

11th Annual
Oregon Department of Fish and Wildlife Marine Resources Program
Dungeness Crab Fishery Newsletter

November 2019

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Visit Our Website:

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

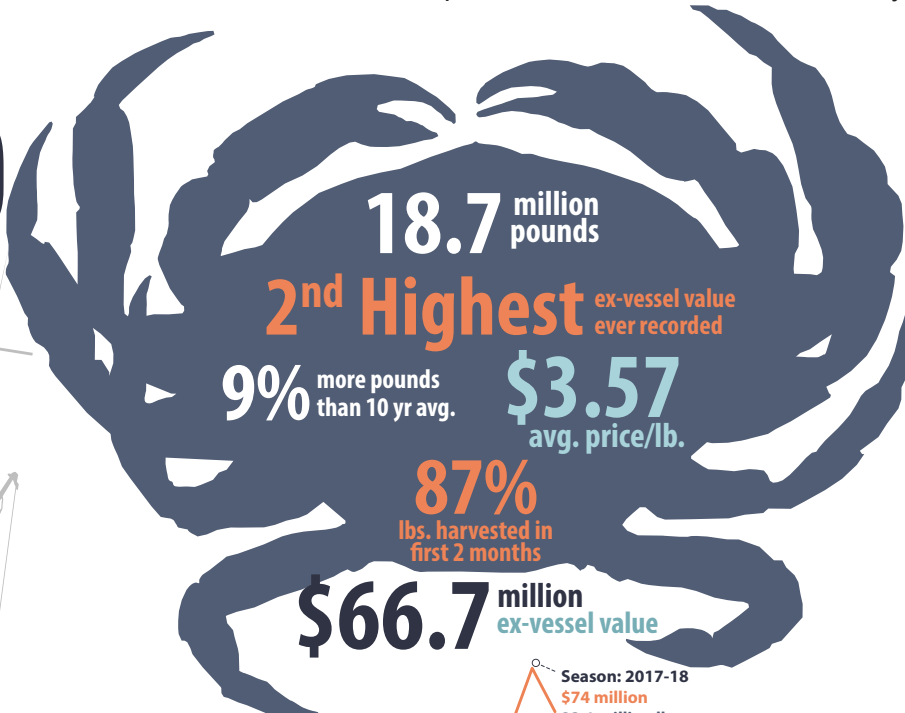
Bountiful Harvest, Great Value

The 2018-19 Oregon Dungeness crab season brought in \$66.7 million dollars ex-vessel value, the second highest grossing season on record! Landings totaled 18.7 million pounds, approximately 9% above the 10-year average of 17.0 million pounds. The average price per pound peaked at \$7.15 in May and came in at \$3.57 across the entire season, up from last year's \$3.22 average price per pound. In total, 319 different permit holders made 5,575 separate landings into Oregon ports from the ocean and Columbia River.

For the fourth year in a row, the 2018-19 Dungeness crab season had a significantly delayed split coast opening structure. The area from Cape Arago north to the OR/WA border was delayed by regulation due to low meat yield until January 4. The remaining area south of Cape Arago was delayed due to a combination of low meat yield and elevated domoic acid levels in crab viscera that exceeded public health thresholds, until finally (con't on p.2)

How'd it GO?

