Oregon Offshore Wind Energy Planning Fisheries Data Review Workshop

August 11, 2021

Necy Sumait, Whitney Hauer, Ph.D. and Frank Pendleton
Bureau of Ocean Energy Management (BOEM) Pacific Regional Office

Andy Lanier
Oregon Department of Land Conservation and Development (DLCD)

Facilitated by Jamie Damon, Kearns & West

For help with technical difficulties, please contact Ariella Dahlin (aDahlin@kearnswest.com, 541-659-5852) for assistance.
Webinar will be recorded.
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td>9:00 am</td>
<td>Welcome</td>
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<tr>
<td>9:05 am</td>
<td>Overview of Oregon offshore wind energy planning</td>
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<tr>
<td>9:15 am</td>
<td>Fisheries data overview</td>
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<tr>
<td>9:50 am</td>
<td>Break</td>
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<tr>
<td>10:00 am</td>
<td>Fisheries datasets in OROWindMap and draft Vessel Monitoring System (VMS) analysis</td>
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<td>11:55 am</td>
<td>Next steps</td>
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Meeting Participation Tips

Please join audio by either phone or computer, not both.

During data review presentation
  o Turn off your video and stay on mute
  o Rename yourself to include your organization/affiliation

During the public input section, use “Raise Your Hand” button to get in the queue; if joined by phone, press *9 to raise hand
  o Facilitator will call on you
  o Turn on your video
  o Say your name and affiliation before speaking

For Zoom technical issues, email aDahlin@kearnswest.com or call 541-659-5852

Meeting recording and presentation will be posted at www.boem.gov/oregon-virtual-meeting-room
How to Raise Hand

Raise your hand by selecting the reactions tab or by selecting the “Participants” tab.
Raise comments for discussion during the public input session.

Be respectful of speaking time during the public input session.

Respect differences of opinion and perspectives.

Listen and speak with respect.
Welcome

Necy Sumait, Renewable Energy Section Chief
BOEM Pacific Regional Office
Overview of Oregon Offshore Wind Energy Planning

Whitney Hauer, Ph.D., Renewable Energy Specialist
BOEM Pacific Regional Office
Mission: Manage the development of U.S. Outer Continental Shelf (OCS) energy and mineral resources in an environmentally and economically responsible way.

Jurisdiction on the U.S. West Coast
- Federal waters from 3 to 200 nautical miles (i.e., the OCS)
- Excludes National Marine Sanctuaries
BOEM Offshore Wind Energy Authorization Process

[ Planning & Analysis ]  [ Leasing ]  [ Site Assessment ]  [ Construction & Operations ]

BOEM Initiates Leasing Process (Call)

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<tr>
<th>BOEM-State Planning</th>
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<td>Area Identification</td>
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<td>Wind Energy Areas</td>
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Lease Granted
Pre-survey Meetings/Plan

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<th>Site Assessment &amp; Surveys</th>
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Lessee Submits SAP

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Auction

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<th>BOEM Reviews &amp; Approves SAP</th>
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BOEM Deems COP Complete & Sufficient

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NEPA/Environmental & Technical Reviews

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<th>Submit Design &amp; Installation Reports</th>
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[BOEM Bureau of Ocean Energy Management]
Provides coordination with governmental bodies and input into BOEM’s renewable energy leasing process

September 2019 meeting: discussed planning approach
- Result: BOEM and DLCD drafted data gathering and engagement plan
- Oregon Ocean Policy Advisory Council (OPAC) letter to the Governor supports planning

June 2020 meeting: discussed draft plan
- Result: BOEM and the State of Oregon committed to offshore wind energy planning

October 2020: BOEM and DLCD finalized “Data Gathering and Engagement Plan for Offshore Wind Energy in Oregon”
OROWindMap launched in 2020

Potential Area for Leasing:
- Federal waters offshore Oregon
- Water depths <1,300 m (4,625 ft)
- Average wind speed >7 m/s (13.6 knots)

Planning Area: State and federal waters, and onshore with pertinent data and information
Depth and Slope

Bathymetry data from NOAA

Slope derived from bathymetry
OROWindMap Introductory Webinar (March 2021)
  o Functionality of OROWindMap

