether new or modified vessel routing measures were needed to ensure safety of navigation along the U.S. Pacific Coast due to the quickly evolving demand for use of coastal waters. In recent years, a growing number of stakeholders and organizations have required use of coastal waters for proposed offshore wind developments, new aquaculture projects, space mission launches and recoveries, military exercises, commercial fisheries, and National Marine Sanctuaries, all in addition to a general increase in vessel traffic. The workgroup that conducted this study examined vessel traffic data from the past decade and collected input and data from key stakeholders, tribal governments, and the public to develop this study's recommendations with the goal to ensure continued safe, efficient, and predictable vessel navigation alongside other reasonable waterway uses.

On July 28, 2021, the USCG Pacific Area Command issued a Notice of Study (NOS) to publicly announce the PAC-PARS in the *Federal Register* (Docket number USCG-2021-0345). The NOS incorporated a 180-day comment period to offer an opportunity for industry, federal, state, local, and tribal governments, and members of the public to engage in the study process and meet with the workgroup to discuss specific concerns, if desired. In addition, the USCG Pacific Area Command, Eleventh District, Thirteenth District, Sectors, Stations, and Aids to Navigation Teams collaborated to carry out a public affairs campaign to notify as many interested and potentially affected organizations and members of the public as possible.

A supplemental Notice of Inquiry (NOI) was issued by the Eleventh District and released in the *Federal Register* under the same docket number on February 24, 2022, which was open for a 90-day comment period. The purpose of the NOI was to solicit additional public input regarding four California offshore areas due to the status of other federal projects and comments received during the NOS.

To provide maximum opportunity for public input, the Coast Guard published the Notice of Availability of Draft Study and Request for Comment in the *Federal Register* on August 26, 2022 under the same docket number. The Draft Study contained recommended vessel routing measures based on previously received public comments and data analysis. Originally, it allowed for a 60-day comment period, which USCG Pacific Area Command extended an additional 14 days due to multiple requests from the public to have more time to compile input and to provide additional opportunity for all stakeholders to participate in the comment period.

The Coast Guard carefully evaluated the comments received on the Draft Study, and combining that with continued data analysis, proposes the following recommendations. The Commandant (CG-NAV) will validate these recommendations and initiate the federal rulemaking process, as required.

As a result of this study, the Coast Guard recommends:

- A 15NM-wide coastwise fairway that follows existing vessel traffic patterns and

connects with existing Traffic Separation Schemes (TSSs) (Strait of Juan de Fuca, San Francisco, Santa Barbara, and Los Angeles – Long Beach) and key ports
- A 5NM-wide San Diego Fairway
- A 5NM-wide Point Mugu Fairway to direct traffic from LA/LB around the Channel Islands National Marine Sanctuary and to make accommodations for DoD training and testing ranges
- A 5NM-wide nearshore fairway north of San Francisco
- A Coastal Fairway Zone that overlays the existing Crabber/Towboat Lane Agreement in Washington and Oregon
- The removal of the International Maritime Organization (IMO) recommended routes located offshore of the Monterey Bay National Marine Sanctuary
- Continued support for the voluntary practice of bulk chemical and petroleum carriers to keep 50NM offshore without charted lanes in accordance with the 2002 Pacific States/British Columbia Oil Spill Task Force recommendations

B. Purpose

This study evaluated whether new or modified vessel routes could improve safety of navigation by providing unimpeded routes for vessel traffic proceeding to or from ports along the western seaboard of the United States while also accommodating other reasonable waterway uses. Due to the emergence of new and increasing uses of Pacific coastal waters, it was critical that the Coast Guard evaluate whether existing vessel routes were sufficient to provide safe access routes for future vessel traffic. Conducting a study, as well as the associated coordination with other groups, organizations, tribal governments, and the public, is required before any potential changes can be made to existing vessel routing measures.

The scope of this Port Access Route Study (PARS) included all waters extending from the baseline seaward to 200NM offshore and the approaches to the ports below:

San Diego, CA	Coos Bay, OR
Los Angeles/Long Beach, CA	Yaquina Bay, OR
Morro Bay, CA	Astoria, OR
San Francisco, CA	Grays Harbor, WA
Humboldt Bay, CA	Puget Sound, WA

These ports were included due to their economic significance, ties to military or national defense operations, vicinity to planned offshore developments, or relation to international entry and departure transit areas that are integral to the safe, efficient, and unimpeded flow of commerce to/from major international shipping lanes.

C. Background

Statutory Authority

The Coast Guard's authority to designate fairways and traffic separation schemes is found in Chapter 700, Ports and Waterways Safety, of Title 46 of the United States Code (USC), specifically 46 USC 70003, which states: *"in order to provide safe access routes for the movement of vessel traffic proceeding to or from ports or places subject to the jurisdiction of the United States, the Secretary (of the department in which the Coast Guard resides) shall designate necessary fairways and traffic separation schemes for vessels operating in the territorial sea of the United States and in high seas approaches, outside the territorial sea, to such ports or places. Such a designation shall recognize, within the designated area, the paramount right of navigation over all other uses.*"

The Ports and Waterways Safety Act (PWSA) requires the Coast Guard to conduct a Port Access Route Study before establishing or modifying any fairway or traffic separation scheme (TSS).

Existing Routing Measures

Existing vessel routing measures in the study area include:

1. Approaches to the Strait of Juan de Fuca
   The traffic separation scheme for the approaches to the Strait of Juan de Fuca consists of three parts: the western approach, the southwestern approach, and precautionary area "JF." These parts are described in §§167.1301 through 167.1303.

2. Santa Barbara Channel TSS
   The Traffic Separation Scheme in the Santa Barbara Channel is described in 33 CFR §§ 167.451 and 167.452.

3. San Francisco TSS
   The Off San Francisco Traffic Separation Scheme consists of six parts: a Precautionary Area, a Northern Approach, a Southern Approach, a Western Approach, a Main Ship Channel, and an Area To Be Avoided (ATBA). The specific areas in the Off San Francisco TSS and Precautionary Area are described in 33 CFR §§167.401 through 167.406.

4. Los Angeles-Long Beach TSS
   The Traffic Separation Scheme in the approaches to Los Angeles-Long Beach consists of three parts: a Precautionary Area, a Western Approach, and a Southern Approach. The specific areas in the approaches to Los Angeles-Long Beach are described in 33 CFR §§ 167.501 through 167.503.

5. International Maritime Organization (IMO)
   In 1997, a workgroup of key stakeholders in the issue of vessel traffic reviewed existing practices and risks and proposed establishing Recommended Tracks. These tracks are organized into north-south lanes offshore of the Monterey Bay National Marine Sanctuary to maximize protection of Sanctuary resources while allowing for the continuation of safe and efficient transportation. The group's recommendations also included alteration of the TSS off San Francisco to move vessels further offshore. These recommendations were approved by IMO and implemented in 2000.

   The IMO Sub-Committee on Navigation, Communications and Search and Rescue (NCSR), 9th session, 21-30 June 2022, adopted a U.S. proposal to extend the existing TSS in the Santa Barbara Channel 13 nautical miles to the north and west as well as expanding the existing areas to be avoided off the California Coast by approximately 1,800 square miles.

Previous Port Access Route Studies

The Atlantic Coast Port Access Route Study (ACPARS) (82 FR 16510) analyzed the Atlantic Coast (Maine to Florida) waters seaward of existing port approaches out to 200 nautical miles (NM) offshore and was finalized in 2017. This study recommended establishing coastwise fairways to facilitate safe and predictable vessel routing.

Along the Pacific Coast, the most relevant recent PARS include: The Approaches to San Francisco, completed in 2011; the Approaches to Los Angeles – Long Beach and in the Santa Barbara Channel, completed in 2011; and the Strait of Juan de Fuca and Adjacent Waters, completed in 2000. These studies took various approaches to assess navigational safety given their capabilities at the time. All completed port access route studies can be found on USCG Navigation Center's (NAVCEN's) website, *https://www.navcen.uscg.gov/port-access-route-study-reports*.

Vessel Traffic Studies and Agreements

The West Coast Offshore Vessel Traffic Risk Management Project

The West Coast Offshore Vessel Traffic Risk Management Project was co-sponsored by the Pacific States/British Columbia Oil Spill Task Force and the USCG. This study looked at vessel traffic transiting between 3 and 200NM off the West Coast from Cook Inlet in the north to San Diego in the south. The study completed reviews of vessel traffic and safety factors along the coast, transit distances from shore, and emergency support, among many other factors. Some of the recommendations from this study were published in the Coast Pilot and noted on nautical charts, recommending specific vessel and cargo types transit set minimum distances from shore. This study was published in 2002 on the Oil Spill Task Force's website, *https://oilspilltaskforce.org/documents/other-documents/*.

In 2002, the Pacific States/British Columbia Oil Spill Task Force recommended a voluntary program that vessels laden with petroleum and chemical cargo observe a 50NM transit

route from shore and non-tank vessels and laden tank barges observe a 25NM distance from shore to reduce the risk of drift groundings. The first observed assessment period of this volunteer program witnessed 95% of vessels transiting these offshore recommended corridors, demonstrating apparent compliance with the task force's recommendations. The U.S. Coast Pilot 7 Pacific Coast – California and U.S. Coast Pilot 10 Oregon, Washington, Hawaii and Pacific Islands both reference the recommended routes.

