

12th Annual
Oregon Department of Fish and Wildlife Marine Resources Program
Dungeness Crab Fishery Newsletter

December 2020

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Visit Our Website:

<http://www.dfw.state.or.us/MRP/shellfish/commercial/crab/.asp>

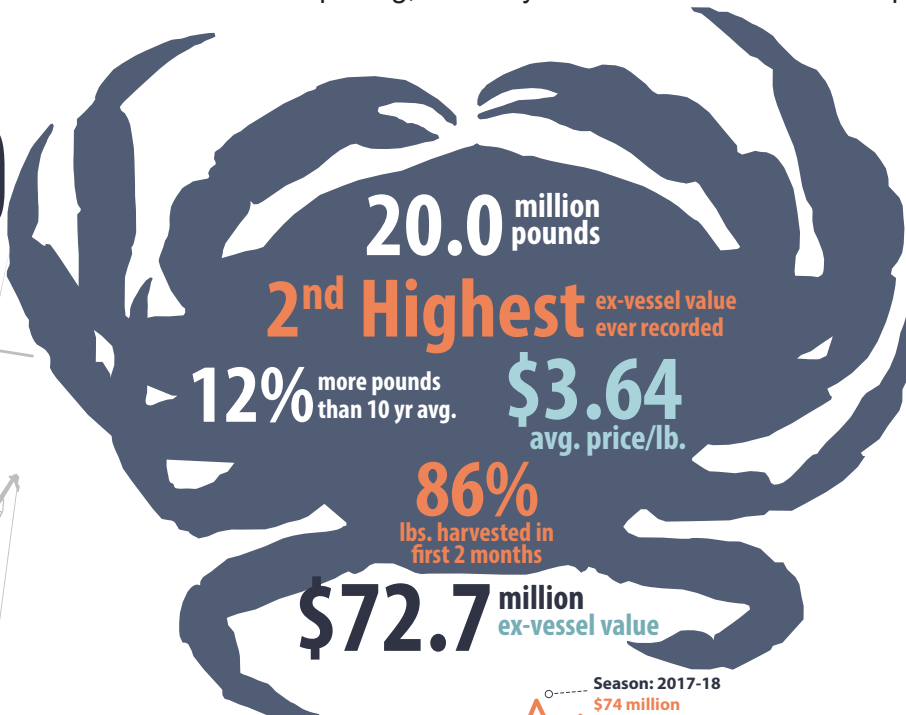
Excellent crab season!

The 2019-20 Oregon Dungeness crab season brought in \$72.7 million dollars ex-vessel value, the second highest grossing season on record! Despite a challenging year for the seafood industry due to the COVID-19 pandemic, crab landings totaled just under 20.0 million pounds, approximately 12% above the 10-year average of 17.6 million pounds. The average price per pound peaked at \$6.28 in May and came in at \$3.64 across the entire season, up from last year's \$3.57 average price per pound. In total, 320 different permit holders made 5,691 separate landings into Oregon ports from the ocean and Columbia River.

The 2019-20 season opening was delayed coastwide due to low meat yield and opened throughout the Tri-State area on December 31st. No elevated levels of domoic acid were detected in crab viscera samples collected prior to the season opening, or in any of the areas that were sampled (con't on p.2)

How'd it GO?

2019-20 Season Summary



Pounds Landed

22% Astoria

5% Nehalem/Garibaldi/Pacific City

45% Depoe Bay/Newport

3% Florence/Winchester Bay

15% Charleston

4% Bandon/Port Orford

6% Gold Beach/Brookings

— Ex-Vessel Value (\$) (inflation adjusted)

— Total Pounds

Season: 1994-95
\$37.3 million
15.1 million lbs.

Season: 2000-01
\$21.2 million
7.4 million lbs.

Season: 2004-05
\$60.9 million
33.7 million lbs.

Season: 2017-18
\$74 million
23.1 million lbs.

Season: 2014-15
\$34.9 million
8.2 million lbs.

117,800
estimated pots used

1980's

1990's

2000's

2010's

Season Summary (cont'd)

throughout the season. Therefore, no preseason or in-season actions were needed to manage biotoxins, a welcome change from the domoic acid delays and evisceration orders of the last several seasons.

As usual, the vast majority (86%) of crab were caught in the first eight weeks of the fishery. This is right on par with recent seasons that ranged from 83-91% landed in the first eight weeks. For the 4th year in a row, the Newport area led all ports in total landings with more than 8.9 million pounds (45% of the total season landings), followed by the Astoria and Coos Bay areas with 4.5 and 2.9 million pounds landed, respectively.

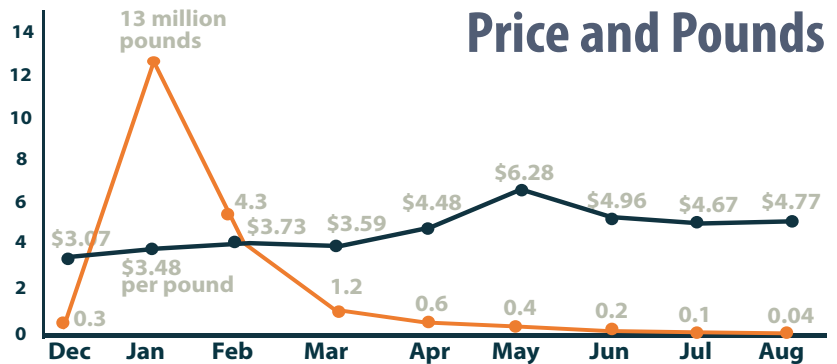


Figure 1: Pounds of crab landed and price per pound by month for the 2019-20 crab season.