Oregon Offshore Wind Energy Planning Public Webinars (May 2021)
  o Provide an overview and update of planning effort
  o Gather feedback

Data Review Virtual Workshops (August 2021)
  o Provide an overview of the datasets in OROWindMap
  o Gather feedback/input on datasets
  o August 4, 2021 – Physical, human use, and biological data review
    o Provide written feedback to renewableenergypocs@boem.gov by August 18, 2021
  o Today – Fisheries-related data review
    o Provide written feedback to renewableenergypocs@boem.gov by August 25, 2021

Webinar materials and recordings available at www.boem.gov/Oregon
Selected BOEM-Funded Research

**Overview of Floating Offshore Wind**

Walt Mosial
Offshore Wind Research Platform Lead
National Renewable Energy Laboratory
February 26, 2020

Available at [www.boem.gov/Oregon](http://www.boem.gov/Oregon)
Fisheries Data Overview

Andy Lanier, DLCD
Jon Bonkoski, Ecotrust
Brian Corrigan, NOAA Office of Law Enforcement
Frank Pendleton, BOEM
Fisheries Data to Support Oregon Offshore Wind Energy Planning

Andy Lanier, Marine Affairs Coordinator
Oregon Department of Land Conservation and Development
Oregon’s ocean planning framework:

- **Statewide Planning Goal 19, Ocean Resources** (mandates protection of important marine habitat and fisheries)

- **Oregon Ocean Resources Management Act** (ORS 196.405) (creates state-ocean governance structure)

- **Ocean Policy Advisory Council** (legislatively established stakeholder advisory body)

- **Oregon Territorial Sea Plan (TSP)** – Rocky Habitats (Part 3), Subsea Cables (Part 4), Marine Renewable Energy (Part 5) (TSP contains specific enforceable policies for state ocean management)

- **CZMA Review Authority for Marine Renewable Energy** (through a GLD)
Offshore Wind Data Catalog Organizational Plan

Oregon Data Catalogs + Federal Data Catalogs

Oregon Data Catalogs:
- Coastal and Marine Data
  - Oregon Coastal Atlas
  - Oregon Ocean Information
- Oregon Statewide GIS Data Catalog
  - Oregon Spatial Data Library
  - Oregon Explorer (ORESA Project)

Federal Data Catalogs:
- Offshore Wind Catalog (Combination of Records from Oregon and Federal Data Catalogs)
  - Marine Cadastre
  - Ocean Reporting Tool
  - Digital Coast
  - NOAA Fisheries (FRAM)
  - NREL Data Catalog
  - Ocean Observing Initiative
  - USGS
  - ...and many more

Curated Offshore Wind Catalog
The Oregon Offshore Wind Mapping Tool (OROWindMap), found at https://offshorewind.westcoastoceans.org, has been developed to provide visualization capabilities for data that has been discovered through the catalog compiled and curated on the West Coast Ocean Data Portal.
Human Use Data

Admin Boundaries
Marine Infrastructure
Hazards Information
Renewable Energy

Marine Fisheries
Scientific Research
Military Uses
Economy & Population

Marine Transport
Conservation Areas
Marine Recreation
Culture & Heritage
Marine Fisheries Data Catalog Review

TSP Part Five

NOAA Fisheries (FRAM)

BOEM VMS Analysis (Draft Products)
Mapping Fisheries Uses and Values for Oregon’s Territorial Sea Plan Revision

PRESENTED BY
Jon Bonkoski
Knowledge Systems Program Director

Ecotrust
In 2010, Oregon initiated an amendment process for its Territorial Sea Plan (TSP) focused on developing policies to guide the approval of renewable energy facilities.