Crabber/Towboat Lane Agreement

Sea Grant brokered an agreement that provided navigable towboat and barge "lanes" through the crabbing grounds between Cape Flattery, Washington, and San Francisco back in 1971. Today, this "Crabber/Towboat Lane Agreement" is facilitated by the University of Washington Sea Grant program. The current tow-lanes (last updated in November 2019) can be viewed at https://wsg.washington.edu/community-outreach/outreach-detail-pages/crabbertowboat-lane-agreements-download-charts-data-and-meetings/.

Santa Barbara TSS Extension Study

The PAC-PARS workgroup reviewed the National Oceanic and Atmospheric Administration (NOAA) Channel Islands National Marine Sanctuary (NMS) Marine Shipping Working Group final report recommending an extension of the Santa Barbara TSS to IMO. This study concurs with the recommendation based on the analyses conducted, as it supports environmental goals, offshore renewable energy projects, and safe navigation objectives. This IMO-adopted extension supports vessel traffic management near the Channel Islands and is scheduled to be charted for vessel use in the summer of 2023.

Navigation Guidelines

Traffic Separation Schemes and fairways may be designated or established to provide unobstructed approaches for vessels using U.S. ports. Ship routing measures in U.S. waters are established through the regulatory process.

The IMO is the only recognized international body for developing guidelines, criteria, and regulations on a global level concerning specific vessel routing measures. IMO states the purpose of ships' routing is "to improve the safety of navigation in converging areas and in areas where the density of traffic is great or where the freedom of movement of shipping is inhibited by restricted sea room, the existence of obstructions to navigation, limited depths or unfavorable meteorological conditions." Guidelines for establishing routing measures and areas to be avoided are contained in the IMO "Ships' Routing" publication.

The United Nations Convention on the Law of the Sea (UNCLOS), Article 60, Paragraph 8 states; "Artificial islands, installations and structures, and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation." A similar provision is found in U.S. Law – The Outer Continental Shelf Lands Act (OCSLA), as amended by the Energy Policy Act of 2005 (EPAct), provides that the Secretary of the Interior shall ensure that any leases, easements, or rights-of-way are carried

out in a manner that prevents interference with reasonable uses of the exclusive economic zone, the high seas, and the territorial seas; and in consideration in any other use of the sea or seabed, including use for a fishery, sea-lane, a potential site for a deep-water port, or navigation.

Definitions

Aquaculture – a value loss crop for the reproduction and rearing of aquatic species in controlled or selected environments including, but not limited to, ocean ranching, except private ocean ranching of Pacific salmon for profit in those States where such ranching is prohibited by law. (7 CFR §760.802)

Baseline (Territorial Sea Baseline) – The line defining the shoreward extent of the territorial sea of the United States drawn according to the principles, as recognized by the United States, of the Convention on the Territorial Sea and the Contiguous Zone, 15 U.S.T. 1606, and the 1982 United Nations Convention on the Law of the Sea (UNCLOS), 21 I.L.M. 1261. Normally, the territorial sea baseline is the mean low water line along the coast of the United States. (33 CFR §2.20)

Critical Marine Habitat – Specific areas within the geographical area occupied by species that contain physical or biological features essential to the conservation of the species that may require special management considerations or protection; and specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. (50 CFR §424.12 (b)(2))

Deep-water Port – Any fixed or floating manmade structure other than a vessel, or any group of such structures, that are located beyond State seaward boundaries and that are used or intended for use as a port or terminal for the transportation, storage, or further handling of oil or natural gas for transportation to or from any State. (33 CFR §148.5)

Exclusive Economic Zone – The zone where the U.S. and other coastal nations have jurisdiction over natural resources extending no more than 200 nautical miles from the territorial sea baseline. (33 CFR §2.30)

Fairway – A lane or corridor in which no artificial island or fixed structure, whether temporary or permanent, will be permitted. Temporary underwater obstacles may be permitted under certain conditions described for specific areas. Aids to navigation approved by the U.S. Coast Guard, such as data buoys and research moorings, may be established in a fairway. (33 CFR §166.105)

High Seas – All waters seaward of the territorial sea baseline. (33 CFR §2.32)

Obstruction – Anything that restricts, endangers, or interferes with navigation. (33 CFR §245.5)

Precautionary Area – A routing measure comprising an area within defined limits where vessels must navigate with particular caution and within which the direction of traffic flow may be recommended. (33 CFR §167.5)

Recommended Route – A route of undefined width, for the convenience of vessels in transit, which is often marked by centerline buoys. (*General Provisions on Ships' Routing*, adopted Nov. 20, 1985, IMO Resolution A.572(14) as amended at 2.1.9.)

Recommended Track – A route which has been specially examined to ensure so far as possible that it is free of dangers and along which vessels are advised to navigate. (*General Provisions on Ships' Routing*, adopted Nov. 20, 1985, IMO Resolution A.572(14) as amended, 2.1.10.)

Regulated Navigation Area – A water area within a defined boundary for which regulations for vessels navigating within the area have been established under 33 CFR §165.10.

Structures – Any fixed or floating obstruction, intentionally placed in the water, which may interfere with or restrict marine navigation. (33 CFR §64.06)

Territorial Seas – Waters 12 nautical miles wide, adjacent to the coast of the United States. (33 CFR §2.22)

Traffic Separation Scheme – A routing measure aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes. (33 CFR §167.5)

Abbreviations and Acronyms

ACPARS – Atlantic Coast Port Access Route Study
AIS – Automatic Identification System
ATBA – Area to Be Avoided
BOEM – Bureau of Ocean Energy Management
CFR – Code of Federal Regulations
CG-NAV – Coast Guard Office of Navigation Systems
COA – Course of Action
COP – Construction and Operations Plan
COTP – Captain of the Port
D11 – U.S. Coast Guard Eleventh District
D13 – U.S. Coast Guard Thirteenth District
DoD – Department of Defense
EEZ – Exclusive Economic Zone
EIS – Environmental Impact Statement
FAQ – Frequently Asked Questions
FERC – Federal Energy Regulatory Commission
FR – Federal Register
GAP – General Activity Plan
GIS – Geographic Information System
IMO – International Maritime Organization
MOA – Memorandum of Agreement
MOC – Memorandum of Cooperation
MTS – Marine Transportation System
NAVCEN – Coast Guard Navigation Center

NEPA – National Environmental Policy Act
NM – Nautical Mile
NMS – National Marine Sanctuary
NSRA – Navigation Safety Risk Assessment
NOAA – National Oceanic and Atmospheric Administration
OCS – Outer Continental Shelf
OCSLA – Outer Continental Shelf Lands Act
OLE – NOAA's Office of Law Enforcement
OREI – Offshore Renewable Energy Installation
PACAREA – U.S. Coast Guard Pacific Area Command
PAC-PARS – Pacific Coast Port Access Route Study
PARS – Port Access Route Study
PMSR – Point Mugu Sea Range
PWSA – Ports and Waterways Safety Act
RNA – Regulated Navigation Areas
SAP – Site Assessment Plan
SAR – Search and Rescue
TSS – Traffic Separation Scheme
USACE – United States Army Corps of Engineers
USC – United States Code
USCG – United States Coast Guard
VMS – Vessel Monitoring System
WEA – Wind Energy Area

D. Study Process

Objectives

The Pacific Coast PARS (PAC-PARS) workgroup used the objectives and guidance outlined in COMDINST 16003.2, "*Marine Planning to Operate and Maintain the Marine Transportation System (MTS) and Implement National Policy*," and publications by The World Association for Waterborne Transport Infrastructure (PIANC), primarily MarCom Wg 161: *Interaction between Offshore Windfarms and Maritime Navigation*, to guide this study.

1. Determine present traffic density characteristics
2. Determine potential traffic density characteristics
3. Determine if existing vessel routing measures are adequate
4. Determine if existing vessel routing measures require modifications
5. Determine the type of modifications
6. Define and justify the need for new vessel routing measures
7. Determine the type of new vessel routing measures
8. Determine if the vessel routing measures must be mandatory for specific classes of vessels

Data Collection and Processing

To make the above determinations, the PAC-PARS workgroup performed the following tasks:

1. Collect and analyze Automatic Identification System (AIS) data used to track vessels and associated transit details
2. Collect and analyze Vessel Monitoring System (VMS) data used to track fishing vessels and associated transit details
3. Collect and analyze marine incidents and casualties (search and rescue cases, collisions, allisions, groundings, etc.)
4. Collect and address public input through comments submitted to the *Federal Register*
5. Collect and review coastal environmental and ecological data (protected species/areas, National Marine Sanctuaries and associated studies, predictive cetacean densities, etc.)
6. Collect and review all waterway user requests (Tribal lands, DoD areas, offshore renewable energy areas, etc.)
7. Review existing routing measures (IMO recommended routes, local/industry agreements, established TSS/fairways, etc.)

Tribal Government Engagement

In accordance with the 2023 Department of Homeland Security Tribal Consultation Directive (071-04) and Policy (071-04-001), the Coast Guard is committed to upholding its trust obligation to federally recognized Tribes in any future rulemaking process. A core element of meeting trust obligation is to engage with Tribes to determine the required levels of interaction to ensure tribal input is included. Obligation to consult applies to any proposed activities, new or ongoing, that may or may not impact tribal governments, treaty rights, and Usual and Accustomed Fishing Areas. The Coast Guard will not place restrictions on Tribes or tribal treaty rights without formal government-to-government consultation.

