7th Annual

Oregon Department of Fish and Wildlife · Marine Resources Program

Dungeness Crab Fishery Newsletter

November 2015

What's Inside

Have Questions?

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Visit Our Website:
www.dfw.state.or.us/MRP/shellfish/commerical/crab

2014-15 Season: Record High Prices, Fewer Pounds

The 2014-15 Oregon Dungeness crab season had highs and lows: record high prices coupled with lower than average landings. The season kicked off coast-wide on December 1st. Oregon records were shattered when the average price per pound peaked at $8.23 in February and averaged $4.10 for entire season! Total season average price was $0.62 higher than any other season on the books. The price jump helped buffer the season's low landings, which totaled 8.2 million pounds (about 58% less than the 10 year average). Landings into Oregon ports from the ocean and Columbia River were made by 305 different permit holders in 5,771 separate landings. Total pounds landed were well below recent season totals but similar to the 2000-01 season total of 7.4 million pounds. As usual, the vast majority (86%) of crab were caught in the first eight weeks of the fishery.

How'd it GO?

2014-15 Oregon Season Summary

305 active permit holders

8.2 million pounds

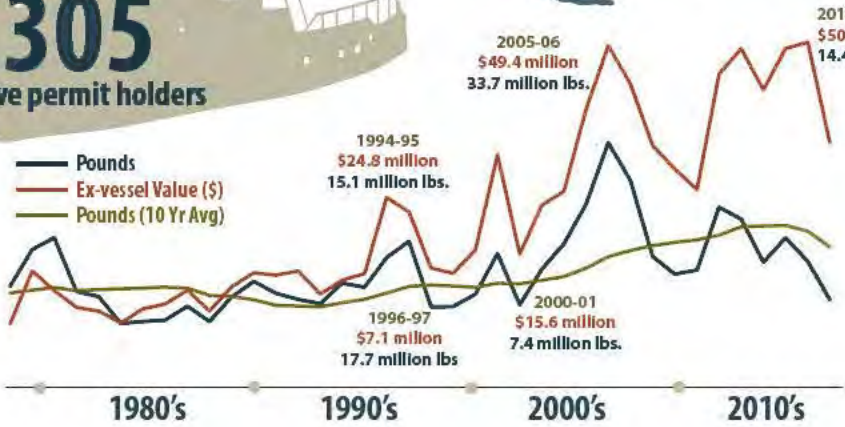
Highest avg. price/lb. ever recorded

58% fewer pounds than 10 yr avg.

$4.10 avg. price/lb.