The TSP includes Goal 19 (Protects Ocean Resources)

- To conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social value benefits to future generations

- Protect and encourage the beneficial uses of ocean resources—such as navigation, food production, recreation, aesthetic enjoyment, and uses of the seafloor—provided that such activities do not adversely affect the resources protected—

Mapping process initiated by fishing community

- The Southern Oregon Ocean Resources Coalition (SOORC) organized to bring fishing community voice to process
Project Goal

- Comprehensively describe Oregon’s commercial and recreational fishing community and incorporate fishermen’s knowledge into the development of future amendments to the Oregon Territorial Sea Plan (TSP);

- Develop accurate maps depicting the extent of the local fishing grounds and their stated and economic importance to local fleets (just stated importance for the consumptive recreational fleet)

- Analyze areas of high or valuable use in relation to existing or prospective alternative ocean uses
Ports to survey:
- Brookings, Gold Beach, Port Orford, Florence, Newport, Depoe Bay, Pacific City, Garibaldi/Tillamook, and Astoria

Data collection period: in-person and online (recreational only)
- December 1, 2009 – August 31, 2010

Quality assurance and control
- Individual and group reviews for accuracy and presentation

Spatial analysis and map products
- Aggregate individual responses
- Map products created based on fishing community and state’s needs
Methods

Commercial Sector

- Identify commercial fisheries: Differentiate by fishery and gear type (E.g., Crab, rockfish, sablefish, halibut, salmon, hagfish, urchin, and trawl fisheries)
- Goal was to represent at least 5 fishermen and 50% of the total landings (ex-vessel revenue) from 2004-2008 in each fishery, gear type, and port complex combination.

Charter/Recreational

- Recreational sectors: dive, kayak, private vessel
- Target fisheries – salmon, Dungeness crab, rockfish, Pacific Halibut, abalone (dive), shrimp/prawn, and flatfish
- We attempted to capture all the charter and six-pack operations in each of the port group
## Fisheries by Sector

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<th>Recreational</th>
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<td>Albacore Tuna</td>
<td>Private Vessel &amp; Kayak</td>
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<td>Dungeness Crab</td>
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<td>Rockfish</td>
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<td>Whiting - Midwater Trawl*</td>
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Total participation by sector
Commercial Fishing: 244
Charter: 63
Private recreational: 237
Fishermen identified all fishing areas/locations that were of economic importance over their cumulative fishing experience.

Fishermen ranked these areas using a weighted percentage — by allocating 100 points that they distribute over the fishing grounds (100 points per fishery).

Also collected voluntary non-spatial information pertaining to demographics, fishing characteristics, and socioeconomic data.
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<tr>
<td>Gold Beach/Brookings</td>
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</tr>
</tbody>
</table>
Open OceanMap Tool
Step 1: Collect data on fishing characteristics
Step 2: Select the fishery to map
Step 3: Draw fishing area
Step 4: Assign points to fishing area
Repeat steps 1-4 to create a map for each fishery
Recreational Online Survey Tool

The survey is split by sector

Step 1: Answer questions on your fishing characteristics

Step 2: Select the fisheries you fish for

Step 3: Begin mapping
The Map Interface

Instructions
First, navigate the map to the general area of your primary salmon fishing ground as a sport boat fisherman.

a. To move the map, use the blue arrow buttons. To zoom the map in and out, use the blue ‘+’ and ‘-’ buttons.

b. To turn on ‘Nautical Charts’ use the selection window on the top right. Click the selection to turn them on or off.

c. Get as close as you can to your fishing ground, then press the continue button.

Help Videos

GPS Coordinates

Nautical Chart Layer

Navigation Controls
If you are unhappy with your area, you may **cancel** it.

Verify that you are happy with the area you have drawn before proceeding.
You may **draw more areas** as well as **delete previous areas**

In this section, you can:
- Select areas
- Delete areas
- Zoom to areas
- Zoom to all areas
Pennies are used to give weights to each area

You have 100 pennies to divvy up between the areas for each species

The more pennies you give an area, the more important it is to you
Select “Edit Pennies” to allocate pennies to each area.