Public and Stakeholder Engagement

Over the course of the study, the Coast Guard coordinated with other federal and state agencies and considered the views and concerns of maritime community representatives, environmental groups, tribal governments, and other interested stakeholders. This coordination helped to reconcile the need to maintain safe access routes with other reasonable waterway uses such as the construction and operation of renewable energy facilities and other uses of the Pacific Ocean in the study area.

E. Discussion

Vessel Traffic Analyses

Coastal Analysis

The coastal analysis evaluated vessel traffic for the years 2012, 2015, and 2017-2021 to determine vessel statistics and trends over time. The analysis found that fishing, recreational, passenger, 'other' ship-types, and vessel traffic overall increased over time. The most prominent users, based on the number of unique vessels active in the study area, were cargo and recreational vessels. Seasonally, many ship-type categories saw a large fluctuation in the number of vessels, number of transits, and the distance transited. The highest traffic volume typically occurred in the third quarter of the calendar year, while the lowest traffic volume was seen in the first quarter. Detailed vessel traffic data for the study area can be found in Enclosure 1. Notable findings from the analysis include:

- Based on a 5-year average, 664 unique vessels and 1,338 transits crossed the southern sections of the inner IMO-recommended tracks south of San Francisco. These transits will likely be displaced by the future development of the Morro Bay offshore wind energy lease.
- The study area saw a 5-year average of 8,015 total vessels: 676 fishing vessels, 224 tug and tow vessels, 3,062 recreational vessels, 304 passenger vessels, 2,822 cargo vessels, 576 tanker vessels, and 351 'other' vessels.
- Coastwise cargo vessel transits tended to follow similar tracks approximately 25-40NM from shore.
- Tanker vessels appeared to largely follow the 2002 West Coast Offshore Vessel Traffic Risk Management Project recommendation to maintain at least 50NM offshore when transiting along the coast.
- A significant portion of tug and tow vessels appeared to follow the crabber-towboat lanes when transiting along the Washington-Oregon coast.

Port Analysis

The port analysis evaluated vessel traffic for the years 2018-2021. The complete analysis of vessel traffic for the study's ports is found in Enclosure 2. Notable findings from the analysis include:

- Overall, the number of track lines and unique vessels in each port area showed a steady increase from 2018-2021. For Puget Sound, San Francisco, LA/LB, and San Diego, these increases in traffic appear to be predominantly associated with pleasure craft. Given that most pleasure craft are not required to carry AIS, this may be indicative of increased voluntary carriage on these boats, but not necessarily an actual increase in traffic volume.
- In several areas, including Puget Sound, Astoria, San Francisco, and LA/LB, passenger vessel traffic decreased somewhat in 2020 compared to other observed

years. This may be attributable to the COVID-19 pandemic and the decrease in cruise ship, ferry, or other passenger vessel activity in those areas during this time.

- In some of the smaller port areas, such as Grays Harbor, Astoria, Coos Bay, and Morro Bay, fishing vessel activity increased from 2018-2021. Other areas, such as Yaquina Bay and Humboldt Bay, showed variability in fishing vessel activity.
- Generally, cargo vessels and tank ships must transmit on AIS in accordance with international convention or domestic regulation. Activity for these vessel types did not show dramatic increases or decreases over time.
- LA/LB showed the most noticeable increase of any port area. Although these observations are informative, data across a longer timeframe is needed to make definitive conclusions about the traffic trends for these areas over the years or to discern if there is a statistically significant difference in the number of unique vessels or tracks between years.

Fishing Vessel Analysis

Vessel Monitoring System (VMS) data is primarily used for monitoring certain fisheries and gear-types through NOAA's Office of Law Enforcement (OLE). After receiving approval from OLE, the Pacific Fisheries Information Network (PacFIN) provided the PAC-PARS workgroup with the VMS dataset for the study area from 2017 to 2020. This data was processed into vessel densities following the same methods in Enclosure 1. The results were compared to the AIS data to validate fishing vessel activity within the study area. The visual results of this analysis will not be included in this draft study due to data distribution restrictions set by OLE and the proprietary information associated with fishing grounds.

SAR and Marine Incidents

Over the past ten years, the Coast Guard has documented over 35,000 Search and Rescue (SAR) cases in the area covered by this study. Over a third of all cases involved a disabled vessel. The other most common types of USCG SAR cases included reports of distress alerts and a person in the water.

The majority of cases also occurred close to shore – 80% of SAR cases in the study area over the last ten years happened either in inland waters such as rivers, bays, or harbors, or in territorial waters - defined as waters within 12 nautical miles from shore.

With the shifting landscape of maritime uses within the PAC-PARS area combined with the overall trend of increasing commercial shipping traffic, the trends in Search and Rescue cases may also change. The proposed recommended routes will help mitigate maritime safety risks around these emerging ocean uses. The recommended fairways provide clearly designated routes to add predictability and to improve safety in high vessel traffic areas such as LA/LB, San Francisco Bay, and the Strait of Juan de Fuca.

Coast Guard Headquarters is developing guidance for response operations within and around offshore wind installations. There will be an opportunity to incorporate this new guidance during the planning phase of the offshore wind developments in the PAC-PARS area.

Environmental Factors

The PAC-PARS workgroup sought the advice of NOAA experts throughout the development of the study to ensure important environmental factors were considered while determining the locations and specifications of the recommended routing measures. NOAA provided recent studies, publications, and data related to the impact of vessel traffic on the marine environment - including whale migration patterns and vessel strike data, critical marine habitats, and National Marine Sanctuaries studies in the PAC-PARS area.

With considerations taken for environmental factors, the recommended vessel traffic routing measures remain clear of susceptible environmental areas such as essential fish habitats, biologically significant areas, whale hotspots, sea mounts, and continental shelf boundaries to the greatest extent possible. Vessel traffic lanes are kept outside NMS boundaries wherever possible, and when not possible (i.e. for vessel traffic transiting in and out of San Francisco Bay), vessels are routed through the sanctuary as efficiently as possible. In addition, the recommended routing measures proposed in this study avoid two environmentally significant sea mounts – the Rodriguez Sea Mount by the Channel Islands and the Davidson Sea Mount in the Monterey Bay NMS.

Military and National Security

The PAC-PARS region has multiple Department of Defense (DoD) organizations conducting national security missions, testing, and operations along the Pacific Coast. The primary goal of this study in relation to DoD use areas was to assess current vessel traffic patterns in the two separate Point Mugu Sea Ranges (PMSR) located off Point Arguello, CA and Point Mugu, CA, as referenced on NOAA Charts 18020, 18022, 18700, 18720, 18728, 18729, 18725, and 18724, and to evaluate the optimal routing measures within these charted areas to mitigate the operational risks to vessel traffic, to minimize DoD operational delays, and to reduce mission rescheduling due to vessel transit routes.

The PAC-PARS process assisted in improving communications with the military operators in the Pacific Ocean and evaluating the current risks associated with maritime activities in the Point Mugu Sea Range (PMSR). These discussions and meetings were productive in understanding the national needs and operational requirements for the DoD programs in the area and developing future strategies to improve the notification protocols of these operations to the maritime community. A meeting with representatives from Vandenberg Space Force Base, Naval Air Warfare Center Weapons Division PMSR, U.S. Navy Pacific Fleet, and Navy Region Southwest helped shape the fairway recommendations to best meet the need for safety of navigation while minimizing the impacts of vessel traffic on DoD operations.

Public Comments

Notice of Draft Study

A Notice of Study for the PAC-PARS was announced in the *Federal Register* on July 28th, 2021, initiating a 180-day public comment period. The Eleventh District also posted an additional Notice of Inquiry in the *Federal Register* to the same Docket on February 24th, 2022 to request comments related to four focus areas within their AOR. A total of 68 comments were received; the responses to those comments were contained in the Draft Study and are now included in Enclosure 6.

A Notice of Availability of Draft Study and request for comments was published in the *Federal Register* on August 26th, 2022. This study contained the Coast Guard's preliminary recommendations for vessel routing measures along the West Coast and requested all interested stakeholders comment within a 60-day comment period, which was extended 14 days to allow additional time for affected parties to prepare their comments. A total of 192 submissions were posted to the Docket; however, some comments contained multiple signatures, resulting in a total of 22,097 submissions.

The PAC-PARS workgroup combined all responses into similar subject matter topics. Summaries for each comment topic are listed in alphabetical order below, and the responses are provided in *italics*. Some comments addressed concerns that fell outside the scope of the study or were pertinent to the rulemaking process; the response is indicated as "noted" and will be forwarded, as appropriate. Full submissions for all of the *Federal Register* comment periods can be viewed by searching for Docket ID USCG-2021-0345 in the *Federal Register* or by going to: https://www.regulations.gov/docket/USCG-2021-0345/comments.

1. Bureau of Ocean Energy Management (BOEM) / Renewable Energy

    a. Current capabilities restrict offshore wind development to offshore areas that are less than 1,300 meters deep, and the development must also remain outside National Marine Sanctuary boundaries, military use areas, and other spaces. The proposed PAC-PARS fairways will occupy a significant amount of the remaining available space for potential future offshore wind leases. Please consider the following route modifications to keep more space available for future offshore wind developments:

        1. Locate the D13 Coastal Fairway Zone closer to shore to be more consistent with the D11 Nearshore Fairway.

            The Coastal Fairway Zone enables the continuation of a 50-year-old cooperative agreement between the towboat and crabber industries in northwest coastal waters who collaborate to determine navigation routes that

avoid crab fishing grounds. The Coastal Fairway Zone covers the area of these routes, which shift over time based on environmental factors.