An estimated 117,800 total pots were used in the fishery this season, which is slightly above the estimated average number (115,017) of pots utilized each season since the implementation of pot limits.

Derelict Gear Program Summary

Thanks to everyone who retrieved derelict gear in-season and reported those efforts in your logbooks (reminders on dates and allowances listed below). Also, thanks to those of you who participated in the Post-Season Derelict Gear Recovery Program (PSDGRP) this year bringing in a total of 588 pots. The number of pots brought in through the program has ranged from 421-957 pots per year since 2014. Throughout the duration of the program this year (August 30th – October 11th) we issued 43 permits and just under half (20 permits) recovered gear. Pots were brought into six Oregon ports from 38 separate retrieval trips. All recovered gear was registered and tagged by ODFW or Oregon State Police (OSP) at the dock and all gear registration forms are posted on our website <https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/psdgrp.asp>. This allows any previous gear owners interested in negotiating for retrieved pots to contact retrieving vessels directly.

For the second year in a row, additional outreach efforts resulted in reports of over 90 locations of derelict pots to ODFW from OSP, Oregon State University (OSU) researchers, and recreational ocean users. We regularly shared these locations with PSDGRP permit holders to target for retrieval and approximately

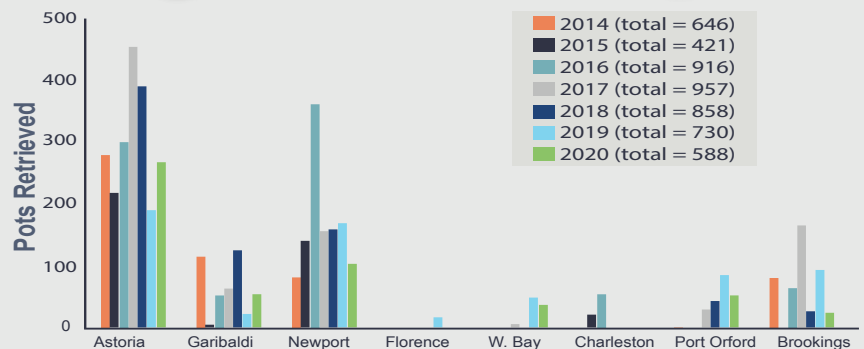


Figure 2: Number of pots retrieved by port from all years of the PSDGRP.

18 of them were retrieved and registered through the program. Many of the remaining reported derelict pots are likely still out in the water, so please consider retrieving derelict pots as you start crabbing this season under the in-season derelict gear allowances (see reminders below). The updated list of reported derelict gear is located on our derelict gear recovery webpage listed to the left.

Overall, the program continues to be successful at bringing in a significant amount of derelict crab gear and at raising awareness both within the fleet and with other ocean users about the crab industry's efforts to remove crab gear post season. In light of the increased rate of confirmed large whale entanglements along the West Coast, efforts to reduce risk of entanglement by removing lines from the water both during and after the season are more important than ever for the continued sustainability of the fishery. Please consider removing derelict gear throughout the season as allowed by regulation and participating in next year's post-season program.

In-Season Derelict Gear Retrieval Reminders

- ### Seasonal allowances
- Season start to 2nd Monday in June - 25 pots
 - 2nd Monday in June to August 14 - 50 pots
 - August 15 to October 31 - Unlimited pots *without post-season permit conditions listed on the right still apply

Conditions upon retrieval

- Gear must be unbaited
- Retain only legal crab
- Record number of pots and locations in logbook
- Transport to shore on same trip
- Return to owner

Fishery Monitoring Update

The primary tools we continue to use to monitor the crab fishery are dockside and at-sea sampling to evaluate size of catch and bycatch rates, fish tickets to track total harvest, and crab logbooks to track effort over space and time.

2019-20 Fishery Sampling Efforts

In November 2019, we sampled a subset of pots on every preseason test trip (n=20 out of 6 ports) to evaluate bycatch of crab and non-crab species caught just before the season opens. In total we sampled 179 pots and measured 3,574 crab. Pre-season bycatch rates continue to indicate catch per pot of sub-legal male Dungeness crab is the highest of all the categories of bycatch, followed by female Dungeness crab, other invertebrates (sea stars, etc.) and fish species during this time of year.

Dockside sampling in the 2019-20 season consisted of measuring the carapace widths and weighing a portion of the crab landed, based on the size of the landing. Coastwide, three ODFW samplers measured and weighed 22,284 crab from 514 different offloads in 6 ports from December through May. The average size of crab sampled was 6.8 inches (173 mm), the smallest was 6.0 inches (152 mm), and the largest was 8.0 inches (204 mm). Due to the COVID-19 pandemic, our in-season ride-along efforts were cancelled. We plan to resume these when it is determined safe and we have the staff capacity to do so.

Logbooks and Fish Tickets Why so much paperwork?

In addition to the ODFW's own uses (see previous newsletters for more information), crab logbook and fish ticket data are used by researchers and other agencies to describe the crab resource and the fishery you participate in to inform management of the crab resource and to provide rationale for protecting the crab fishery itself. The use of any logbook and fish ticket data follows a rigorous data request process and the development of a Data Use and Non-Disclosure Agreement between the Department and all data users.