Edit values until you are satisfied.
Cross Sector Aggregate Map

Combines all three sectors by:
1) Giving equal weight to each fishery in a sector
2) Giving equal weight to each sector

- Commercial weighted by ex-vessel revenue
- Charter weighted by gross revenue
- Recreational weighted equally

Max Normalization equation:
\[ X_i = \frac{(X_y - X_{\text{min}})}{(X_{\text{max}} - X_{\text{min}})} \]

\( i \) = index value
\( y \) = grid cell value
Thank you for joining us

Ecotrust.org | @ecotrust
NOAA Fisheries OLE
Vessel Monitoring System (VMS) Program

Brian Corrigan

NOAA Fisheries Office of Law Enforcement – West Coast Division (OLE-WCD)
Vessel Monitoring System (VMS)

– **WHAT:**
  - 24/7/365 monitoring
  - Variable transmission rate

– **WHY:**
  - Implemented 2004 under WC Groundfish Regulations
    - Enforcement: Conservation Areas
    - Fisheries Management: Fishing Effort

– **HOW:**
  - Satellite based tracking (cellular used in other regions)
  - vTrack Software (includes AIS data)
  - Monitored in real time & with remote alarms
  - No limit to historical data
    - Data Confidentiality
Vessel Monitoring System (VMS)

— **WHO:**
  - Dependent on gear & catch
    - 1,616 vessels monitored

— **WHEN & WHERE:**
  - Underway & In Port
  - VMS Declarations
  - VMS Exemptions

— **WHO & WHEN & WHERE ELSE:**
  - Non-VMS Vessels
  - High Seas VMS Vessels
  - Alaska VMS Vessels
Brian Corrigan
Investigative Support Program Manager
NOAA Fisheries Office of Law Enforcement
Seattle, Washington
(206) 526-6135 - Office
brian.corrigan@noaa.gov
VMS Analysis and NOAA Northwest Fisheries Science Center (NWFSC) Observer Program Spatial Data

Frank Pendleton, GIS Specialist
BOEM Pacific Regional Office
We are asking for your expertise. Is there…

- Another dataset(s) that show where fishing occurs?
- A specific concern we should address in our analysis?
- Something about a fishery we should consider when analyzing the data?
  - Fishing speeds vs Transit speeds
  - Fishing times
  - Big change by year
- People/Organizations/Fishing Meetings BOEM and the States should talk to about Offshore Wind Planning or datasets?
- Anything else?
Extensive data discussions, including with:

- Oregon Dept of Fish and Wildlife
- California Dept of Fish and Wildlife
- NOAA Aquaculture Team
- NOAA Northwest Fisheries Science Center
- NOAA Office of Law Enforcement
- Pacific Fisheries Management Council
- Pacific States Marine Fisheries Commission
- Fishing Commissions
Non-Disclosure Agreement
At least 3 vessels in any block
(Example is AIS data)

Data
Vessel ID
Declaration code
Date Time, Lat/Long, Course, Speed

Our Dataset = 2010 – 2017
<table>
<thead>
<tr>
<th>Declaration ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>210</td>
<td>Limited entry fixed gear, not including shorebased IFQ</td>
</tr>
<tr>
<td>211</td>
<td>Limited entry groundfish non-trawl, shorebased IFQ</td>
</tr>
<tr>
<td>220</td>
<td>Limited entry midwater trawl gear, non-whiting shorebased IFQ</td>
</tr>
<tr>
<td>221</td>
<td>Limited entry midwater trawl, Pacific whiting shorebased IFQ</td>
</tr>
<tr>
<td>222</td>
<td>Limited entry midwater trawl, Pacific whiting catcher/processor sector</td>
</tr>
<tr>
<td>223</td>
<td>Limited entry midwater trawl, Pacific whiting mothership sector (catcher vessel or mothership)</td>
</tr>
<tr>
<td>230</td>
<td>Limited entry bottom trawl, shorebased IFQ, not including demersal trawl</td>
</tr>
<tr>
<td>231</td>
<td>Limited entry demersal trawl, shorebased IFQ</td>
</tr>
<tr>
<td>233</td>
<td>Open access longline gear for groundfish</td>
</tr>
<tr>
<td>234</td>
<td>Open access groundfish trap or pot gear</td>
</tr>
<tr>
<td>235</td>
<td>Open access line gear for groundfish</td>
</tr>
<tr>
<td>240</td>
<td>Non-groundfish trawl gear for ridgeback prawn</td>
</tr>
<tr>
<td>241</td>
<td>Non-groundfish trawl gear for pink shrimp</td>
</tr>
<tr>
<td>242</td>
<td>Non-groundfish trawl gear for California halibut</td>
</tr>
<tr>
<td>243</td>
<td>Non-groundfish trawl gear for sea cucumber</td>
</tr>
<tr>
<td>250</td>
<td>Tribal trawl gear</td>
</tr>
<tr>
<td>260</td>
<td>Open access prawn trap or pot gear,</td>
</tr>
<tr>
<td>261</td>
<td>Open access Dungeness crab trap or pot gear</td>
</tr>
<tr>
<td>262</td>
<td>Open access Pacific Halibut longline gear</td>
</tr>
<tr>
<td>263</td>
<td>Open access salmon troll gear</td>
</tr>
<tr>
<td>264</td>
<td>Open access California halibut line gear</td>
</tr>
<tr>
<td>265</td>
<td>Open access sheephead trap or pot gear</td>
</tr>
<tr>
<td>266</td>
<td>Open access Highly Migratory Species line gear</td>
</tr>
<tr>
<td>267</td>
<td>Open access Coastal Pelagic Species net gear</td>
</tr>
<tr>
<td>268</td>
<td>Open access California gillnet complex gear</td>
</tr>
</tbody>
</table>
AIS Data for Demonstration