2. Shift the Offshore Fairway to the west so that the entire fairway is in waters deeper than 1,300 meters.

   The proposed Offshore Fairway was determined based on historic vessel traffic patterns while considering additional waterway uses including Wind Energy Areas (WEA) and Call Areas, National Marine Sanctuaries, and other significant waterway activities and environmental considerations. The proposed Offshore Fairway is designed to provide space for safe and efficient vessel traffic routing along the West Coast and to provide a means for vessels to approach/depart safely from the ports. Significantly shifting the fairway to the west will increase shipping distances, fuel consumption, costs, and emissions. Given the number of considerations the Coast Guard reviewed and the collaborative work conducted with all waterway users to develop these fairways, redirecting vessels to navigate exclusively along the 1,300 meter line is impractical for efficient and safe navigation along the Pacific Coast. The Coast Guard has made some changes to the recommended fairways from the Draft Study to accommodate additional potential offshore wind energy development areas, balancing wind energy needs with other waterway user requirements, the safety of navigation, and the preservation of critical supply chain routes.

3. Select a single perpendicular fairway connecting Coos Bay to the Offshore Fairway.

   The Coast Guard evaluated changes to the Coos Bay port access routes from the two north- and south-angled approach/departure fairways recommended in the Draft Study and determined that a single, funnel-shaped approach meets vessel traffic needs and accommodates the BOEM Coos Bay Call Area.

4. Select a single perpendicular fairway connecting the Columbia River to the Offshore Fairway.

   The Coast Guard evaluated changes to the Columbia River access routes from the three recommended routes in the Draft Study and determined that an east-west funnel-shaped approach and a northly approach (its location also shifted slightly from the Draft Study) meet vessel traffic needs and provide space for potential wind energy development areas.

b. Current and future federal and state offshore wind procurement goals need to be considered when addressing vessel navigation needs.

The Coast Guard worked closely with BOEM throughout the PAC-PARS process. The public outreach portion of the study included 344 days of open comment period to receive feedback from interested organizations and the public. Using all information gathered, the Coast Guard made accommodations for additional potential offshore wind development from the Draft Study recommendations, balancing that need with safe navigation and other waterway user/environmental constraints. Ensuring unobstructed navigation fairways are in place also will benefit the emerging offshore wind developments by providing safe access routes to potential ports supporting these projects.

c. The timing of the study conflicts with the development of established WEAs.

This study was announced in the Federal Register in July 2021 with the aim of supporting the establishment of safe and reliable navigation routes while considering the dynamic coastal waterway uses, environment stewardship, and renewable energy goals along the West Coast. The Coast Guard has worked closely with BOEM and the maritime community through each step of the WEA formulation and leasing process. Specific guidance for navigation safety has been provided and outlined in correspondence during BOEM's federal notices. All considerations were measured in evaluating the recommended fairways, as outlined in this study, and specific adjustments were incorporated to the recommended fairways from the Draft Study to the maximum extent possible for safe navigation along the Pacific Coast and in support of the offshore wind energy landscape.

d. The proposed Humboldt Bay and Coos Bay port approach fairways do not consider current port traffic density or existing WEAs.

The port access routes utilized all data associated with Humboldt Bay and Coos Bay to support vessel traffic entering/departing these ports. To see a more detailed vessel traffic data analysis, please refer to Enclosures 1 and 2.

Current data and waterway needs surrounding the Humboldt Bay WEA were evaluated and discussed with the maritime community and BOEM. The Coos Bay Call Area is still in BOEM's evaluation phase and the port access routes entering and departing Coos Bay provide critical safe navigation lanes for vessel traffic. The Coast Guard is working with BOEM to develop solutions that will provide safe navigation routing for the viability of Coos Bay Harbor. Additionally, in conjunction with the maritime community and BOEM, the Coast Guard has made changes to both port approaches from the Draft Study that provide enhanced

navigational safety and allow additional potential space for offshore wind energy development.

e. The safety constraints associated with conditions 25-40NM offshore, (e.g. convergence, restricted sea room, obstructions, limited water depths, meteorological conditions, vessel traffic volume) do not seem to require a north-south fairway that is 15NM wide.

The 15 NM Offshore Fairway width was designed to ensure existing traffic patterns could be maintained unimpeded by future offshore development. The placement factors in safety concerns as a baseline and expands to a width that accommodates the variable routing of large industry vessels making international transits along the United States Pacific Coast.

The Atlantic Coast PARS, which recommended three offshore fairways 10 NM wide, among other studies, were utilized to benchmark the PAC-PARS. Enclosure 2 to the AC-PARS "Marine Planning Guidelines - Recommended Navigational Safe Distances," outlines the regulations, international guidelines, risk assessments, vessel maneuver characteristics, buffer zones, and other considerations in determining fairway width, which were all consulted in the development of the 15 NM width.

f. Prior experience should inform the USCG PAC-PARS analysis and recommendations for safe distances between projects and shipping lanes, or any extensions to existing lanes.

The Coast Guard supports the case-by-case evaluation of navigation risks for each offshore wind project. The Coast Guard's role in assessing safe navigation regarding offshore wind developments is through a cooperating agency agreement with BOEM, review of the lessee's Construction and Operations Plan (COP), and the conduct of a Navigational Safety Risk Assessment (NSRA) prior to any installation of infrastructure. The fairways do not allow development within the defined areas, ensuring an unobstructed flow of traffic. Additional safety buffers and concerns are to be addressed at the time of development in proximity to these fairways.

g. Offshore wind survey, construction, and operations vessels will utilize California and potentially Oregon and Washington ports. The USCG should not be identifying and defining traffic lanes until more is known from these port studies.

The aim of the PAC-PARS is to ensure there are adequate, safe access routes for vessel traffic entering and exiting ports along the California, Oregon, and Washington Coasts. It is critical that these lanes be designated as soon as possible to provide safe, unobstructed navigation and to avoid the need to route

vessel traffic in or around waterway development projects that eventually may cause a crowded offshore environment.

h. The USCG could seemingly avoid siting fairways in close proximity to the Humboldt and Morro Bay leases while preserving safety measures.

The PAC-PARS took a holistic look at vessel traffic patterns along the West Coast, and the proposed Offshore Fairway seeks to provide a safe and efficient route for coastwise vessel traffic that also closely matches historic vessel routes. Safe port access routes, including those proposed for vessel traffic entering/departing Humboldt Bay and Morro Bay, are critical to designate unobstructed space for vessel traffic. These fairways will become even more important if Humboldt is a port that supports the offshore wind developments, which will result in a significant increase in vessel traffic.

2. Fishing Industry

a. Concerns about the impact of offshore wind developments to navigational safety.

The timing of this study is critical to provide safe navigation corridors for all vessel traffic considering the dynamic coastal waterway use environment, including the future development of offshore wind infrastructure. The Coast Guard consulted the fishing industry throughout the PAC-PARS process to incorporate access routes that provide safe navigation lanes that consider the needs and concerns of the West Coast fishing communities.

The scope of this study focused on ensuring adequate vessel routing measures for navigation safety and access to ports. The Coast Guard's role in assessing and promoting safe navigation in and around offshore wind developments is through our review of the lessee's Navigational Safety Risk Assessment.

b. PAC-PARS did not consider smaller ports due to a perceived lack of vessel traffic because these ports support smaller vessels that are not required to maintain AIS tracking.

The PAC-PARS selected the ports identified within the study based on input from the USCG District Offices. The study and associated appendices address most major categories of vessel types and user groups. Of note, recreational vessels represented a large percentage of the recent year's data. While it is understood that recreational vessels and fishing vessels are not all required to broadcast AIS, it can be assumed that the vessel activity observed likely represents where those vessels primarily operate.

c. Distinguish between activities and equipment that are either permissible or prohibited in designated fairways. Ensure adequate planning during approval stage of proposed project installation.

According to 33 CFR §166.105, a shipping safety fairway or fairway means a lane or corridor in which no artificial island or fixed structure, whether temporary or permanent, will be permitted. Temporary underwater obstacles may be permitted under certain conditions described for specific areas in Subpart B – however, there are not any exceptions in Subpart B that apply to the area examined in the PAC-PARS. Aids to navigation approved by the U.S. Coast Guard District Commander may be established in a fairway. Additionally, the applicant will conduct an NSRA prior to developing the wind energy area that will allow the Coast Guard review of any project that may impact safe navigation.

3. Navigation Safety / Shipping Industry

    a. Port feeder routes are not wide enough to accommodate increased traffic and provide for worst case scenarios for navigational safety – recommend making nearshore fairways 12 NM wide per USCG Marine Planning Guidelines.

    The USCG Marine Planning Guidelines discuss navigation safety corridors to be established by offshore renewable energy infrastructure. These are not to be confused, per the same guidance, with safety fairways. The purpose of a safety fairway is to ensure no future developments impede safe navigation. Previous Port Access Route Studies for North Carolina, available on USCG NAVCEN's webpage, go into depth defining international standards for safe navigation and maneuverability. These found that 5.1 NM was an appropriate width for safe navigation. In addition, given the vessel traffic observed in this study, no additional spacing was determined to be necessary for the activity observed and the expected growth. It is important to note that the coastal analysis addresses AIS carriage requirement changes over time. It was concluded that a large portion of the 'growth' in vessel activity observed was due to existing vessels broadcasting AIS based on new requirements and does not represent a true trend of expected change in those user groups.

    b. We recommend improving the predictability, routing, and safety of marine shipping in the area by marking the outer boundary of the Olympic Coast NMS ATBA using virtual aids to navigation; no changes to the current ATBA configuration would be necessary. This marking also might reverse the recent trend in reduced compliance.