This year, these additional uses of crab fish ticket and logbook data have contributed to further development of seasonal ocean condition forecasts for the crab fishery (see project update on p.4), a continuation of the National Oceanic and Atmospheric Administration's (NOAA) whale and crab fishing co-occurrence modeling and whale entanglement risk assessment efforts, an economic analysis of whale entanglement mitigation measures (see p. 7-8 for more description of both of these), and an economic evaluation of crabbing location choice relative to safety considerations. Please contact us for more information about any of these projects at any time.

Why Monitor?



Provides data to compare historical stock trends with current info.

Allows investigation of year class structure, recruitment trends and relative abundance.



Provides data to assess and quantify bycatch rates of female crabs, undersize crabs and other species.

Offers a communication channel between ODFW and the fleet, processors, and enforcement.



Provides information to evaluate the success of management measures.

J-Scope Seasonal Forecasts for the Dungeness Crab Fishery



Since 2017, the JISAO Seasonal Coastal Ocean Prediction of the Ecosystem (J-SCOPE) research team, including researchers from NOAA, University of Washington, and University of Connecticut, have collaborated with state and tribal managers from Washington and Oregon to adapt seasonal (<9 month) forecasts of ocean conditions relevant to the Dungeness crab fishery (see Figure 1 for one example). This effort relies on the J-SCOPE forecast system, which translates global, seasonal weather predictions from NOAA's Climate Forecast System down to the scale of Oregon and Washington's coastal ocean. All forecasts developed by the project are available on the Northwest Association of Networked Ocean Observing Systems (NANOOS) portal (<http://www.nanoos.org/products/j-scope/>).

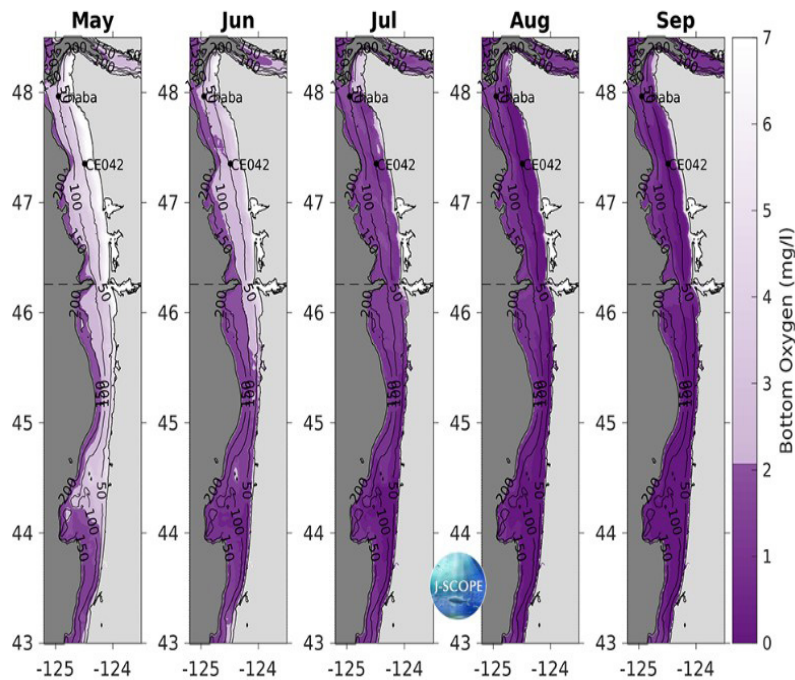


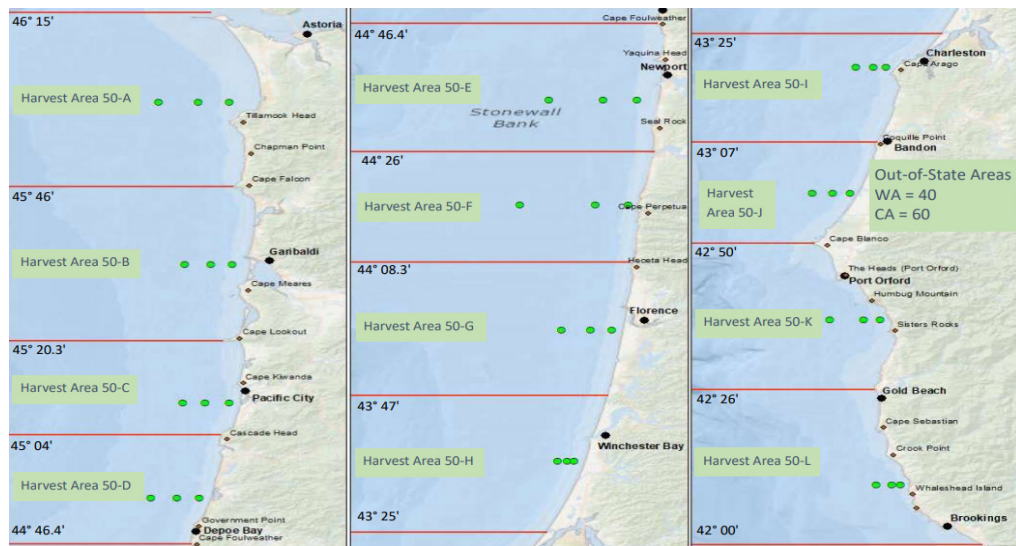
Figure 3: Bottom hypoxia (< 2 mg/l, dark purple on the color scale) from the forecast that was initialized in January 2020, projecting through summer and fall 2020.