2018-19 Season Summary



Pounds Landed

18% Astoria

4% Nehalem/Garibaldi/Pacific City

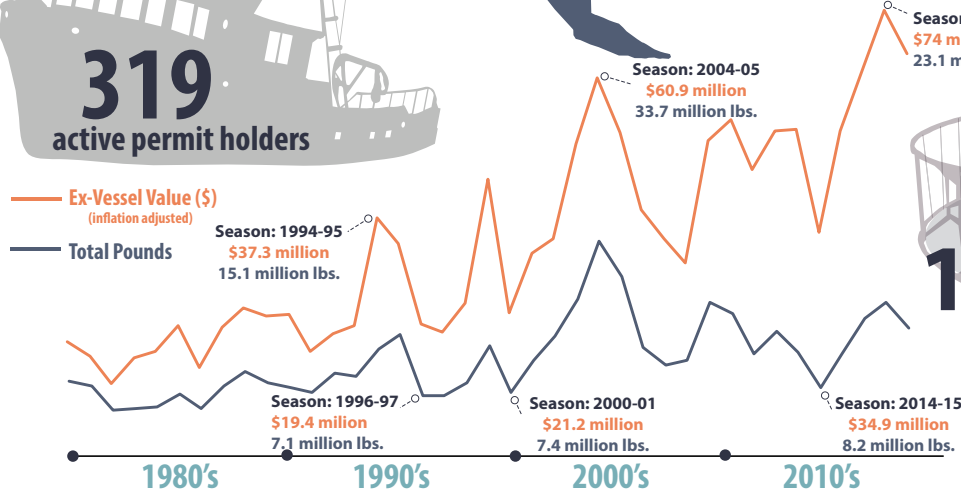
37% Depoe Bay/Newport

4% Florence/Winchester Bay

23% Charleston

4% Bandon/Port Orford

9% Gold Beach/Brookings



117,200
estimated pots used

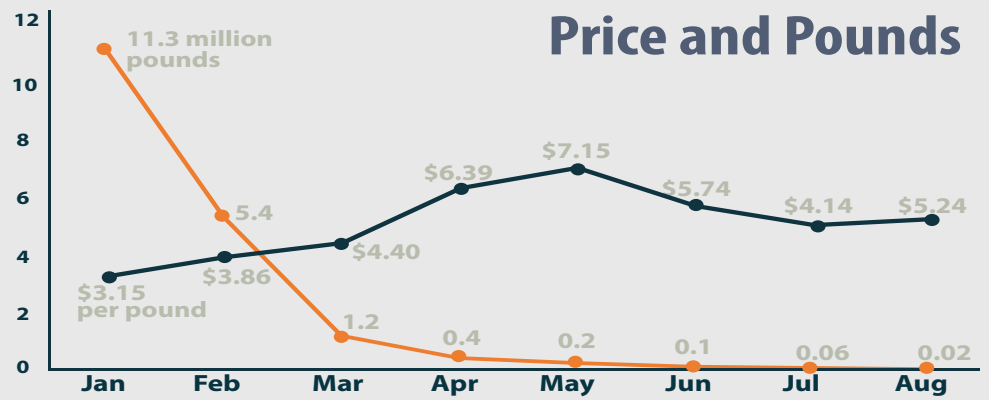
Season Summary (cont'd)

opening up on February 1, 2019. Once open, two in-season evisceration orders were issued affecting the south coast due to elevated domoic acid levels detected in crab viscera.

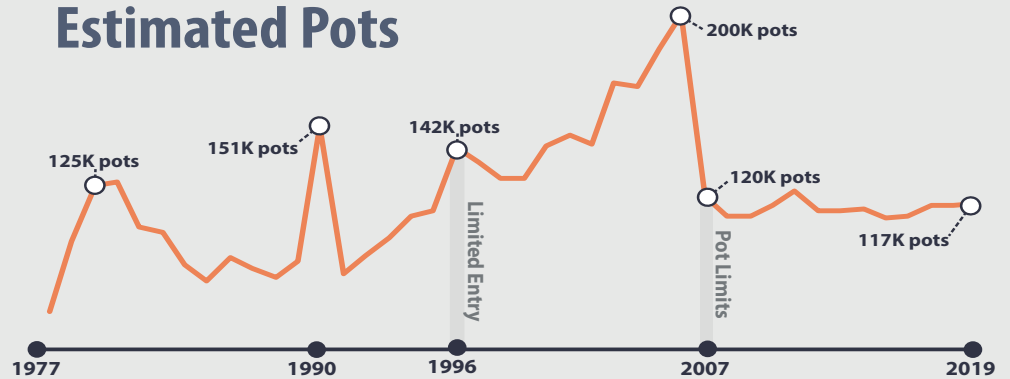
As usual, the vast majority (87%) of crab were caught in the first eight weeks of the fishery. This is right on par with recent seasons that ranged from 83-91% landed in the first eight weeks. The Newport area led all ports in total landings with more than 6.9 million pounds, followed by the Coos Bay and Astoria areas with 4.3 and 3.4 million pounds landed, respectively. Pots used in the fishery this season totaled an estimated 117,200 pots, which is slightly above the estimated average of pots utilized each season since the implementation of pot limits.