    Any recommended navigation improvement should be presented to the local Coast Guard Captain of the Port (COTP), specifically during the Waterways Analysis Management System review. For the discussion of Synthetic AIS use around Areas to be Avoided, the lead organization requesting the aid should work with the respective District for that area to evaluate the need and to provide guidance in the private aids to navigation permit process.

c. The proposed D11 Nearshore Fairway is a concern for Greater Farallones NMS given the severity of dead ship tow accidents that have occurred along these routes in numerous West Coast Regional NMSs. On a scale of roughly once a year, a large incident results in a sinking/discharge of large vessels, crushed cars, and other towed material into a NMS. NOAA's Office of National Marine Sanctuaries (ONMS) requests that USCG work with the San Francisco Harbor Safety Committee and USCG D11 to establish best practices for dead ship tows to help reduce accidents as much as practical.

The Coast Guard does not have specific dead ship tow authorities. However, the Coast Guard strives to assist dead ship tow companies with guidelines to enhance the safety of their planned evolution, including reviewing Dead Ship Tow Movement Plans and proving a Dead Ship Tow checklist. Specifically, Coast Guard Sector San Francisco has a Marine Safety Information Bulletin (MSIB) 13-01 that addresses dead ship tow evolutions and provides guidelines in the Dead Ship Tow Best Maritime Practices, which was developed with the San Francisco Bay Harbor Safety Committee. Since the last major emergency incident, Coast Guard units have expressed additional precaution for any dead ship tow transiting near a marine sanctuary.

d. Would a precautionary area be established to merge ship traffic into and out of the Santa Barbara TSS and proposed fairway?

The Eleventh District does recommend a TSS precautionary area be added due to two separate traffic management plans meeting for vessels entering and exiting the Los Angeles and Long Beach Ports. CG-NAV, during the rule making process, will evaluate the current models and determine the regulatory changes needed for the safe navigation of vessels entering and exiting the TSS and fairways near the Santa Barbara TSS.

e. Recommend Point Mugu Fairway be modified to follow current vessel traffic in a more direct path toward San Pedro Bay Ports, which they may do anyway since these are voluntary fairways. Deviating from the current preferred traffic pattern may also cause crowding at the eastern end of the TSS, increasing emissions.

The recommended Point Mugu Fairway is a result of the Coast Guard's assessment of navigational safety requirements and the consideration of other reasonable waterway uses, which are many in this area, including the NMS and the Point Mugu Sea Range operations. All proposed fairways are voluntary and vessel traffic may choose to follow a different route.

f. Will this routing become mandatory for all users? Will there be any VTS involvement or changes? If inshore routing becomes necessary due to poor weather, how will notification be made of that intent and to whom?

The fairways recommended by this study are all voluntary. There are no planned changes to how USCG Vessel Traffic Services in the vicinity of LA/LB, San Francisco, or Puget Sound operate as a result of the proposed fairways. As always, the Coast Guard will broadcast storm warnings and other urgent marine information on VHF channel 16/22A and advises mariners to use good seamanship and all available weather forecasting to make decisions on transit routes.

g. California State Lands Commission staff would encourage the USCG to assess potential impacts that the adjusted shipping freeways might have on the safety, maintenance, and operation of existing or planned undersea infrastructure.

The proposed voluntary fairways should not impact undersea infrastructure based on current traffic patterns utilized in these areas. The Coast Guard reviewed all charted references in these areas, and as outlined in the study, the routes provide safe navigation corridors along the Pacific coasts of California, Oregon, and Washington. However, if a permitting agency is considering a project proposal from an applicant that will place a structure in navigable waters, the Coast Guard would require the applicant, through the lead agency, to conduct a Navigation Safety Risk Assessment (NSRA) for any project that may impact the paramount right of safe navigation per the PWSA.

h. California State Lands Commission staff recommend that the study incorporate an assessment of predicted or planned increases in vessel traffic, specifically as it pertains to offshore wind development.

This study showcased observed changes in vessel traffic over time and made informed decisions regarding proposed offshore developments and their potential to displace vessel traffic. Additional predictive growth and spatial modeling were determined to be beyond the scope of this study for determining adequate vessel routing measures.

i. Concerns with the design of the port access routes for the Columbia River as it relates to the turn-in angle from the fairway and vessel maneuverability.

The Coast Guard evaluated changes to the Columbia River access routes from the three recommended routes in the Draft Study and determined that an east-west funnel-shaped approach and a northly approach (its location also slightly shifted from the Draft) meet vessel traffic needs and provide space for potential wind energy development areas.

j. Ensure there are aids to navigation, as well as a safety buffer, within the Morro Bay and Humboldt WEA boundaries to protect vessels, turbines, and personnel.

The Coast Guard accounted for planned offshore wind installations in drafting these recommended fairways to ensure safe vessel routing options are in place in light of growing coastal waterway uses. The Coast Guard's role in assessing safe navigation in and around offshore wind developments will occur through our review of the lessee's Navigational Safety Risk Assessment for each project.

4. Point Mugu Sea Range

    a. Concern about the extension of the Channel Islands NMS Area To Be Avoided (ATBA) extension into DoD area.

    The IMO adopted the expansion of the ATBA in June 2022 and intends to include the area on charts for vessel use in Summer 2023. The PAC-PARS vessel routing recommendations account for this expansion as well as the associated extension of the Santa Barbara TSS to the northwest by 13 NM. In addition to routing commercial vessels outside the ATBA, this extension also helps route vessel traffic west of the Morro Bay WEA.

    b. The DoD Warning and Special Use area used in the PAC-PARS is inaccurate.

    Coast Guard staff used the DoD Warning and Special Use Area boundaries that are currently charted on NOAA navigational charts, and we recommend the Navy conduct a public comment process to engage all waterway users regarding the increase in size of the Point Mugu charted area per the regulatory process. NOAA Charts 18020, 18022, 18700, 18720, 18728, 18729, 18725, and 18724 outline the specific areas recognized by current waterway users.

    c. Concern about the Point Mugu Fairway directing traffic into their range.

    The proposed Point Mugu Fairway will help consolidate and lend predictability to vessel traffic that currently travels through the DoD Warning and Special Use Area south of the Channel Islands.

    d. There is no route given for those vessels that cannot utilize the identified coastwise (north-south) fairway, for example, liquid bulk tankers that are following the recommendation to remain 50 NM offshore. Recommend that an alternate route be developed for those vessels so that the range has some predictability and that mariners have a well-defined alternate.

    The Coast Guard did not include an additional fairway farther offshore for vessels that follow the 50+ NM offshore guidelines because there is far less vessel traffic congestion at that distance offshore. The Coast Guard does support the improvements for safe navigation protocols as outlined in the 2002 Pacific States/British Columbia Oil Spill Task Force recommendations.

e. It is unclear if adequate thought has been put into the planned and likely future Wind Energy Areas (WEAs) in the central coast region. Offshore WEAs in this area represent a large portion of the likely build-out in the short to mid-term, which will be required to meet the state's offshore wind production goals. Thorough planning is required to ensure that any fairway developed is compatible with those goals and that the planning considers the undesirability of pushing vessel traffic further westward where it could introduce operational constraints on the PMSR.

The scope of this study is focused on ensuring adequate vessel routing measures for navigation safety, access to ports, and to the extent practicable, reconcile the need for safe access routes with the needs of all other reasonable uses in the study area. The Coast Guard worked closely with BOEM throughout the study period, including through bi-weekly BOEM-USCG coordination meetings and quarterly meetings between BOEM's West Coast Director and Admirals at each USCG West Coast District.

5. Scientific equipment in proposed Fairway

a. Woods Hole Oceanographic Institution operates scientific equipment in an area the coincides with the proposed Offshore Fairway. Are there issues with near surface equipment that rises to within 5m of the ocean surface several times per day? Will anything beyond a local Notice to Mariners be required when conducting maintenance to the equipment? Is it possible to move the proposed Offshore Fairway 25km west to avoid the near surface equipment?

Nothing is expected to change with respect to how the USCG will facilitate ocean research enterprises. The fairways were designed to encompass past and current vessel traffic; therefore, we do not expect any significant changes to traffic or traffic density. The USCG will continue to review each research enterprise based on its possible impact to the safety of navigation and set requirements (charting, Private Aids to Navigation, early notice of operations, broadcast notice to mariners, AIS PATON, etc.) as deemed appropriate to mitigate any risk to navigation.

b. Request that language be added to the PAC-PARS specifically stating that NOAA data buoys and research moorings are permitted within the proposed fairways.

Language was added in the definition of Fairway to clarify that data buoys and research mooring may be established in a fairway if approved by the U.S. Coast Guard. See 33 CFR §166.105.

c. The USCG should consider cable challenges in its marine spatial planning.

The Coast Guard has reviewed all provided documentation for current programs and projects on the waters outside of Washington, Oregon, and California. The study has outlined the optimal recommended routing that continues to offer safe and reliable navigation corridors and solidifies the preexisting historic traffic routes established by the marine transportation system. The Coast Guard has also consulted with current waterway programs that have preexisting seabed gear around the recommended fairways.