Over the last few years, the team has continued to investigate ocean drivers of crab abundance (catch per pot), and consider ways that existing forecasts of summertime hypoxic events can be incorporated into management decisions for the fishery. ODFW, Washington Department of Fish and Wildlife (WDFW), and Washington tribal managers have collaborated on this project by providing crab fishery logbook data to help determine relationships between ocean conditions and seasonal changes in the fishery. The approach is similar to new hake distribution forecasts, which are also driven by J-SCOPE seasonal predictions of ocean conditions. Though Dungeness crab catch rate is influenced by many factors (especially days since start of the season), ocean conditions are also significant in the forecasts of crab catch. This project is planned for completion by the end of 2021 and the research team welcomes feedback from crab fishery participants regarding their experience with ocean conditions that influence crab abundance, behavior, and catch rates.

In related work, the J-SCOPE team also developed models that related Dungeness crab megalopae (larvae) occurrence in net surveys to their dispersal path and environmental exposure history (e.g. oxygen, salinity, nitrate, pH). The models were able to predict the distribution of crab megalopae. The model results highlight the importance of including exposure history in larval occurrence modeling, and provide a method for predicting occurrence of this critical life stage of crab, which may impact the fishery years later. If you have questions about this work please contact Isaac Kaplan (Isaac.Kaplan@noaa.gov) or Samantha Siedlecki (Samantha.Siedlecki@uconn.edu).

Crab Biotoxin Management Reminders

Over the years we have continued to improve traceability of crab in order to maintain the option of fishing on crab during elevated biotoxin events by using evisceration to protect public health. Last year, we strengthened our crab traceability measures in Oregon by getting the new crab harvest areas into our electronic fish ticket system and requiring mandatory electronic fish tickets for all crab landings starting December 2019. To make sure you are in full compliance with these new regulations, please review reminders on the right. The map of crab harvest areas is located here https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/commercial_crab_harvest_areas.asp.



Buyers – Crab fish tickets are required to be electronically submitted by the end of the next business day after a crab landing is made. **ALL** crab harvest areas that a vessel harvested crab from on a trip are required to be listed on each fish ticket.

Harvesters – For every crab landing, it is your responsibility to tell your crab buyer **ALL** of the areas that crab were harvested from for that landing, and to make sure that information is recorded accurately on the dock slip or fish ticket before signing.



Want information about when and where crab are being tested for domoic acid? Sign up for email or text alerts from ODA here

<https://www.oregon.gov/ODA/programs/FoodSafety/Shellfish/Pages/CrabBiotoxinInfo.aspx>

Whale Entanglements in Oregon Dungeness Crab Gear

Since 2014, there has been an elevated level of confirmed whale entanglements in fishing gear along the West Coast, approximately one-third of which include California, Oregon, or Washington Dungeness crab gear. The most recent summary of entanglement information is available on NOAA Fisheries website: http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/fisheries_interactions.html. While the incidence is highest in CA crab gear, elevated entanglements in both WA and OR gear are also of concern.

Whale populations in the United States are protected, assessed, and managed by the federal government under the Marine Mammal Protection Act (MMPA) for all species, and additionally under the Endangered Species Act (ESA) for threatened or endangered populations. Over the last seven years (2014-2020), there have been six confirmed entanglements of ESA-listed humpback whales in Oregon crab gear. For the entire West Coast, the recent increased rate of entanglements is almost entirely due to increased entanglements of humpback whales.

Reducing Whale Entanglement Risk in the Oregon Crab Fishery

The Oregon Fish Wildlife Commission (OFWC) recently adopted two regulatory packages (Sep 2019 and Sep 2020) to address whale entanglements in Oregon's fixed-gear fisheries. Complete meeting materials for both packages are located at <https://www.dfw.state.or.us/agency/commission/minutes/>. Additional information about all of ODFW's efforts to curtail whale entanglements can be found on our website: https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/whale_entanglement.asp.

There are four primary areas of on-going work to understand and reduce whale entanglements; we ask you, as part of the crab industry, to embrace the important role you play in helping with this work to maintain a dynamic and vibrant crab fishery.