86% lbs. harvested in first 2 months

$33.7 million 2014-15 ex-vessel value



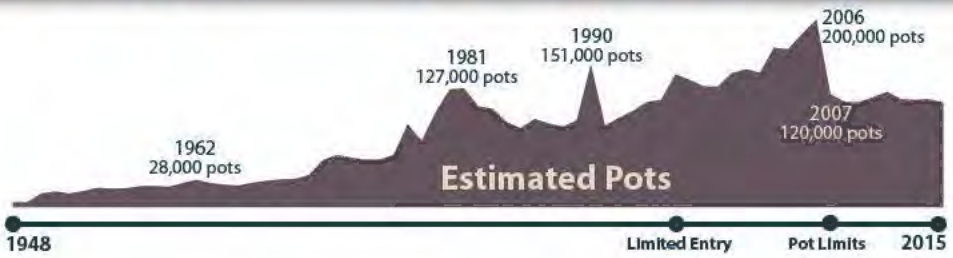
111,100 estimated pots used

Pounds Landed

2014-15 Season Summary

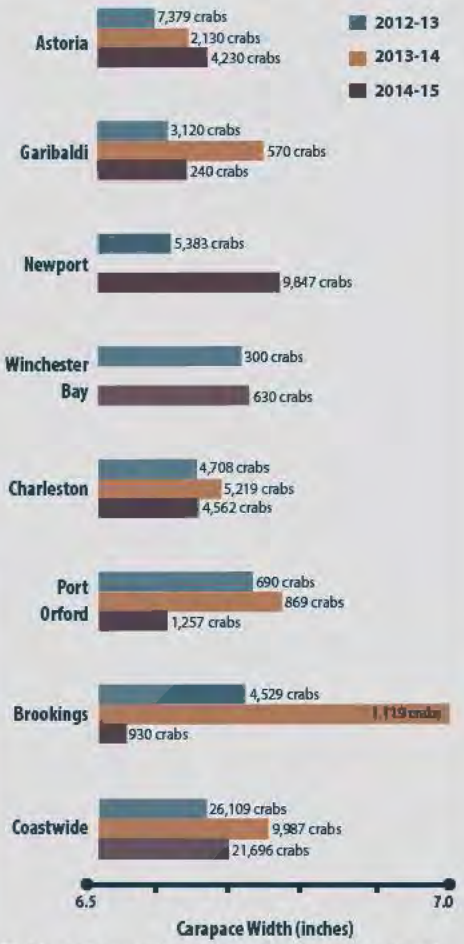
This is on par with recent seasons that ranged from 83%-89% of the season total landed in the first eight weeks. The Newport area led all ports in total pounds landed with more than 2.5 million pounds, followed closely by the Astoria and Charleston areas with 2.2 and 2.1 million pounds landed, respectively. Ex-vessel value in the 2014-15 season totaled $33.7 million dollars, well within the range of value of the fishery for the past 10 years ($26.1-50.2 million). Pots used in the fishery this season totaled an estimated 111,100 pots, which is slightly below the average 115,322 pots utilized each season since pot limits were implemented.

The average price per pound peaked in February 2015 at $8.23, and the season average was still a record breaking high at $4.10 (top right). Pots lined up for crab season opening (middle). Estimated pots declared by year in the Oregon commercial Dungeness crab fishery. Boats' pot limits were used beginning in the 2006-07 crab season (bottom right).



Dockside Sampling: Monitoring the Size of the Catch

During the 2014-15 crab season we had seasonal sampling coverage on the central and south coast and intermittent sampling coverage on the north coast for sampling Dungeness crab catch at the docks. The sampling at the dock consisted of measuring carapace widths and sample weights from a certain number of crabs, based on size of the offload. We were able to sample 453 offloads from 202 different vessels, representing close to 18% of pounds landed from December through June. During the 2014-15 season, carapace widths averaged 6.7 inches coastwide and ranged from an average of 6.6 inches in Brookings to 6.8 inches in Newport. For the past three seasons the size of crab has not varied much, with the exception of a larger overall size of crab harvested off Brookings during the 2013-14 crab season (see graph on right).



The last three crab seasons we have measured and weighed a portion of the catch at the dock. The number after each bar is the total number of crab measured in each port during that season (above).
(Left) Crab boats in Newport.