6. Tribal Concerns

   a. Emphasize the need of USCG to consult with each of the Coastal Treaty Tribes before any decisions are made to ensure no impacts on their access to treaty-protected resources within their Usual and Accustomed Areas (U&As). For example, vessel traffic implications that may arise from any fairway designation in U&As could be a matter for consultation with respective tribes.

      The Thirteenth District (D13) sent letters to nine Coastal tribes with Usual and Accustomed waters off the coasts of Washington and Oregon on September 27th, 2021. We received two responses during the initial comment period and conducted meetings with each tribe. In addition, D13 was contacted by a tribal confederation during the comment period for the Draft PAC-PARS in the fall of 2022. We have since met with their representatives and also are consulting formally with a tribe regarding potential impacts to their U&A if the proposed fairways are federally approved. The Eleventh District also sent out a letter to tribes within their Area of Responsibility and had multiple consultations with neighboring nations with no concerns regarding offshore fairway plans.

   b. California State Lands Commission staff recommends the USCG provide a more in-depth discussion of the results of the consultation efforts and demonstrate how cultural concerns and cultural landscapes will be addressed in any proposal to change routing measures. Any future rulemaking and environmental review process for vessel routing should seek to avoid allowing anchoring or other seafloor-disturbing activities in culturally sensitive areas.

      The Coast Guard continues to provide government-to-government consultations with tribal nations within the region. In each of the consultations to date, the Coast Guard responded to the tribal nation's questions, primarily related to details on the scope of what a fairway is and the locations of the proposed fairways. Additionally, the location of the Offshore Fairway is primarily outside of the 1300-meter sea-depth line and supports the request for avoiding anchoring and seafloor-disturbance activities.

7. Whales Strikes / Environmental Concerns

    a. Move California coastal shipping fairways further offshore outside the whale habitat (beyond the continental shelf break), and for any shipping routes that cross the continental shelf, use the shortest distance feasible while avoiding areas with a high risk of co-occurrence with whales.

    The overarching goal of this study is to enhance navigation safety along the Pacific Coast while also considering the needs of all waterway users and any potential environmental impacts. Once finalized, this study will be submitted to the USCG Headquarters Office of Navigation Systems, which is responsible for waterway management nationwide. That office will review the study recommendations and oversee any further environmental analysis if needed according to the National Environmental Policy Act (NEPA) and other environmental acts as appropriate.

    Over the course of this study, Coast Guard staff frequently consulted NOAA staff to seek guidance on how best to mitigate impacts to marine life. These consultations resulted in routing decisions to avoid sea mounts, to route traffic outside a marine sanctuary, or to provide a route that moves vessels efficiently through the sanctuary if avoidance is not possible, and to provide an alternative route to the Channel Islands Traffic Separation scheme to provide additional safe navigation corridors.

    b. Reconfigure the San Francisco Bay shipping lanes by extending the northern shipping lane to avoid a prime whale feeding area.

    The Northern San Francisco Bay TSS lane was modified after a PARS was completed in 2011. The existing TSS was narrowed and extended by 17 NM to improve safety of navigation and to reduce the impact of vessel traffic to marine life. The study does not recommend modifying the existing San Francisco TSS lanes due to the need to provide a safe route for nearshore vessel traffic entering and departing San Francisco Bay's northern approaches.

    c. Extend the Western TSS lane to the Greater Farallones NMS western boundary to help consolidate traffic and reduce the fanning out of ships over the continental shelf break, to support better management of sanctuary resources and to reduce the risk of ship strikes.

    The Coast Guard worked directly with NOAA and other groups in formulating the recommended navigation protocols in the San Francisco Bay area. The current TSSs established in San Francisco Bay provide safe navigation corridors to meet

the needs of vessels entering and departing the ports of San Francisco Bay, and therefore, were not examined as part of this study.

d. Eliminate inshore fairways over the continental shelf, or where not possible, require travel below 10 knots (vessel speeds 10 knots or less reduce risk of fatal ship strikes) or limit traffic to small vessels only.

The Coast Guard does not have the authority to implement mandatory vessel speed limits. The Coast Guard does not currently support mandatory speed restrictions in constrained areas, like the San Francisco Bay, where vessels may require flexibility to maintain a speed sufficient for safe steerage for confined navigation spaces and weather conditions. The Coast Guard supports the voluntary vessel speed reduction zones in place around the Channel Islands and San Francisco Bay region.

Overall, the Coast Guard prefers further investment/support of the Blue Whales Blue Skies program to incentivize shipping industry compliance with speed reductions as opposed to a mandatory speed limit. Voluntary speed restrictions allow each vessel's master to maintain safe navigation speeds to meet the steerage requirements for their specific vessel to safely navigate critical areas, avoiding collisions, allisions, or other mishaps that could result in loss of life or damage to the environment. As an additional safety measure, the Coast Guard highly encourages mariners to use the WhaleSafe tool when transiting in / around the areas surrounding the San Francisco Bay and the Channel Islands to increase awareness when whales are in those areas.

e. Please include the ongoing NOAA passive acoustic monitoring information in USCG's environmental analysis of the fairway during the rulemaking process.

Noted.

f. It appears that USCG does not support a 15 NM buffer from the top of Rodriguez Seamount. Nonetheless, NOAA's Office of National Marine Sanctuaries (ONMS) maintains its concerns about damage that could come to that important seamount. As an alternative, we would like to work with USCG to consider modifying the Point Mugu Fairway another 5 NM further to the west of Rodriguez Seamount (for a compromise of a total of 10 nautical miles distance from the top of the seamount) to direct traffic away from sensitive pelagic and seafloor habitats and still allow fairway alignment to the north.

The proposed fairway sections around the Channel Islands NMS support two routes around the Channel Islands to mitigate risk, provide safe navigation options, and support all environmental initiatives. The section specifically near Rodriguez Seamount was an area discussed with NOAA during the development

of the recommended fairways to provide awareness of the environmental conditions and to support the sensitive ecosystems off California. The Eleventh District recommends this fairway based on an analysis of the data provided to limit vessel routing measures, to provide a distance standard as outlined near other seamounts, and to limit encroachment of the PMSR, supporting all interests in the area and safe navigation.

g. California State Lands Commission staff encourages the USCG to engage with California state agencies, including the California State Lands Commission, throughout the environmental review and rulemaking process.

Noted.

h. Dredge material disposal sites near vessel traffic lanes.

Noted.

i. Consider air emissions and fuel usage, specifically related to air quality impact in areas with environmental justice concerns and port congestion.

The PAC-PARS is a study based on navigational safety and provides results to optimize navigation routing along the Pacific Coast. An environmental analysis through the National Environmental Policy Act may be required during any future rule making process.

F. Outreach

Staff at the Eleventh and Thirteenth Coast Guard Districts as well as Pacific Area conducted public outreach campaigns for their respective jurisdictions and jointly. This public information initiative involved virtual and in-person outreach at Marine Sanctuary Advisory Committees, Harbor Safety Committees, marine exchanges, industry representative boards, NOAA working groups, open webinars, and others. Both Districts and Area issued press releases, social media announcements, Marine Safety Information Bulletins, Local Notice to Mariners, business letters, informational pamphlets, flyers, website posts, and notices in the *Federal Register*.

Three critical public comment periods drove the pace and method of outreach; the Notice of Study (NOS), published by Pacific Area Command on July 28th, 2021, had a comment period of 180 days and the Notice of Inquiry (NOI), published by District Eleven on February 24th, 2022, had a comment period of 90 days. Pacific Area published the Notice of Availability of Draft Study on August 26th, 2022, with a 60-day comment period, which was extended an additional 14 days based on requests from stakeholders for additional time to submit comments for consideration. Requesting comments at each step in the PARS processes provided multiple

opportunities for public participation and upheld the Coast Guard's commitment to maintaining open dialogue and accessibility with the maritime community.

Pacific Area

Pacific Area hosted two webinars to present the content of the Draft Study, which contained initial routing recommendations, and to answer public questions. These webinars took place on October 4th and October 11th, 2022. They were announced in the *Federal Register*, on social media, the PAC-PARS Homeport website, as well as other avenues. The presentation slides and October 4th Webinar recording also were posted to the PAC-PARS Homeport website for additional viewing options.

The Eleventh Coast Guard District

A summary of the Eleventh District's quarterly outreach efforts is outlined below. A variety of outreach material was developed for this study including the D11 PAC-PARS Business Letter, the NOS Marine Safety Information Bulletin (MSIB) (04-21), Eleventh District Local Notice to Mariners article (Section I – Special Notices), NOI flyer, and NOI MSIB (01-22).

Third Quarter 2021

- Initial information about the PAC-PARS was presented via virtual monthly meetings to the San Francisco Harbor Safety Committee, headed by the Marine Exchange of the San Francisco Bay Region.
- Information was presented to the Channel Islands National Marine Sanctuary Advisory Council via a virtual public forum.
- Information was submitted to and published in the Pacific Maritime News Magazine.
- Notifications were made to the U.S. Senate and U.S. House of Representatives in the form of an official congressional notification.
- The NOS MSIB was published, providing background information, and providing specific instructions for accessing and commenting on the NOS. The MSIB also provided an email address (PACPARS@uscg.mil) as an alternate means of submitting comments or questions.