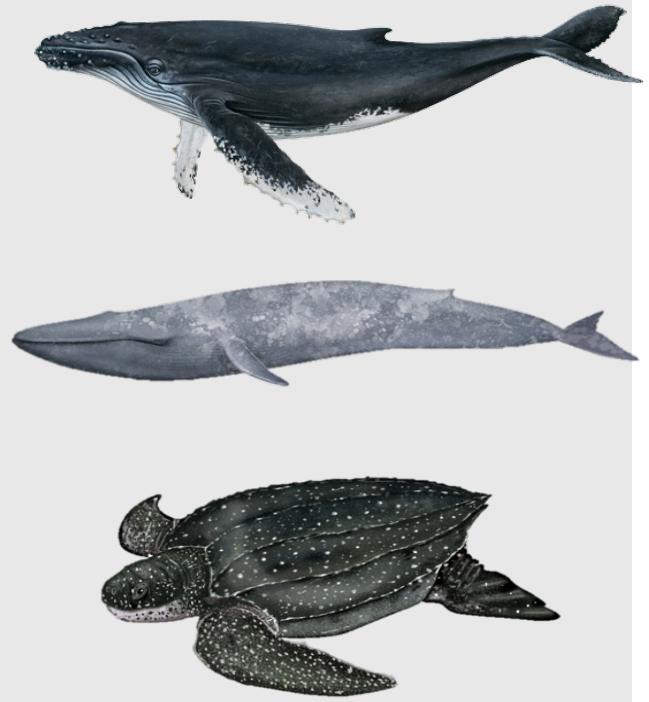
1. **Accountability** – improving our ability to learn more from any future whale entanglements through enhanced gear marking, electronic submission of fish tickets, and buoy color registration (regulations adopted in 2019, additional measures such as line marking and enhanced vessel accountability tools still in development).
2. **Risk reduction** – reducing co-occurrence of whales and crab gear (separation in time and space) through a 20% pot limit reduction and 40 fathom depth restriction effective May 1, elimination of standard replacement tag allowance, elimination of the post-season two-week gear retrieval period, requirement of a taut line best practice and changes to the season opening criteria to lessen the need for lengthy delays (regulations adopted in 2020, see October public meetings materials for adaptive management approach and development of longer term measures). The main risk reduction measures will be evaluated over the next three crab seasons at which point we will present our assessment of these measures to the OFWC to continue or modify them for future seasons (Summer/Fall 2023). See industry notice dated September 25, 2020 on entanglement page noted above for more regulation details.
3. **Research** – reporting whale distribution using Whale Alert App (see more on this app, below) to support the Oregon Dungeness Crab Commission (ODCC) and NOAA Section 6 funded, on-going collaboration between OSU, Oregon Sea Grant (OSG), ODFW, and U.S. Coast Guard (USCG) to understand where and when whales are in the ocean off Oregon. See status update on this project, below (“Oregon Whale Survey Update”).
4. **Best Management Practices** – using whale-safe practices on the water and encouraging other crabbers to do so as well. Originally developed by the Oregon Whale Entanglement Working Group (https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/docs/2019/owewg_2018-2019_bestpracticesdirective.pdf).

All four areas of on-going work are vital for the long-term viability of the Dungeness crab fishery in Oregon, and are central to ODFW's related planning efforts. In October 2020 we hosted two virtual crab industry meetings (agenda and meeting materials on our entanglement webpage above) focused on two long-term plans, the Conservation Plan (CP) and the Dungeness crab Fishery Management Plan (FMP), described on p.6. We greatly appreciate those of you who attended the industry meetings and provided input on different aspects of these plans.

Conservation Plan (CP)

The CP is our detailed description of what we are doing and will do in the future to minimize the take of ESA-listed species in the ocean commercial crab fishery to the maximum extent practicable. The new regulations adopted by the OFWC in 2019 and 2020 (described on p.5) form the foundation of this plan, along with the adaptive management approach that we discussed with you at the October public meetings. We are on track to submit our full Incidental Take Permit (ITP) application, including the CP, to NOAA this coming winter/spring, which will be a culmination of 2 years of work by industry, ODFW and many partners. An ITP is required under Section 10 of the ESA for the incidental take of ESA-listed species during otherwise lawful activities by non-federal entities. Following submission of our CP/ITP application, NOAA will initiate their formal review process which will include National Environmental Policy Act evaluation, a Biological Opinion, additional public comment opportunity, and a determination on whether to issue the permit.

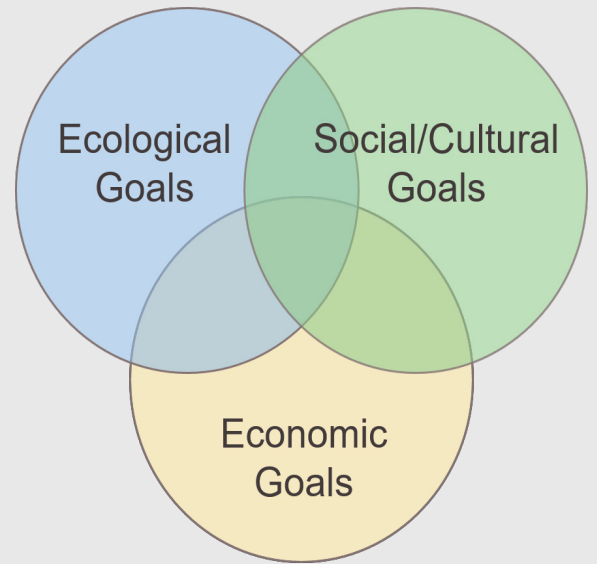
Picture right: Humpback whale, blue whale and leatherback sea turtle images courtesy of NOAA Fisheries. All three species are covered species in Oregon's Conservation Plan to minimize risk of entanglement in Oregon's Commercial Dungeness Crab Fishery.



Fishery Management Plan (FMP)

The Dungeness crab FMP is our detailed description of all three of our Dungeness crab sectors (ocean commercial, bay commercial and recreational fisheries) and how they are managed. At the October public meetings, we provided information on the purpose, scope, process and key components of the FMP and solicited input on your long-term goals for the ocean commercial fishery. There will be additional opportunity for input when the draft FMP is released later this winter, before the plan will be presented to the OFWC for potential adoption (date TBD).