Automatic Identification System (AIS) data downloaded from http://www.miraclenerx.gov/ais/
Point data was converted to tracks, and then summarized by BOEM aligupt (1200m x 1200m). Color represents the number of AIS vessels traveling through an aligupt in 2013.

Coordinate System: WGS 84, UTM Zone 4N, Service Layer Credits: ESRI, DeLorme, GEBCO, NOAA NGDC, and other
**Fishing Trip** begins when a vessel leaves port, ends when it enters a port.

**Fishing Event** begins when a vessel slows to fishing speed, ends when it speeds up.
VMS All Fisheries (>100 events / aliquot) 2010-2018
## NWFSC Observer Program Spatial Data: Spatial Data Collected by Observers

<table>
<thead>
<tr>
<th>Gear Type (Duplicates)</th>
<th>Haul ID</th>
<th>Date</th>
<th>Time</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Depth of Catch (m)</th>
<th>Gear Type</th>
<th>Target Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Trawl Small Footrope (48 inches)</td>
<td>Start</td>
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<tr>
<td>2: Trawl Large Footrope (48 inches)</td>
<td>End</td>
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<td>3: Trawl/Sledded Trawl</td>
<td>Start</td>
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<td>4: Diamond/Sled Trawl</td>
<td>End</td>
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<td>5: Other Trawl Ledge</td>
<td>Start</td>
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<td>6: Vertical Tog and (One)</td>
<td>End</td>
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<tr>
<td>7: Vertical Tog and (Two)</td>
<td>Start</td>
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<tr>
<td>8: Other Mackerel and Line</td>
<td>End</td>
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<td>9: Fish FPI</td>
<td>Start</td>
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<tr>
<td>10: Shrimp Trawl Single Drag</td>
<td>End</td>
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<tr>
<td>11: Shrimp Trawl Double Drag</td>
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<tr>
<td>12: All Net (Double Trawl)</td>
<td>End</td>
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<tr>
<td>13: All Net (Single Trawl)</td>
<td>Start</td>
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<td>14: All Other (Non-Target)</td>
<td>End</td>
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<tr>
<td>15: All Other (Target)</td>
<td>Start</td>
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<tr>
<td>16: Off-Setted Prawn Net (Pineapple)</td>
<td>End</td>
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<tr>
<td>17: Longline (Peanut)</td>
<td>Start</td>
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<tr>
<td>18: Longline (Skipjack Hook)</td>
<td>End</td>
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<tr>
<td>19: Longline (Long lead)</td>
<td>Start</td>
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<tr>
<td>20: Longline (Chain)</td>
<td>End</td>
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</tbody>
</table>

Fishing Effort in the 2002–17 Pacific Coast Groundfish Fisheries

March 2020
Analysis of Spatial Data
Analysis of Spatial Data
Publicly Available Spatial Data
Fisheries Datasets in OROWindMap and Draft Vessel Monitoring System (VMS) Analysis

Andy Lanier, DLCD
Frank Pendleton, BOEM
Module 1: Pacific groundfish (trawl fisheries)

Data themes: Non-trawl groundfish, bottom trawl, midwater trawl
Data Layers in the Catalog (1)

Automatic Identification System (AIS) Fishing Vessel Traffic

The AIS data layers below are provided by the Marine Cadastre and Ocean Reporting Tool.