Fourth Quarter 2021

- Flyers and pamphlets with specific instructions for commenting on the NOS, along with the business letter from the District Commander, were distributed to the Marine Exchange of Southern California.
- Flyers, pamphlets, and the business letter were distributed to the office of Vessel Traffic System (VTS) LA/LB.

- Both districts attended a high-level virtual meeting hosted by BOEM to discuss the effects of offshore wind structures on the fishing communities.
- The Eleventh District's Commercial Fishing Vessel Safety Specialist released a newsletter featuring PAC-PARS information and the NOS flyer.

First Quarter 2022

- Eleventh District Public Affairs created a post on the U.S. Coast Guard Pacific Southwest Facebook page (https://www.facebook.com/USCoastGuardCalifornia) requesting public participation in the PAC-PARS.
- Details of the NOI were discussed with a representative from the Environmental Protection Agency Region 9 Laboratory.
- Eleventh District Public Affairs created a post on the USCG Northern California Twitter page (@USCGNorCal) requesting public participation in the PAC-PARS.
- An email containing the NOI and a flyer with specific instructions for commenting on the NOI were distributed to a group of over 100 port partners in the LA/LB area of responsibility.
- Initial information about the NOI was announced via virtual monthly meetings to the San Francisco Harbor Safety Committee. Details of the NOI's focus on the San Francisco area, as well as the timeline for public comment, were mentioned by both the Captain of the Port and the Navigation working group chair.
- The Eleventh District secured a panelist position in the Pacific Offshore Wind Summit held in San Francisco. This event was attended by over 500 representatives from various private and government organizations, including Offshore Wind California, the California Energy Commission, and the Bureau of Ocean Energy Management. The Eleventh District's panelist distributed the NOI MSIB and flyers to attendees.

Second Quarter 2022

- Initial information about the NOI was announced via virtual monthly meetings to the LA/LB Harbor Safety Committee. Details of the NOI's focus area, as well as the timeline for public comment, were mentioned by both the Captain of the Port and the Navigation working group chair. Flyers were also distributed to participants virtually.
- Printed NOI flyers were distributed to Coast Guard Sectors Humboldt Bay, San Francisco, LA/LB, and San Diego for public dissemination. Individual units handed out flyers to the maritime community during routine operations.
- The timeline for commenting on the NOI was announced via virtual monthly meetings to the San Francisco Harbor Safety Committee. The MSIB was also attached to the official meeting minutes.

- Flyers were sent to Coast Guard Auxiliary Flotillas throughout California for distribution to the maritime community. The flyers were distributed to marinas, yacht clubs, and marine supply stores throughout the cities of Brisbane, Oxnard, Ventura, Avila, Morro Bay, and Marina Del Rey.
- The Eleventh District attended the first in-person San Francisco Harbor Safety Committee held in over two years. The deadline for the NOI comment period was announced by the Captain of the Port and Navigation working group chair.
- The Eleventh District met with representatives from U.S. Naval Region Southwest, U.S. Navy Pacific Fleet, Point Mugu Sea Range, and U.S. Space Force Western Region for interagency discussion and collaboration on the PAC-PARS.

The Thirteenth Coast Guard District

A summary of The Thirteenth District's quarterly outreach efforts is outlined below.

Third Quarter 2021

- Initial information about the PAC-PARS was presented to the Olympic Coast National Marine Sanctuary.
- Initial letters sent to Tribal Councils notifying them of the study. D13 replied to all responses with a letter and meeting(s), as requested.

Fourth Quarter 2021

- The NOS was discussed at the Puget Sound Harbor Safety Committee meeting. Feedback from the group included the recommendation that the USCG incorporate ocean floor features in the analysis.
- General PAC-PARS info was discussed during a BOEM Oregon Task Force meeting. A general timeline for BOEM's Oregon call area and Environmental Assessment was disclosed.
- The NOS was presented to the Coos Bay Harbor Safety Committee members.
- The NOS was discussed at the Columbia River Harbor Safety Committee meeting. Bar Pilots highlighted studies of possible interest and local fisherman highlighted that several fisheries are heavy and in close proximity to the entrances of OR and WA ports.
- The NOS was presented to the Pacific Fish Council, which was largely attended by members of the crabbing, pot, line, and trawler communities. Members expressed concerns about the fifty-year agreement between crabbers and the towing industry. Also, concerns about distances between WEA platforms for transiting and fishing were also brought up.
- The Thirteenth District met with representatives from the Pacific Northwest Crabber/WA Sea Grant community to discuss the PAC-PARS and towing lane agreements. Attendees requested that data from fisheries logbooks be included in the analysis.

- Both districts attended a high-level virtual meeting hosted by BOEM to discuss the effects of offshore wind structures on the fishing communities.

First Quarter 2022

- Projected changes to the vessel traffic density in the port of Coos Bay were discussed with representatives from the Coquille Tribe.
- The PAC-PARS was discussed with representatives of the Makah Tribe at several staff-level meetings and between Coast Guard Rear Admiral Bouboulis and Vice Chairman Bowechop during a formal government-to-government consultation on Makah Tribal lands located in Neah Bay, Washington on April 28, 2023. Tribal representatives emphasized the importance of vessel traffic safety and protecting sovereign interests in the Tribe's Usual and Accustomed Fishing Area. The extent of the Makah Tribal Council's interests are outlined in the Memorandum of Agreement between the Makah Tribe and the Coast Guard District 13.
- The PAC-PARS was discussed with five representatives of the Coquille Tribe, which was followed-up with a formal letter.
- The Thirteenth District briefed Puget Sound Harbor Safety Committee with an update on PAC-PARS and closure of the public comment period. There was a comment regarding taking into account the sea floor and impacts to marine mammals caused by additional routing measures.
- Lash up meeting with BOEM West Coast Director and the Eleventh and Thirteenth Districts. BOEM provided an update on leasing status off the west coast and CG provided an update on PAC-PARS progress.
- PAC-PARS update briefed at Lower Columbia River Harbor Safety Committee meeting.
- Met with OR/WA crabber/towboat group and WA Sea Grant to discuss incorporating lanes as a federally recognized fairway.

Second Quarter 2022

- Provided project update to Puget Sound Harbor Safety Committee meeting.
- Crabber/towboat WA Sea Grant follow-up meeting on PAC-PARS. Tentative support for a fairway zone that enabled this community to refine and manage the agreed-upon lanes inside of a larger federal fairway.
- Met with Columbia River Steamship Operators' Association to discuss lower Columbia River anchorages and had a brief discussion on PAC-PARS.
- Meeting with BOEM West Coast Director, and the Eleventh, Thirteenth, and Fourteenth Districts to discuss PAC-PARS and lease updates.
- Briefed Trans Boundary forum (Pacific Coast Marine Advisory Review Panel/Puget Sound Harbor Safety Committee) on PAC-PARS update including a timeline for recommended federal recommendations with regards to routing measures. Trans Boundary forum includes major waterways users from WA and British Columbia operating in the shared waterway.

- Briefed Joint Coordinating Group which supports the 1979 State Department Cooperative Vessel Service Agreement between the U.S. and Canada. D13 staff provided an update on PAC-PARS and informed group that the Strait of Juan de Fuca Traffic Separation Scheme was not being evaluated as part of this study.

G. Recommendations

The Eleventh Coast Guard District

Charts showing the following recommended fairways are included in Appendices I and II.

Proposed Fairway System:

1. **D11 Offshore Fairway**: A voluntary fairway system comprised of a 15 NM wide major thoroughfare that follows historic offshore routes used by commercial container and bulk carrying vessels. The main trunk of the fairway runs north - south between the Oregon/California border to the Santa Barbara TSS north of the Channel Islands and the recommended Point Mugu Fairway south of Channel Islands. This fairway provides a voluntary route for coastwise vessel traffic, which will accommodate the current and future navigation requirements necessary to maintain the safe and reliable shipping routes critical for the preservation of economic stability and national security.

   Port Approaches - The D11 Port Approaches connect vessel traffic entering and departing major California ports to the Offshore Fairway. These fairways are generally 5 NM wide except for the larger funnel-shaped fairway entering/departing the San Francisco east-west TSS.

   Santa Barbara TSS and Channel Island: The approach/departure from the Santa Barbara TSS was extended 13 NM by IMO resolution in 2022. The D11 Offshore Fairway incorporated this modification by seamlessly connecting the Santa Barbara TSS and the Point Mugu Fairway to the main Offshore Fairway.

   San Francisco: The approach/departure from San Francisco has three TSS routes with the east-west TSS being the primarily used routing measure. To maximize the efficiency of vessel routing to the east-west TSS, D11 incorporated a larger, funnel-shaped fairway, which will provide a seamless transition from the TSS to the main Offshore Fairway.

   Humboldt: The approach/departure from Humboldt Bay incorporated two 5 NM wide fairways running to the north and south of the BOEM Humboldt WEA. D11 modified this fairway after consulting with BOEM and the maritime community to provide a standard width, to improve angles for safe navigation, and to allow space for the WEA.

2. **D11 San Diego Fairway**: The approach/departure from San Diego and Southern Los Angeles/Long Beach harbors provides two voluntary recommended routes. The two approach/departure fairways provide defined north and south angled routes, each with a 5

NM width. These routes were added after discussions with fishing, tug, and commercial shipping industry representatives regarding vessel traffic issues in this area.