Top Right: Pounds of crab landed and price per pound by month for the 2018-19 crab season.

Bottom Right: Estimated pots declared, per year, in the Oregon commercial Dungeness crab fishery. The number of pots used has stabilized since the implementation of pot limits.



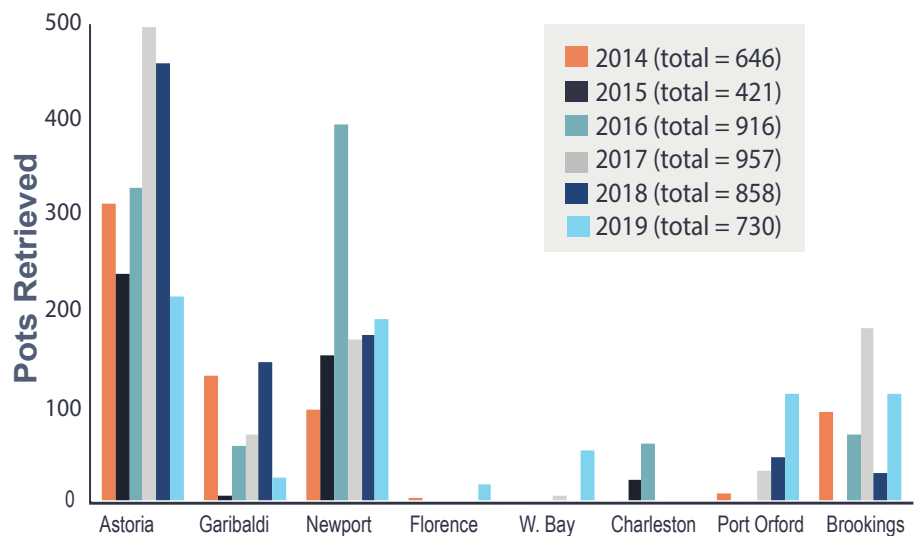
Estimated Pots



Derelict Gear Program Summary

A total of 730 pots were removed from waters off Oregon in this year's Post-Season Derelict Gear Recovery Program! 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 40 permits and over half recovered gear. Pots were brought into seven Oregon ports from 51 separate retrieval trips. This year, additional outreach efforts resulted in reports of over 100 locations of derelict pots to ODFW from our own field research crews, Oregon State Police, Oregon State University researchers, and recreational ocean users. We then share these locations with permitted vessels to target for retrieval through the program. All recovered gear was registered and tagged by ODFW or OSP at the dock and all gear registration forms are posted on our website <http://www.dfw.state.or.us/MRP/shellfish/commercial/crab/>. This allows any previous gear owners interested in negotiating for retrieved pots to contact retrieving vessels directly.

Overall, the program continues to be successful at raising awareness, both within the fleet and with other ocean users, about the crab industry's efforts to remove crab gear post-season and at bringing in a significant amount of derelict crab gear. 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 are more important than ever for the continued sustainability of the fishery. Thank you to all who participated in this year's gear recovery program – and please consider removing derelict gear throughout the season as allowed by regulation and participating in next year's post-season program.