- AIS Vessel Transit Counts: Fishing (2016)
- AIS Vessel Transit Counts: Fishing (2017)
- Marine Traffic Fishing (High Traffic) by Aliquot AIS 2017
- Marine Traffic Fishing by Aliquot AIS 2017

View in OROWindMap
Data Layers in the Catalog (2)

Oregon Marine Fisheries Uses and Values Data Products to Support the Territorial Sea Plan, Ecotrust, 2010-2012

- Astoria All Fishing Sectors
- Garibaldi All Fishing Sectors
- Depoe Bay All Fishing Sectors
- Newport All Sector;
- Florence All Fishing Sectors
- SOORC Commercial Fishing
- Port Orford Commercial Fishing
- Brookings, Gold Beach All Fishing Sectors
- Statewide All Fishing Sectors
Data Layers in the Catalog (3)

Fishing Effort in the 2002-2017 U.S. Pacific Coast Groundfish Fishery, NOAA

This set of map services depicts the relative intensity and proportion of commercial fishing effort for several gear types used off the U.S. West Coast from 2002-2017 (Somers et al. 2020).

- Limited Entry Bottom Trawl Intensity (2002-2006); (2006-2010)

Non-Catch Shares
Hook and Line

https://www.webapps.nwfsfc.noaa.gov/data/map
Catch Shares
Hook and Line

https://www.webapps.nwfsc.noaa.gov/data/map
Groundfish

Limited Entry

Groundfish

Fixed Gear

2010-2017
Groundfish

Limited Entry Groundfish Non-Trawl
2010-2017

211_Limited Entry Groundfish non-Trawl (Shorebased IFQ)
Groundfish
Limited Entry
Groundfish
2010-2017

Call Areas
- Oregon Planning Area
- Call Areas

Groundfish (Fishing Events)
- 10 - 20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 100
- >100
Open Access Groundfish Longline, Line, Trap or Pot 2010-2017
Limited Entry Bottom Trawl

Catch Shares Bottom Trawl

Bottom Trawl

https://www.webapps.nwfsfc.noaa.gov/data/map
Call Areas
- Oregon Planning Area
- California Call Areas

Bottom Trawl (Fishing Events)
- 11 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- >250

Bottom Trawl 2010-2017
At-Sea Midwater Trawl Catcher Processor

https://www.webapps.nwfsc.noaa.gov/data/map
At-Sea Midwater Trawl Mothership

https://www.webapps.nwfsc.noaa.gov/data/map
Shoreside
Midwater Trawl
Hake

https://www.webapps.nwfsc.noaa.gov/data/map
Shoreside Midwater Trawl Rockfish

https://www.webapps.nwfsc.noaa.gov/data/map
Midwater Trawl 2010-2017
Whiting Trawl
2010-2017
Whiting Trawl
2010-2017
220_Limited Entry Midwater Trawl
(Non-whiting Shorebased IFQ)

Non-Whiting
Shorebased IFQ
2010-2017
221 Limited Entry Midwater Trawl (Pacific Whiting Shorebased IFQ)
Whiting Mothership 2010-2017

223_Limited Entry Midwater Trawl (Pacific Whiting Mothership Sector)
Module 2: Crab, Shrimp, and Other Pot or Trap Fisheries
Data Layers in the Catalog

Oregon Marine Fisheries Uses and Values Data Products to Support the Territorial Sea Plan, Ecotrust, 2010-2012

- Astoria All Fishing Sectors
- Garibaldi All Fishing Sectors
- Depoe Bay All Fishing Sectors
- Newport All Sector;
- Florence All Fishing Sectors
- SOORC Commercial Fishing
- Port Orford Commercial Fishing
- Brookings, Gold Beach All Fishing Sectors
- Statewide All Fishing Sectors
Non-Catch Shares
Pot

https://www.webapps.nwfsc.noaa.gov/data/map
Catch Shares
Pot

https://www.webapps.nwfsc.noaa.gov/data/map
Dungeness Crab
2010-2017
Dungeness Crab
2010-2017