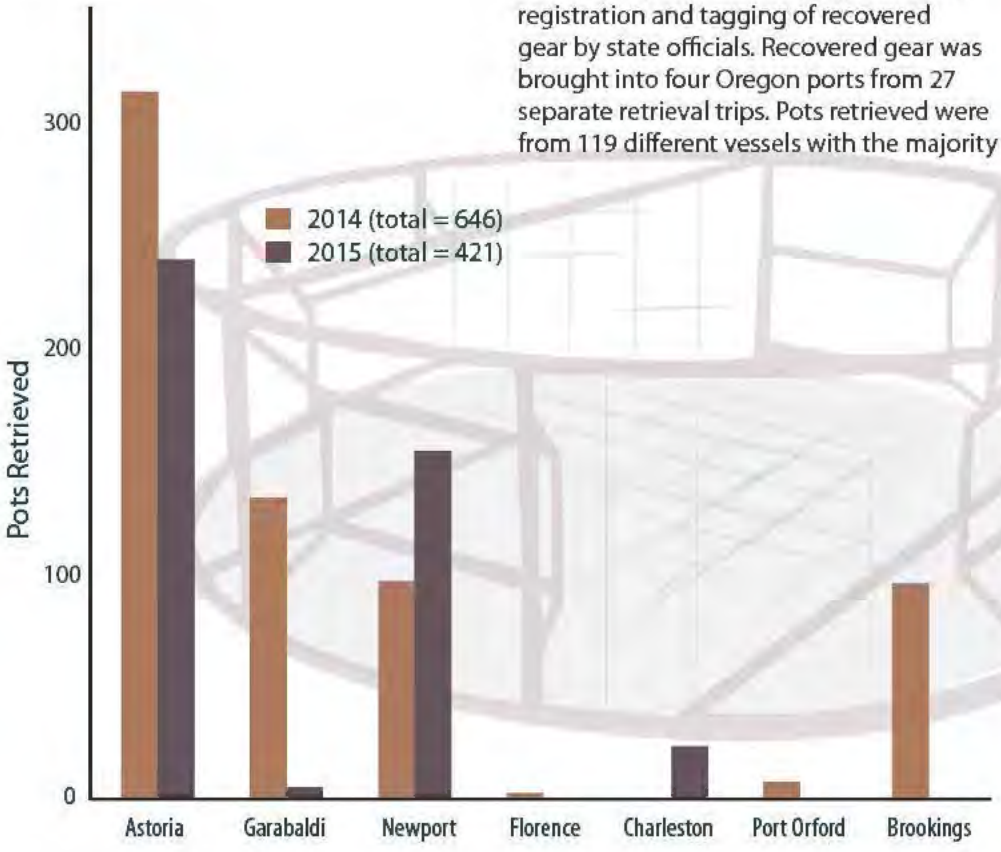
Oregon Fleet Recovers 421 Derelict Pots

The derelict pot tag attached during the gear registration process by ODFW or OSP to every commercial pot brought in through the permitted program.

Derelict crab gear creates a number of problems for Oregon fishermen and resources, including conflicts with other fisheries, ghost fishing of crab, and entanglement potential for marine mammals. To incentivize removal of lost and abandoned crab gear from the ocean, the Oregon Dungeness Crab Comission (ODCC) recently supported legislation to exempt crab pots recovered in a permitted post season program from Oregon's personal property law, which ultimately allows participants to keep or sell the gear. The Post-Season Derelict Gear Recovery Program was first implemented in 2014, and the program has successfully removed 1,067 pots (646 pots in 2014, and 421 pots in 2015) from waters off of Oregon (see graph below).

Throughout the duration of the four-week program this year (Sept. 2nd- 30th) we issued 37 permits coastwide, of which 20 permits recovered gear. For enforcement and tracking purposes, requirements of the permits issued included pre and post recovery trip notifications, logbooks, and registration and tagging of recovered gear by state officials. Recovered gear was brought into four Oregon ports from 27 separate retrieval trips. Pots retrieved were from 119 different vessels with the majority (321) from this past crab season and in useable condition (245 good condition, 112 fair condition). All 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/) to allow any previous gear owners interested in negotiating for retrieved pots to contact retrieving vessels. We would like to thank everyone who participated in this year's gear recovery program. This program continues to raise awareness about derelict crab gear removal efforts and operates very efficiently.

Stack of derelict pots brought into the port of Newport and registered with the derelict gear tags during the 2015 permitted program.



Recovered pots were brought into many of the major crabbing ports during the first two years of the permitted post-season gear recovery program. In 2015, 421 derelict pots were recovered.