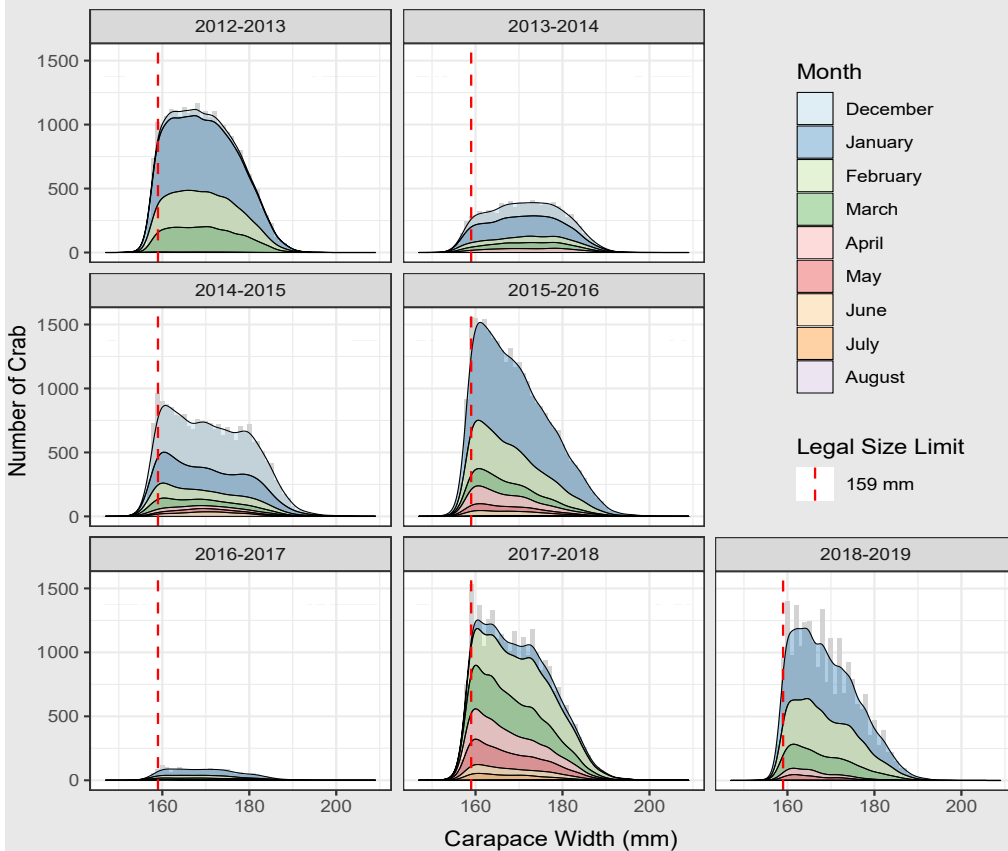
Graph above: Number of pots retrieved by port from all years of the post-season derelict gear program.

Fishery Monitoring Update

In recent years, ODFW has implemented multiple fishery monitoring projects to collect information on the crab resource and commercial fishery. This past season we continued our coast-wide preseason test fishery, dockside and at-sea sampling programs. We also completed a thorough evaluation of our dockside sampling program, comparing samples collected in the past seven crab seasons. Throughout the entirety of the dockside sampling program, ODFW samplers have weighed and measured 136,845 crab from 2,169 separate offloads in eight ports along the coast. The largest crab measured in the program was 8.22 inches (209 mm) while the smallest was 5.79 inches (147 mm). Across all seasons, the annual average percent of short crab observed in samples has ranged between 0.08% and 1.23%. A detailed report of this evaluation will be posted on our website when it is finalized. Brief summaries of the data collected from this past season are below. For the 2019-20 season we will have coast-wide sampling coverage throughout the majority of the season. These samplers will be focusing on our at-sea monitoring efforts to continue to assess and quantify bycatch rates of female crab, undersize crab and other species caught throughout the season. If you are interested in participating in the at-sea portion of the sampling program, please contact us soon so we can start lining up trips. ODFW samplers will also be out sampling crab at the docks as resources allow.

Dockside Sampling

Dockside sampling in the 2018-19 season consisted of measuring the carapace widths and weighing a portion of the crabs landed, based on the size of the landing. Coastwide, three ODFW samplers measured and weighed 22,292 crab from 326 different offloads in 6 ports from January through August. The average size of crab sampled was 6.65 inches (169 mm), the smallest was 5.98 inches (152 mm), and the largest was 7.80 inches (198 mm). The size distributions by month from our dockside sampling efforts during the past seven seasons are compared in the graph below. Crab caught in the 2018-19 season were smaller than many of the recently sampled seasons. Overall, more small crab were caught in Astoria, Garibaldi, and Newport than the ports to the south during this past season.



Graph: Monthly crab carapace measurements recorded during ODFW dockside sampling from the 2012-13 through the 2018-19 crab seasons. Sampling effort varies by season due to available staffing resources, resulting in low sample sizes for some seasons.

Ride-along Sampling

In November 2018, we sampled a subset of pots on every preseason test trip (n=16 out of 6 ports) to evaluate bycatch of crab and non-crab species caught just before the season opens. In total we sampled 132 pots and measured 3,378 crab. Within this past crab season, we rode-along on 5 trips to conduct at-sea monitoring to assess bycatch rates of crab and non-crab species caught in-season. Trips originated out of Garibaldi, Newport, Charleston and Port Orford from March through July. Results of both pre-season and in-season sampling continue to indicate catch per unit 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.