Picture right: The Dungeness Crab Fishery Management Plan describes ecological, social/cultural and economic goals and how they are achieved through management measures for all three sectors of Oregon's Dungeness crab fisheries.



Oregon Whale Survey Update

To help fill the critical information gap of up-to-date and detailed scientific information about where and when whales are in Oregon's waters, ODFW has collaborated with OSU and OSG to collect whale sighting data during ride-alongs on USCG training flights since February 2019. Initially funded by the ODCC and then by NOAA Section 6 funds, these monthly aerial surveys will continue through June 2021. The overall goal of this project is to improve knowledge of whale space-use patterns in Oregon, enabling targeted regulations that discretely restrict fishing effort so that the conservation benefit to whales is maximized and burdens to fishery participants are minimized. Preliminary data from these surveys have already assisted us in developing our main risk reduction measures adopted by the OFWC this past September.

Picture right: Dr. Leigh Torres flying with the USCG on a monthly aerial survey to collect whale sighting data along standardized tracklines. Photo courtesy of Dr. Leigh Torres, Oregon State University.



Oregon Whale Survey Update (cont'd)

Beginning this year, OSU will use the whale sightings data combined with environmental data to predict seasonal whale distribution along the entire Oregon coast and how the distribution changes relative to environmental variables, such as sea surface temperature. This will help us assess seasons and areas at greatest risk of whale interaction with fishing gear. More information about this project is located at <https://mmi.oregonstate.edu/gemm-lab/where-are-whales-oregon-waters>. Information about the project was also presented at the West Coast Entanglement Workshop described on p.8. This fall, we worked closely with OSU to develop a proposal to apply for a second Section 6 grant to fund these surveys for another two years and include a whale prey component in the modeling efforts. Stay tuned for updates this spring.

Whale Entanglement Avoidance Measures Economic Impact Study

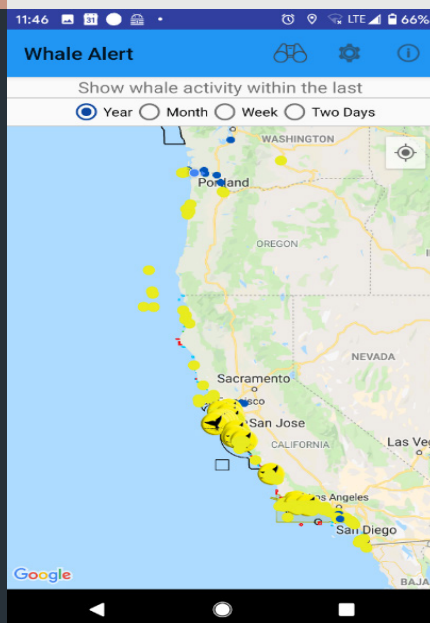
The ODCC contracted with The Research Group (TRG), Corvallis, Oregon to investigate economic trade-offs of two whale entanglement mitigation measures: late season pot reduction and early closure. This past year, TRG completed an evaluation utilizing the existing bioeconomic model they developed for the Oregon commercial crab fishery in 2015 and their final project report can be found at <https://oregondungeness.org/crabbers/>. The report includes an updated description of the fishery with recent fish ticket and logbook data, economic assessment of the two effort reduction measures, and discussion of the possible impacts and economic risk of these measures. For more information about this project, contact Hugh Link, Executive Director ODCC.

Quick Facts: Oregon crab gear and whale entanglements

- ⊙ We need your help to reduce entanglement risk
- ⊙ Since 2014, 6 Humpbacks (ESA listed) and 1 Gray (delisted)
- ⊙ Mostly in ACTIVE SEASON GEAR (identified by buoy tags/brand), but also derelict gear
- ⊙ Oregon crab gear has been confirmed in entanglements observed in WA, OR, CA and MEX

Want to be involved? Use Whale Alert App!

All ocean users can help collect data for the whale surveys, by being the eyes on the water to record whale locations in the areas the research team doesn't cover. This will help the researchers groundtruth their observations with "citizen science" sightings of whale presence, to make accurate models of whale distribution. Download and use the Whale Alert App to document where healthy, happy whales are seen off Oregon. Recruit others to join Whale Alert, and post information about it and your participation on social media. If the researcher's models are informative, we will all be better at fishing in ways that avoid the whales and keep the fishery (and whales) thriving.



Picture: Homescreen of the Whale Alert App where you can explore recent whale sighting data entered by fellow citizen scientists. The app is available for download for both android and iphone operating systems.

Download the Whale Alert App from iTunes or Google Play



Picture: Humpback whale entangled with Oregon Dungeness crab gear on July 7, 2015. The whale was reported entangled off Monterey, California. The information from the buoy tag was used to identify the owner of the gear who informed NOAA Fisheries the gear was set off Cape Meares, OR. Photo courtesy of NOAA Fisheries under NMFS MMHSRP Permit #18786.