3. **D11 Point Mugu Fairway**: This voluntary fairway provides an alternative southern route around the Channel Islands to/from the Santa Barbara TSS, which runs along the north side of the Channel Islands. This 5 NM wide alternate route runs south of the IMO Area to Be Avoided (ATBA) encompassing the Channel Islands. This route was developed in collaboration with NOAA Office of National Marine Sanctuaries and DoD representatives to help organize vessel traffic through the Point Mugu Sea Range and minimize disturbance to the Channel Islands NMS.

4. **D11 Nearshore Fairway**: This voluntary fairway system predominantly meets the needs of the commercial fishing and shipping industries off Northern California and supports the longstanding Crabber/Towboat Lane Agreement (1971), amended in November 2019. The D11 Nearshore Fairway spans from the north boundary line of NOAA Great Farallones National Marine Sanctuary north of the San Francisco TSS through Humboldt Bay and continues north to the California/Oregon border where it connects to the D13 Coastal Fairway Zone. The Width of the fairway is 5 NM to meet current and future vessel traffic safety needs.

The Thirteenth Coast Guard District

Charts showing the following recommended fairways are included in Appendices I and III.

Proposed Fairway System:

1. **D13 Offshore Fairway**: A voluntary fairway system comprised of a 15 NM wide major thoroughfare that follows historic offshore routes used by commercial container and bulk carrying vessels. The main trunk of the fairway runs north – south, spanning the Washington and Oregon coasts from outside the Strait of Juan de Fuca TSS entrance/departure south to the boundary of Oregon and California, which is also the boundary of the Thirteenth and Eleventh Coast Guard Districts. This fairway aligns with the Eleventh District Offshore Fairway continuing south along the California coast.

   Port Approaches - The D13 Port Approaches connect vessel traffic entering and departing major ports along the Washington and Oregon Coasts to the Offshore Fairway.

   Columbia River: The approach/departure area for the Columbia River has two recommended routes: a primary east-west funnel-shaped fairway and a 5 NM wide angled northerly approach/departure fairway, which meet the needs of vessel traffic and provide space for potential wind energy development.

   Coos Bay: The approach/departure area for Coos Bay has one funnel-shaped recommended route to meet vessel traffic needs and accommodate the BOEM Coos Bay Call Area.

2. **D13 Coastal Fairway Zone:** A voluntary coastal fairway zone meets the needs of the shipping and commercial fishing industries in this region and supports the successful Crabber/Towboat Lane Agreement (1971), amended in November 2019. The D13 Coastal Fairway Zone spans from just north of Grays Harbor, Washington to the Oregon/California border. The width of the zone varies due to environmental conditions, economic considerations, proposed BOEM Call Areas, and geographic factors to provide safe navigation routes for shallow-draft vessels and fishing grounds.

PAC-PARS Fairways Coordinates

Latitude and Longitude of primary points:

1. Offshore Fairway

Offshore Fairway								
	Latitude	Longitude		Latitude	Longitude		Latitude	Longitude
1	34.51414	-121.46108	19	46.81502	-124.7345	Open		
2	35.42663	-122.21231	20	47.5004	-125.1652	36	40.51717	-124.6792
3	35.76047	-122.48927	21	46.46821	-125.1634	37	40.45892	-124.8337
4	35.84225	-122.55729	22	46.3027	-124.5955	38	40.39389	-124.8233
5	36.27365	-122.92318	Open			39	39.02152	-124.3372
6	37.00808	-123.52339	23	46.16168	-124.5644	40	37.62501	-123.6821
7	36.85275	-123.66722	24	45.96413	-125.1623	41	37.58028	-123.2741
Open			25	43.721	-125.1512	Open		
8	37.69199	-124.24967	26	43.43531	-124.6715	42	37.41399	-123.1371
9	37.66773	-124.04572	Open			43	37.21996	-123.323
10	38.91267	-124.6342	27	43.25421	-124.6705	44	36.56309	-122.7854
11	40.34598	-125.14819	28	43.19193	-125.1336	45	37.17015	-122.7673
12	41.9743	-125.42312	29	41.98324	-125.0877	Open		
13	44.0014	-125.50436	30	41.43443	-124.9928	46	37.16735	-122.6198
14	47.88534	-125.53461	31	41.3069	-124.3923	47	36.38928	-122.6444
15	48.30423	-125.28435	break			48	35.92652	-122.3045
Open			32	41.20037	-124.4645	49	35.52361	-121.9843
16	48.23748	-125.0353	33	41.30852	-124.972	50	35.21745	-121.7211
17	47.8601	-125.26202	34	40.5813	-124.8535	51	34.50183	-121.1105
18	47.1257	-124.79372	35	40.65913	-124.646	Open		
Open								

2. Pt. Mugu Fairway

Pt. Mugu Fairway								
	Latitude	Longitude		Latitude	Longitude		Latitude	Longitude
1	34.50183	-121.1105	6	33.76538	-120.16	10	33.7449	-121.0993
2	34.45383	-121.12617	7	33.92286	-119.1277	11	33.95386	-121.2957
3	34.23396	-121.19831	Open			12	34.51414	-121.4611
4	34.00548	-121.15942	8	33.84067	-119.1098	Open		
5	33.82118	-120.98775	9	33.6811	-120.156			

3. San Diego Fairway

San Diego Fairway								
	Latitude	Longitude		Latitude	Longitude		Latitude	Longitude
1	32.72221	-117.5715	6	32.90717	-118.0429	Open		
2	32.81472	-117.80594	Open			10	33.26206	-118.0024
3	32.67453	-117.74525	7	33.00225	-118.0523	11	32.92517	-117.8536
Open			8	32.97374	-117.9808	12	32.79796	-117.5298
4	32.67813	-117.85208	9	33.2329	-118.0955	Open		
5	32.86439	-117.93326						

4. Fairway Zone

Fairway Zone								
	Latitude	Longitude		Latitude	Longitude		Latitude	Longitude
1	47.1254	-124.26637	6	45.73167	-124.525	11	42.76589	-124.8261
2	47.1257	-124.79372	7	45.28022	-124.2994	12	42.66505	-124.6979
3	46.81502	-124.73448	8	44.43	-124.6833	13	41.96496	-124.5476
4	46.52324	-124.64421	9	43.18264	-124.6685	14	41.97654	-124.4369
5	45.94333	-124.51667	10	43.07119	-124.7811	15	41.98918	-124.3714

5. Near-Shore Fairway

Near-Shore Fairway								
	Latitude	Longitude		Latitude	Longitude		Latitude	Longitude
1	38.87525	-123.90137	9	41.20037	-124.4645	16	41.66852	-124.2442
2	39.32002	-123.98235	Open			17	40.93365	-124.3182
3	39.67952	-123.98391	10	41.3069	-124.3923	18	40.64491	-124.4681
4	40.18657	-124.50006	11	41.64486	-124.3582	19	40.46833	-124.585
5	40.46224	-124.70386	12	41.81024	-124.5146	20	40.22833	-124.4058
6	40.51717	-124.67917	13	41.96496	-124.5476	21	39.70833	-123.8758
Open			Open			22	39.33333	-123.8767
7	40.65913	-124.64601	14	41.97654	-124.4369	23	38.875	-123.7958
8	40.93814	-124.48948	15	41.835	-124.4	Open		

H. Conclusion

The continued growth of competing waterway uses and projects off the coasts of California, Oregon, and Washington will challenge current traffic patterns and increase the risk to safe navigation. A wide range of emerging industries in Pacific waters including commercial space missions, aquafarms, and renewable energy developments, along with an overall growth in vessel traffic, underscore the need for this PARS. Robust statistical analyses of all types of vessel traffic in the study area, detailed in Enclosures 1 and 2, support the need for safe access routes for the movement of vessel traffic along the coast and in and out of ports. The voluntary fairways recommended by this study provide improved traffic management and vessel voyage planning and reduce navigational hazards and the risks associated with unmanaged congestion for all vessel types and sizes, while also accommodating other reasonable waterway uses.

Through extensive public, tribal, and stakeholder engagement, this PARS seeks a balanced approach to marine planning while preserving the safety of navigation at a critical point in the growing demand for use of our waterways.

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Additional data and resources evaluated or reviewed for this study include:

NOAA

1. ENCDirect chart layers including Military Practice Areas, Areas to Be Avoided, Precautionary Areas, IMO Routes, and TSS
2. Critical Habitats
3. National Marine Sanctuaries
4. "*Modeling predator and prey hotspots: Management implications of baleen whale co-occurrence with krill in Central California"* authored by Rockwood et al.
5. *"Habitat-based density estimates for cetaceans in the California Current Ecosystem based on 1991-2018 survey data"* authored by Becker et al.
6. 2017-2020 VMS fisheries data

BOEM

1. Morro Bay Wind Energy Area (WEA)
2. Humboldt WEA
3. Brookings Call Area (OR)
4. Coos Bay Call Area (OR)
5. Morro Bay WEA Draft Environmental Assessment (EA)
6. Humboldt WEA EA

USCG

1. Search and Rescue (SAR) Marine Information for Safety and Law enforcement (MISLE) data
2. Marine Incident MISLE data
3. Navigation and Vessel Inspection Circular (NVIC) NO. 01-19, Guidance on the Coast Guard's roles and responsibilities for offshore renewable energy installations (OREI)
4. Marine Planning to Operate and Maintain the Marine Transportation System (MTS) and Implement National Policy, COMDTINST 16003.2B. 2019.

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