Why Monitor?



Monitoring 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.

Whale Entanglements in Oregon Dungeness Crab Gear

Since 2014, there has been an increased number of confirmed whale entanglements in fishing gear from along the West Coast, approximately one-third of which are in CA, OR or WA 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>. 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. As such, the increased entanglements are a serious concern.

Although Oregon's part in this problem is lower than CA and WA at this time, we note there have been five confirmed entanglements of humpback whales in OR crab gear in the last six years (2014-2019). For Oregon, and for the entire West Coast, the recent increased rate of entanglements is almost entirely due to increased entanglements of ESA-listed humpback whales. Any entanglement of ESA-listed whales is prohibited. The majority of crab gear involved in entanglements is actively fished gear, although derelict gear has also been confirmed (only one of the recent humpback entanglements with OR gear was likely derelict gear). Entangled whales have been reported in all months of the year, with some increase in April, May and August (NOAA data, 2019). However, whales can carry entangled gear for months and travel long distances before they are observed, so the place and time of entanglement reports do not necessarily reflect the place and time that the whales encountered the gear (NOAA, 2018).

Quick Facts: Oregon crab gear and whale entanglements

- ◉ **We need your help to reduce entanglement risk**
- ◉ **Since 2014, 5 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**

Reducing Whale Entanglement Risk in the Oregon Crab Fishery

Over the past five years, ODFW has been actively working on this issue with an increased effort over the last year. In particular, we have been building from the Oregon Whale Entanglement Working Group (OWEWG) preliminary draft recommendations to design and implement a proactive, phased management strategy for Oregon. The strategy has 2 primary goals: 1) learn more from any future entanglements, and 2) reduce the risk of future entanglements. The main efforts are listed below and additional information can be found on our new website on this issue here: https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/whale_entanglement.asp.

- ◉ **June 2019 – Informational briefing** by ODFW staff to the Oregon Fish and Wildlife Commission (OFWC), the decision-making body for Oregon crab regulations. We described our proposal for a phased approach to addressing whale entanglements in Oregon crab gear.
- ◉ **September 2019 – Regulations adopted by OFWC** to improve our ability learn more from any future whale entanglements, including gear marking, electronic submission of fish tickets, and buoy color registration. The OFWC also adopted a commercial harvest control date which could be used in the future if changes to the limited entry program are desired or needed.
- ◉ **October 2019 – Coastwide crab industry meetings.** ODFW staff provided information about the current status of the entanglement issue and DRAFT regulatory proposals to reduce whale entanglement risk, while NMFS and Sea Grant staff provided information about whale entanglements and whale research. We had record participation from the fleet at these meetings, with frank discussions on the need and options to reduce whale entanglement risk in the crab fishery. We are actively evaluating all of the input that we received and we will post an FAQ and summary of the input (including the surveys) soon on our whale entanglement website, which already has the presentations and handouts posted. We greatly appreciate those of you who attended and provided input on solutions to this problem, so that we can maintain the success of this very important fishery.

Since the October industry meetings, we convened our **Oregon Dungeness Crab Advisory Committee (ODCAC)**, which we have augmented to include members of the ODCC, crab associations, and the industry members from the OWEWG. This now-expanded group will advise ODFW staff on opening each crab season (a routine role for this group), as well as advise us on regulatory proposals to reduce whale entanglement risk. In the immediate future, ODCAC will be advising us on our regulatory package that the OFWC will consider this coming spring 2020 (of particular note for industry – we are considering a sunset date for this regulatory package, which would make the changes temporary to allow revisions as we learn more about what is effective). In addition, we will rely on ODCAC to help us with future regulatory phases and development of the Conservation Plan that will be submitted to NMFS (described on the following page). A current list of ODCAC members can be found on our whale entanglement webpage (listed above).