261_Open Access Dungeness Crab
Trap or Pot Gear (>20 events)
Pink Shrimp
2010-2017

241_Nongroundfish Trawl Gear for Pink Shrimp
Open Access Groundfish Trap or Pot
2010-2017
Module 3:
Pacific Salmon, Highly Migratory Species, and Coastal Pelagic Species
Data Layers in the Catalog (1)

Oregon Marine Fisheries Uses and Values Data Products to Support the Territorial Sea Plan, Ecotrust, 2010-2012

- Astoria All Fishing Sectors; Astoria Commercial Dungeness Crab
- Garibaldi All Fishing Sectors; Tillamook, Garibaldi Commercial Dungeness Crab
- Depoe Bay All Fishing Sectors; Depoe Bay Commercial Dungeness Crab
- Newport All Sector; Newport Commercial Dungeness Crab
- Florence All Fishing Sectors; Florence Commercial Dungeness Crab
- SOORC Commercial Fishing; SOORC Commercial Dungeness Crab
- Port Orford Commercial Fishing; Port Orford Commercial Dungeness Crab
- Brookings, Gold Beach All Fishing Sectors; Brookings, Gold Beach Commercial Dungeness Crab
- Statewide All Fishing Sectors; Statewide Commercial Dungeness Crab
Data Layers in the Catalog (2)

Fishing Effort in the 2002-2017 U.S. Pacific Coast
Groundfish Fishery, NOAA

This set of map services depicts the relative intensity and proportion of commercial fishing effort for several gear types used off the U.S. West Coast from 2002-2017 (Somers et al. 2020).

- Limited Entry Bottom Trawl Intensity (2002-2006); (2006-2010)
Highly Migratory Species
2010-2017
Coastal Pelagic Species
2010-2017

No VMS data due to “Rule of 3”
Summary and Next Steps

Whitney Hauer, BOEM
Explore OROWindMap (offshorewind.westcoastoceans.org) and OROWindMap Catalog (portal.westcoastoceans.org/OROWindMap-data-themes)

- Provide written feedback on the content of the data review workshop, email renewableenergypocs@boem.gov by Aug 25, 2021
  - Include “Oregon Data Review Feedback Aug 11” in the subject line
  - Share relevant data (see www.boem.gov/OROWindMapInfo)

Stay informed and connected about Oregon offshore wind activities and any scheduled Task Force meetings at www.boem.gov/Oregon

- Sign up for announcements at www.boem.gov/OregonUpdates

Contact Whitney Hauer (whitney.hauer@boem.gov) and Andy Lanier (andy.lanier@dlcd.Oregon.gov) with names of other organizations, groups, or members of the public that should engage in offshore wind energy planning
Anticipated Next Steps

Continue data gathering and engagement throughout BOEM’s authorization process

Fall 2021: BOEM Oregon Task Force Meeting
  o Present the results of the 12-month effort
  o Seek input from the Task Force

Winter 2021-2022: BOEM Oregon Task Force Meeting
  o Review draft Call Area(s) with the Task Force

Following the Task Force Meetings
  o BOEM to publish Call for Information and Nominations (Call) in the *Federal Register*
    o Describes geographically distinct areas (Call Area(s))
    o Requests comments and information relevant to BOEM’s review to identify Wind Energy Areas which are subject to environmental review prior to leasing
    o Invites submission of nominations of interest for commercial wind leases
Necy Sumait | BOEM Pacific Renewable Energy Section Chief
necy.sumait@boem.gov | 805-384-6320

Whitney Hauer, Ph.D. | BOEM Oregon Task Force Coordinator
whitney.hauer@boem.gov | 805-384-6263

Frank Pendleton | BOEM Pacific GIS Specialist
frank.pendleton@boem.gov | 805-384-6313

Andy Lanier | Oregon DLCD Marine Affairs Coordinator
andy.lanier@dlcd.Oregon.gov | 503-206-2291