2020 West Coast Entanglement Workshop

The Nature Conservancy and the California Ocean Protection Council, in partnership with the NOAA, Pacific States Marine Fisheries Commission (PSMFC) and state fishery managers from California, Oregon and Washington co-hosted an Entanglement Science Workshop this past summer. The primary goal of the workshop was to inform industry, fishery managers, and the public about the state of the science and latest research efforts being undertaken to improve our understanding of whale ecology, fishery interactions, and effectiveness of management strategies to reduce whale and sea turtle entanglement risk within US West Coast fixed-gear fisheries. The workshop featured presentations by researchers and targeted discussions with invited fishery managers, fishery participants and other stakeholders actively working on this issue. The workshop was held as a 5-part series of virtual modules, each addressing a different topic. The presentation slides are posted on the workshop webpage: <https://www.opc.ca.gov/west-coast-entanglement-science-workshop>. A summary report of this event is currently being drafted and will also be posted to this page when finalized. Presentations on the two projects described below were given at the workshop, both of which utilize Oregon crab fishery logbook data in their analyses.

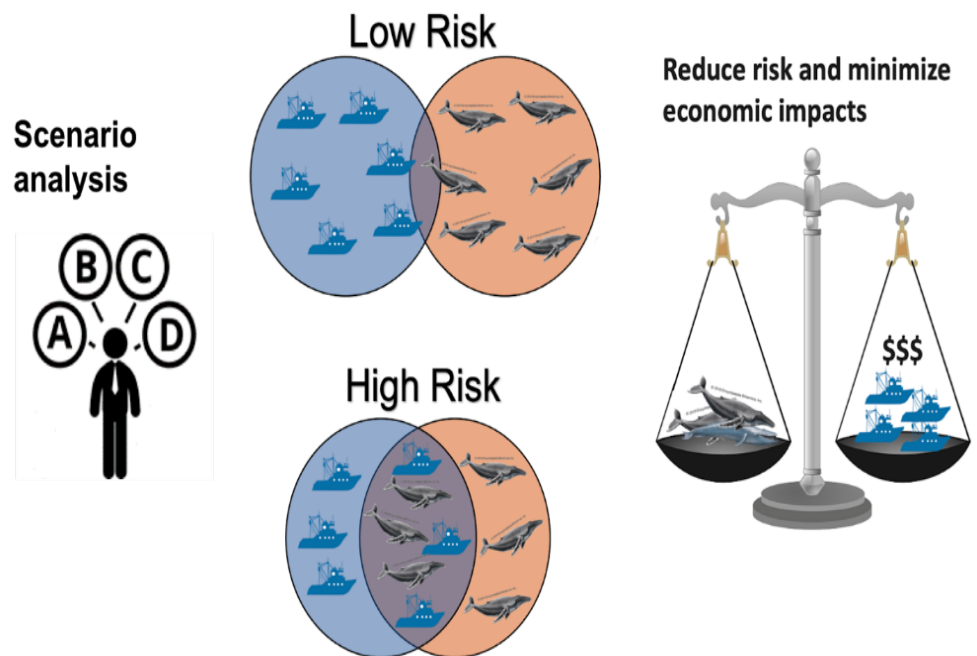
Identifying cost-effective measures to curb whale entanglements

The most effective way to reduce whale entanglements in Dungeness crab fishing gear is to avoid overlap between fishing and whale feeding and migration. Beginning in 2018, researchers from NOAA's Northwest and Southwest Fisheries Science Centers and NOAA's Western Regional Office began to integrate habitat suitability models of whale distributions with satellite data on fishing vessel positions to determine where overlap is greatest. In California, using Vessel Monitoring System (VMS) and landings receipt data on more than 30,000 Dungeness crab fishing trips, the researchers applied a tradeoff analysis to compare potential entanglement risk reduction provided by proactive management measures such as delayed openings, early closures, seasonal depth restrictions, and seasonal fishing effort controls. It turns out that these measures do not perform similarly from year to year because of variable ocean conditions, but this tool can help to identify the most cost-effective management option(s). The researchers shared aspects of this work at the West Coast entanglement workshop in September and a more in depth overview with the California Department of Fish and Wildlife (https://www.opc.ca.gov/webmaster/_media_library/2020/10/samhourietal_tradeoffs_aug2020_sharing.pdf).

The only constant is change? Variability in the Dungeness crab fishing fleet

To enhance these initial modelling efforts, Northwest Fisheries Science Center researchers have expanded their analyses to include the entire US West Coast. They are refining their analyses using ODFW logbook data and pot tier information to generate crab pot vertical line models, which improve the accuracy of maps of Dungeness crab fishing activity. They are also using Automatic Identification System (AIS) data in addition to VMS telemetry to expand vessel coverage. One goal of these analyses is to understand the business strategies adopted by different vessels along the coast, especially in terms of vessel mobility and specialization on crab. This work can inform management

decisions so that they are more in tune with the fleet's diverse characteristics. ODFW meets quarterly with the research group to understand the analyses and provide feedback. The NMFS researchers would love to hear from you about how to improve their understanding of Dungeness crab fishing behavior and how whale entanglement management actions may affect your business. Contact Jameal Samhouri (jameal.samhouri@noaa.gov) for more information.



Picture: Researchers are analyzing potential management scenarios to understand which are most effective at reducing overlap between whales and different groups within the Dungeness crab fleet, while also keeping costs to the fishery as small as possible. Picture courtesy of NOAA fisheries.

2020-21 Season Opener Information

Want Opener Updates?

Here's how you get them



Visit Website

Starting mid-Oct we post weekly updates on preseason testing and information about the season opening status. Updates on this webpage will continue until a decision to open the season is made.