Number of Replacement Buoy Tags Issued Each Year

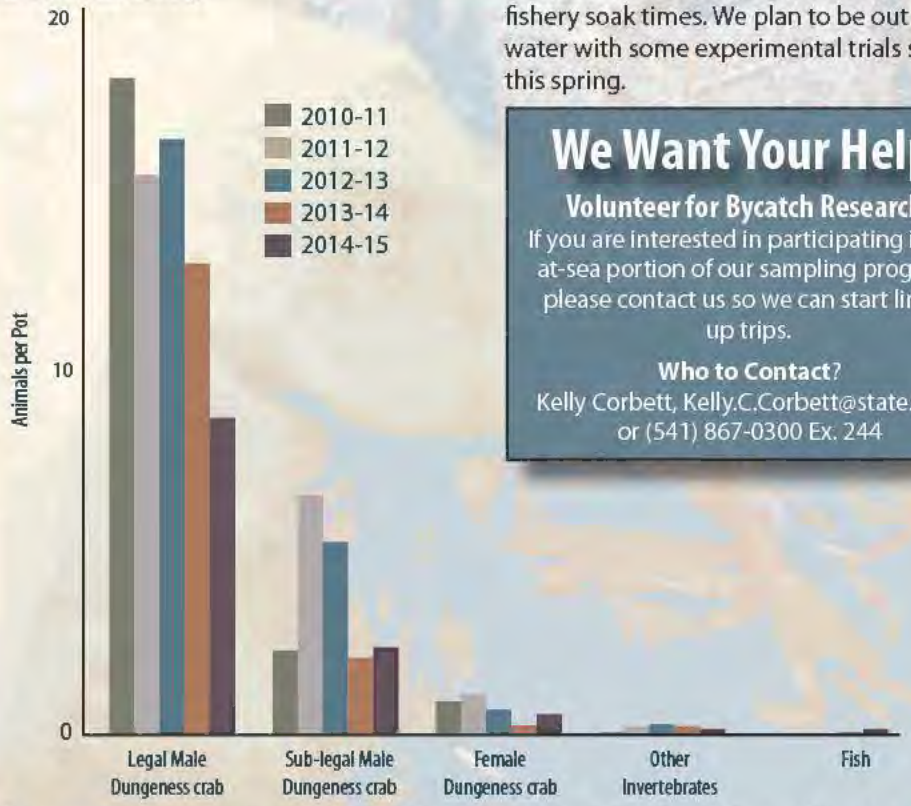
2006-07	3,647
2007-08	4,273
2008-09	3,005
2009-10	3,907
2010-11	4,371
2011-12	2,802
2012-13	2,702
2013-14	2,750
2014-15	1,957

What's Thrown Back? Evaluating Fishery Bycatch

Oregon Dungeness crab fisheries are managed using a conservative biological strategy that implements size, sex and season restrictions to sustain the crab resource. This strategy relies on low levels of fishery mortality to protect the reproductive output of the females, and protect the young males for reproduction and future harvest. To assess the effectiveness of current management it is necessary to quantify the fishery related total mortality of all Dungeness crab, including discarded catch. Although bycatch rates of non-crab species are thought to be low in Oregon's crab fisheries this key component of sustainable fisheries management has not been well documented historically. This section includes brief summaries of recent and on-going research and monitoring efforts in the commercial fishery that have and will continue to help evaluate impacts of bycatch (crab and non-crab) in the fishery.

At-sea Sampling for Bycatch Info

For the past three crab seasons we sampled crab at sea to assess and quantify bycatch rates of female crabs, undersize crabs and other species caught throughout the season. This past season we were able to get out on 17 trips from five different ports including Astoria, Newport, Charleston, Port Orford and Brookings, between December and June. We were able to sample 688 pots and measured 6,789 crab. We would like to thank all of the vessels that have voluntarily participated with this portion of our sampling program. In the upcoming 2015-16 crab season we will be continuing these at-sea monitoring efforts coastwide in order to continue building our dataset on bycatch rates in the commercial fishery.



Bars represent pot catch composition data from preseason tests in the past five years. These tests were conducted just prior to the opening of the season listed in graph above (see text on right).

Who's Eating Who? Cameras Will Tell Us

During on-going discussions with industry regarding the evaluation of bycatch in the fishery it has been suggested that a form of unobserved bycatch mortality may be occurring within the pots, by means of cannibalism or predation. This fall, in response to agency-industry interest in minimizing bycatch, we have begun designing a camera system to monitor an actively-fishing crab pot. We plan to utilize the system to investigate rates of cannibalism and predation occurring within crab pots as soak time and shell condition varies. The system will be operational to a depth of 50 fathoms in order to test within typical fishery depths and capable of recording footage for multi-day periods without surface maintenance to mimic fishery soak times. We plan to be out on the water with some experimental trials starting this spring.