Conservation Plan and Fishery Management Plan Development

At our October public meetings, we heard loud and clear that you want us to continue with the Conservation Plan to apply for an **Incidental Take Permit (ITP)** for Oregon. An ITP is required for the incidental take of ESA-listed species; the **Conservation Plan (CP)** is our detailed description of what we are doing and will do in the future to minimize the take of the ESA-listed species to the maximum extent practicable. This means that, whatever take we currently have, we need to take LESS. We have been working on our CP/ITP application since January 2019 and we intend to submit this package in the winter of 2020-21. Part of the CP/ITP application package will include material from **Oregon's DRAFT Dungeness Crab Fishery Management Plan (FMP)**. The draft FMP describes all the Dungeness crab fisheries and how they are managed, and will be released for comment this winter. In addition, the new regulations adopted by OFWC in 2019, as well as any adopted or planned for the future, will be described in the CP/ITP application, as our plan for managing the crab fishery in a way that sufficiently protects ESA-listed species. We are coordinating our CP process with California and Washington, each of which is developing state-specific CPs. This coordination implements the Tri-State Agreement in general, as well as a formal declaration to coordinate on whale entanglement issues that was signed following the May 2018 Tri-State meeting. Following submission of our CP/ITP application, NMFS will initiate their formal review process which will include National Environmental Protection Act evaluation, a Biological Opinion, and from these and public comment, a determination on whether to issue the permit. This process is expected to take several years.

Oregon Whale Survey Study (OSU-OSG-ODFW)

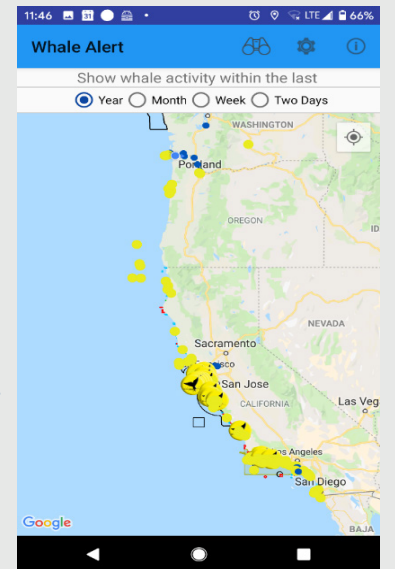
To effectively reduce whale entanglements, we need up-to-date and detailed scientific information about where and when whales are in Oregon's waters. Currently, ODFW is collaborating with Oregon State University (Dr. Leigh Torres) and Oregon Sea Grant (Amanda Gladics) who have been collecting whale sighting information since February 2019 during ride-alongs on USCG training flights. Initially funded by the ODCC and then by NOAA Section 6 funds, these monthly aerial surveys will continue through February 2021. Whale sightings and environmental data will be used to predict where whales will be in the future, including changes in whale distribution patterns relative to environmental change, to help us assess seasons and areas of greatest risk of interaction with fishing gear and take appropriate action to separate gear and whales. More information about this project is located here <https://mmi.oregonstate.edu/gemm-lab/where-are-whales-oregon-waters>.



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 sightings 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 in Oregon's ocean. 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.

Download the Whale Alert App from iTunes or Google Play



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.

Tentative 5-yr Timeline Addressing Entanglements

- 2020** – Jan-Mar: Public input on draft regulations
Apr: OFWC decision-making on crab regulations
Jun-Dec: Implement crab regulations, develop CP
Winter: Submit CP
- 2021-2022** – Evaluate crab regulations, consider results from OSU-OSG-ODFW whale project
- 2021-2023** – Modify risk reduction measures as needed
- 2023-2025** – Decision by NMFS on CP/Permit

What can you do right now to help reduce whale entanglement risk?

You may ask – why should I act now to reduce risk? Here are three good reasons:

- It is the right thing to do to reduce bycatch in any fishery to the extent practicable.
- It is mandated by federal law under the Endangered Species Act to prevent "take" of ESA listed species.
- Whale entanglements in crab gear are attracting a lot of public attention and are a crab product marketing liability.

The best known way to reduce whale entanglement risk is to reduce whale interaction with lines and gear – that means make sure your gear is in your control, the lines are well-managed, and that any unused pots are out of the water. This is particularly important for "whale season" which is estimated as spring-summer months (Apr-Nov), when ESA listed whales are feeding off Oregon. For additional steps you can take, please talk to other fishermen and refer to the enclosed Oregon Best Practices Directive, developed by the Oregon Whale Entanglement Working Group (OWEWG). 5

Fish Tickets and Logbooks - Why so much paperwork?