Want opener updates? Visit: http://www.dfw.state.or.us/MRP/shellfish/commercial/crab/season_weekly_updates.asp



Sign-up for Text & Email Updates

If you would like to receive email and/or text messages with up-to-date information about the ocean commercial Dungeness fishery, please visit the link below.

Want text updates? Sign-up here: <http://dfw.state.or.us/MRP/>

You can cancel your subscription at any time by logging in on the same webpage listed above.

2020 Revised Tri-State Protocol

This past May, Department staff, along with six Oregon industry representatives, met with Washington and California delegations at a Tri-State Dungeness Crab Committee virtual meeting. The Tri-State Committee agreed to modify the Pre-Season Testing Protocol to reduce the meat yield criteria south of Cascade Head from 25% (rounding allowed) to 24% (no rounding). The intent of this change is to increase flexibility in the season opening protocol so that areas can open earlier; since the number of pots declines over the season, an earlier season opening will lead to fewer pots in the water in later months, when risk of whale entanglements is higher. The Tri-State Committee recognized the desire to maintain a high quality product, and that this measure strikes a compromise between the threat of whale entanglements and the threat of eroding meat quality standards. The revised Tri-State Protocol was adopted by the OFWC in September and is posted here https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/season_weekly_updates.asp.

Buoy Color Registration Required

If you have not registered your buoy color pattern or have changed your buoy color pattern for this upcoming crab season please submit an electronic or printed photo of the buoy color pattern with your vessel's name and crab permit number. Electronic registration can be made by emailing or texting ODFW.BuoyRegistration@state.or.us.

Printed photos can be mailed to the Marine Resources Program, Commercial Crab Program, 2040 Marine Science Drive, Newport OR, 97365. Re-registration is only required if you change your vessels buoy color pattern.



Planning to crab past May?

Make sure to order your late-season tags that will be required, in addition to your primary tag, for any gear in the water after May 1 of this season. Late-season tags will be available to order from ODFW at cost (\$1.15 per tag) beginning in mid-March, but cannot be attached to gear in the water before April 18. For more information see industry notice https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/docs/2020/Industry%20Notice%202020-0925_Final.pdf.

Need masks for your crew?

OSU Extension Offices in Clatsop, Tillamook, Lincoln and Coos County have free KN95 masks. Just call your local office to schedule a pick up time.

Clatsop - 503-325-8573 Tillamook - 503-842-3433
Lincoln - 541-574-6534 or 541-648-6814 Coos - 541-572-5263

2020-21 Buoy Tag Colors

| | |
|--------------|------------|
| Tier 200 | Red |
| Tier 300 | Red |
| Tier 500 | Red |
| Replacements | Purple |
| Late-season | Neon green |

Other Updates and Reminders

Wave Energy Updates

As of November 2020, there are no energy facility structures in the water and no upcoming offshore wind or wave energy device deployments currently permitted off of Oregon.

OSU is seeking a license from the Federal Energy Regulatory Commission to construct and operate the proposed PacWave South wave energy test site off of Newport. If licensed, construction of test facility components and cables in the marine environment could commence in 2021. OSU is also working to obtain the necessary permits and authorizations to install research equipment at the PacWave North site off of Yaquina Head, also near Newport. No wave energy devices are planned, but if permitted, research equipment could be installed for up to 12 months.

The US Bureau of Ocean Energy Management (BOEM) has posted a Data Gathering and Engagement Plan for Offshore Wind Energy in Oregon online at <https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/BOEM-OR-OSW-Engagement-Plan.pdf>, which outlines the intended process to gather data and input from Oregon coastal communities and parties interested in issues related to potential future offshore wind development. This plan was developed with input from the Oregon Intergovernmental Renewable Energy Task Force. No open lease applications for offshore wind development off Oregon are currently being considered by BOEM.

For more information please contact Delia Kelly, ODFW's Ocean Energy Coordinator, at 541-867-0300 ext. 292 or email her at: delia.r.kelly@state.or.us.

Vessel Logger Testers Needed!

To further strengthen our crab traceability regulations, help inform whale entanglement mitigation measures, and aide enforcement of season opening provisions, we are very interested in continuing to pursue low-cost, near-real-time vessel monitoring tools.

In recent months the PSMFC has secured a number of vessel loggers that they are interested in testing on the water in all three states during this upcoming crab season. PSMFC plans to provide captains with the test vessel logger units and pay for one year of data transmission. Since they are testing system performance in addition to data quality, they hope that boats will keep them active for any fishery they participate in throughout the year. If you are interested and willing to help with testing one of these systems on your boat this season, please contact us or Dave Colpo at DColpo@psmfc.org.

Marine Reserves Regulation Reminders

A reminder that the marine reserve sites at Cape Falcon, Cascade Head, Otter Rock, Cape Perpetua, and Redfish Rocks are closed to crabbing and fishing. No fishing gear, including surface buoys or bottom contact gear, is allowed in a marine reserve at any time. Crab gear that accidentally drifts into a marine reserve can be removed with prior approval from Oregon State Police (no species may be retained). For marine reserve rules, maps, and coordinates visit oregonmarinereserves.com/rules or call the ODFW Newport office at 541-867-4741. To report violations or for permission to remove derelict fishing gear contact OSP at 1-800-452-7888.



Marine Resources

We are always interested in hearing from you about your fishery and the issues that are important to you. Please give us a call or email us any time!

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Have a safe and productive crab season!