We Want Your Help!

Volunteer for Bycatch Research!

If you are interested in participating in the at-sea portion of our sampling program, please contact us so we can start lining up trips.

Who to Contact?

Kelly Corbett, Kelly.C.Corbett@state.or.us or (541) 867-0300 Ex. 244

Oregon Crab Commission Funds Bycatch Work

The ODCC has provided key leadership in evaluating bycatch mortality in the fishery. Beginning in 2010, the ODCC has supported research to estimate mortality rates of discarded crab in Oregon's crab fisheries. This research concluded bycatch mortality (rate of crab that die after being caught and discarded) is low overall, although highest in male crab in softshell condition (Yochum and Sampson, 2014). To investigate the potential biological and economic impacts of these differential bycatch mortality rates throughout a crab season, the ODCC is funding the development of a Bio-Economic Model of the Oregon commercial crab fishery by Oregon State University and The Research Group. The researchers plan to engage with industry regularly through a steering committee for development, testing and dissemination of results of the model. Want to know more? Call ODCC at 541-267-5810 or email hugh@oregondungeness.org.

Legal Males Dominate Preseason Bycatch Work

Starting in 2010 we began sampling a subset of the pots fished in each preseason test string to document the quantity and species composition of all species caught in the pots, including female and sub-legal male Dungeness crab. To date we have sampled 739 pots and measured 14,707 crab. Results of this sampling continue to indicate catch per unit effort (CPUE) 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 at this time of year (see graph on left). We plan to continue to collect this data in all of our preseason trips this fall and would like to thank all of the captains and crew that volunteer for these trips and help facilitate sampling.

Other News of Interest

Harmful Algal Blooms and Domoic Acid

Beginning in late 2014, and continuing well into this year, unusually high sea surface temperatures preceded massive Harmful Algal Bloom (HAB) events that led to one of the largest commercial and recreational shellfish fishery closures that the west coast has ever seen. These closures included Dungeness crab fisheries in the states of Washington and California due to elevated levels of domoic acid (DA), a naturally occurring bio-toxin produced by marine algae of the genus *Psuedo-nitzschia*. In Oregon, all crab tested by the Oregon Department of Agriculture in the late spring and summer had DA levels well below the Food and Drug Administration (FDA) action threshold of 30ppm in cooked viscera, so the Oregon Department of Agriculture (ODA) recommended no action for Oregon crab fisheries. As the 2015-16 opening of Oregon's crab fisheries approaches we will be working closely with ODA, industry and the other states to monitor DA levels in crab as we have in the past.

Whale Entanglements

Whales have been documented to occasionally become entangled in fishing gear, including but not limited to crab gear, at times causing serious injury or mortality. Since marine mammals are federally protected under the Marine Mammal Protection Act (MMPA) these entanglements are tracked and assessed by the National Oceanic and Atmospheric Administration (NOAA). In recent years, NOAA has observed an increase in the number of whales entangled in fixed gear fisheries along the west coast and has been working with each of the states to share whale entanglement information and explore ways to reduce risk of entanglements in fixed gear fisheries. Coastwide concerns about whale entanglements make Oregon's derelict crab pot removal program not only 'a good thing to do,' but also timely, in terms of coastwide interactions of crab gear with whales. This year, due to a flurry of documented entanglements in California in 2014 and into 2015, NOAA has been working more closely with California Department of Fish and Wildlife and the CA Dungeness crab industry to discuss and develop short and long term strategies to reduce whale entanglement risk. We continue to help inform these discussions with information on our logbook and derelict gear programs, and are tracking outcomes for additional information and measures that might be useful and manageable for Oregon's Dungeness crab fishery.