The primary tools we use to monitor the crab fishery are fish tickets to track harvest and crab logbooks to track effort over space and time. In addition to the Department's own uses (see previous newsletters posted online for more information), crab logbook and fish ticket data have been used to describe the crab resource and the fishery you participate in to benefit 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 development of a Data Use and Non-Disclosure Agreement between the Department and all data users. This year these additional uses of fish ticket and logbook data have included providing data for:

- Investigating the spatial overlap of the crab fishery with potential sea otter habitat to anticipate potential interactions,
- A continuation of NOAA's whale and crab fishing co-occurrence modeling and whale entanglement risk assessment efforts, and
- The economic analysis of whale entanglement mitigation measures (see panel on the right for more details).

Please contact us for more information about any of these projects at any time.

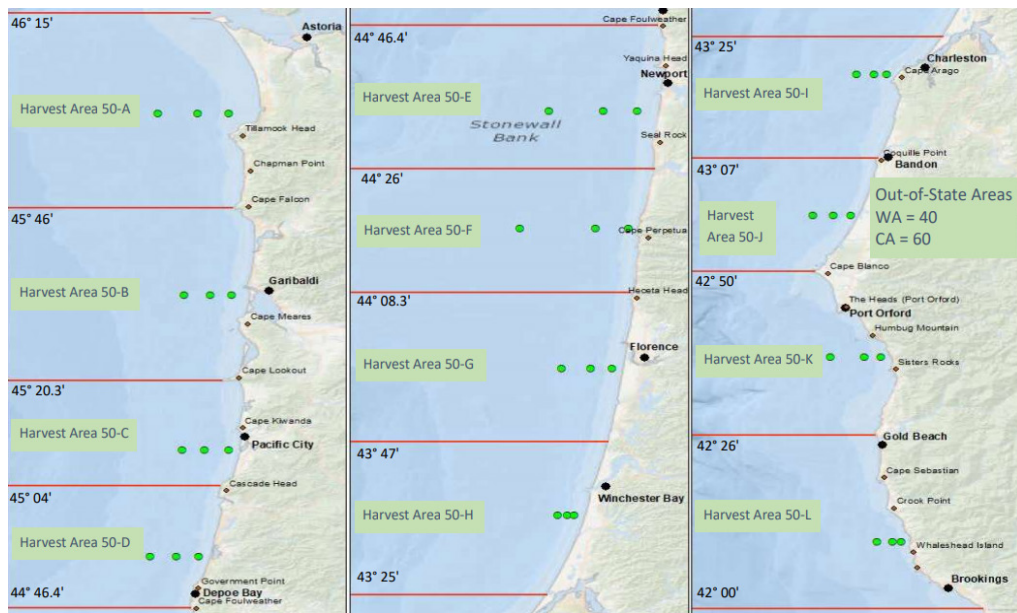
Whale Entanglement Avoidance Measures Economic Impact Study

The Oregon Dungeness Crab Commission has contracted The Research Group (TRG, Corvallis, Oregon) to investigate economic trade-offs of two whale entanglement mitigation measures: late season pot reduction and an early closure. TRG will be utilizing the existing bioeconomic model they developed for the Oregon commercial crab fishery in 2015 and anticipate results early next year. These efforts will include an updated description of the fishery adding 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.

Crab Biotoxin Management Updates

We have continued to improve traceability of crab in order to maintain the option of fishing on crab during elevated biotoxin events, using evisceration to protect public health. This 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 by the start of the 2019-20 crab season. The map of crab harvest areas is shown below and located here https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/commercial_crab_harvest_areas.asp.

Looking ahead, we plan to continue to improve crab traceability by investigating methods to increase vessel accountability through solar loggers, electronic logbooks or other vessel monitoring systems. The vessel accountability tools would also be applicable for developing whale entanglement measures and strengthening fair start regulatory compliance.



REMINDERS!

Buyers – Electronic submission of all commercial crab (bay and ocean) fish tickets is required starting Dec 1, 2019. They are required to be electronically submitted by the end of the next business day after a crab landing is made. To set up an account for electronic fish tickets, go to PSMFC's E-Tix portal website at <https://etix.psmfc.org/Account/Login> and click on 'Request an Account'.