Marine Reserves Info

There are five Marine Reserves and nine Marine Protected Areas (MPAs) designated in Oregon's state waters. Marine Reserves prohibit the take of any fish, invertebrates, seaweeds or wildlife. Fishing gear cannot be deployed in the water at any time within a reserve. Boats are allowed to transit and anchor in a reserve with catch on board. In contrast, all MPAs allow the take of crab. Other site specific harvest restrictions apply at each MPA.

Status of Sites:

- **Cape Falcon - harvest restrictions begin January 1, 2016.**
- Cascade Head, Otter Rock, Cape Perpetua, and Redfish Rocks – harvest restrictions already in effect.

Where to Find Maps, Boundaries, and Rules:

- 2016 Synopsis – Oregon Commercial Fishing Regulations: The 2016 Synopsis (booklet) is available at any coastal ODFW office.
- Boundaries for Navigation Programs/ Plotters: Thumb drives (USB Flash Drives) are available for downloading boundary coordinates onto your boat's navigation system/plotter. The thumb drives will be distributed by Oregon State Police and ODFW during this season's crab hold inspections. You can also request a thumb drive by contacting the ODFW Newport Office. Included with the thumb drive are instructions on how to install the boundaries onto your system and summaries of site specific rules for each area.
- Printed Rules Summaries: Rules summaries with maps and boundary coordinates are available from the Oregon Marine Reserves website or by contacting the ODFW Newport Office.

Retrieval of Lost Fishing Gear:
With prior permission from Oregon State Police, crab pots that have drifted into a reserve can be removed (no crab can be kept). Call Oregon State Police at 1-800-452-7888.

For More Information:
Contact the ODFW Newport Office at 541-867-4741 or visit the Oregon Marine Reserves website at: www.oregonocean.info/marinereserves.

Things to Leave You With...

Recycle Those Buoy Tags!

As you are gearing up for this next season, please remember that we will recycle your old buoy tags. Unfortunately, they still cannot be recycled through your local curb-side recycling program.

We'll Recycle Them For You!

Just drop 'em off! You can bring your buoy tags in to any ODFW office in the major coastal ports and we will transport them in bulk to the recycling center.

How's the Crab? 2015 Preseason Testing

In partnership with the Oregon Dungeness Crab Commission (ODCC) and the commercial fleet, the first round of Oregon preseason Dungeness crab quality testing was completed the first week of November. Crab was also collected during the first round of testing for domoic acid testing by the Oregon Department of Agriculture. Results of all these tests are posted on our website at www.dfw.state.or.us/MRP/shellfish/commercial crab/news_publications.asp. We would like to thank everyone involved with testing this year!

Minor Logbook Changes to Track Gear Loss

We have made two minor format changes to crab logbooks that you may notice this year if you need a new logbook. They include: 1) a column to record an estimated number of pots lost for each string of gear pulled, not to include pots thought to be under due to currents or able to be retrieved on another day, and 2) specified fields within the derelict gear box to record date, number of pots and location of all derelict gear retrieved. The newly formatted logbooks will start being distributed this season but there is no requirement to use the new books until you have finished your current one.

2015-16 Buoy Tag Colors

Tier 200	Light Blue
Tier 300	Orange
Tier 500	Purple
Replacements	Red

We Want YOU!

Volunteer to collect crab for testing!

If you are interested in volunteering for collecting crab for quality and toxin testing in your port in the future, give us or the ODCC (541-267-5810).

Texting: Not Just for Teenagers

If you would like to receive email and/or text messages with up-to-date information about the ocean commercial Dungeness fishery please visit www.dfw.state.or.us/MRP/ to subscribe. You can change your subscription profile or cancel your subscription at any time by logging in on the same webpage listed above.

Have a safe and productive crab season!

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.

Kelly Corbett, Commercial Crab Project Leader (541) 867-0300 x244 Kelly.C.Corbett@state.or.us
Troy Buell, State Fishery Management Program Leader (541) 867-0300 x225 Troy.V.Buell@state.or.us