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>

2019-20 Season Opener Info

Tri-State Protocol

This past May, the Tri-State Dungeness Crab Committee agreed to two protocol changes that will allow more flexibility with season opening dates and areas, so that crabbing can begin when and where crab have met quality criteria. The modifications to the protocol include allowing:

1. More than two areas with different opening dates to be established within the Tri-State region based on crab quality, and;
2. Moving the latest season opening date to February 1, only if meat yield is still less than 23% and there are no other concerns from managers or industry about delaying until Feb 1, such as elevated risk of whale entanglements or biotoxin events.

Season Opening Industry Notices - Electronic Only!

In partnership with the ODCC, Oregon's preseason Dungeness crab meat recovery testing is in full swing. Results of all of the meat recovery tests and all season opening industry notices will be posted as soon as possible on our weekly season opening webpage. Beginning last year, we no longer mail season opening notices. Starting in mid-Oct, we post brief weekly updates on preseason testing and information about the season opening status. Updates on this webpage continue until a decision to open the season is made https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/season_weekly_updates.asp.

Commercial Crabber and Towboat Lane Agreement

The agreed changes to the tow lanes are effective on November 1, 2019. Significant changes were made off Newport, OR, Pt. Arena and Pt. Reyes. You can download the new plotter files from Washington Sea Grant's website <https://wsg.washington.edu/community-outreach/outreach-detail-pages/crabbertowboat-lane-agreements-download-charts-data-and-meetings/> or pick up a thumb drive at the Oregon Fishermen's Cable Committee office in Astoria, all coastal Oregon Sea Grant offices, the Oregon Dungeness Crab Commission office in Coos Bay, or the Oregon Trawl Commission office in Brookings.

Buoy Color Registration Required

To register 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.



We Want YOU!

Volunteer to collect crab for testing!
If you are interested in volunteering to collect crab for quality and toxin testing in your port, call ODCC (541-267-5810) or ODFW (541-867-4741).



Other Updates and Reminders

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.



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 stop by our office in Newport any time!

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Wave Energy Updates

As of November 2019, there are no energy facility structures in the water and no upcoming wave energy device deployments currently permitted off of Oregon. OSU is working on several state permit applications and has filed a Final License Application with the Federal Energy Regulatory Commission for the proposed PacWave South wave energy test site. If licensed, construction of the test facility off of Newport could commence in 2020, with site operations beginning in 2021 and potentially accommodating testing of up to 20 wave energy converters within a 2-square-nautical-mile area.

In September 2019, the US Bureau of Ocean Energy Management (BOEM) convened the Oregon Intergovernmental Renewable Energy Task Force to discuss whether members, representing government entities, are interested in conducting a planning effort for future offshore wind development or would prefer to rely on the existing regulatory process. No decisions have been made regarding planning and no lease applications for offshore wind development off Oregon have been submitted to BOEM. For more information on Task Force meetings and materials, go to <https://www.boem.gov/Oregon/>.

Message from our Enforcement Partners

The Oregon State Police (OSP) works in conjunction with United States Coast Guard and enforcement officers from California and Washington Departments of Fish and Wildlife to ensure compliance with the commercial Dungeness crab fishery regulations. In recent years, the large majority of enforcement issues OSP deals with related to the commercial crab fishery have included:

Licenses – With the fishery starting around the first of the year, there are almost always individuals who forget their new licenses. Make sure you have all the necessary licenses before heading out.

Undersized Crab – There is no allowance for undersize crab and it is the responsibility of all on board the vessel to ensure undersize crab are not retained.

Logbooks – Crab logbooks have been required in Oregon since the 2007-2008 season and must be completed prior to landing. The logbooks need to be available for inspection at that time, and submitted to ODFW within 10 days after the end of the month.

Marine Reserves – 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. There have been several cases where crab pots have been located within the marine reserve boundaries. It is up to you to know where the marine reserves are and it is recommended to have the boundaries of those reserves entered into your navigation systems. Crab gear that has accidentally drifted 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.

For any enforcement related questions, you can reach Lt. Ryan Howell at (971) 563-8687 or Sgt. Todd Thompson at (541) 270-5478. If you would like to report a violation, please call the TIP Line at (800) 452-7888 or *OSP (*677) on a mobile phone, or email TIP@state.or.us.

