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

# About the pink shrimp fishery:

|  |
| --- |
| The pink shrimp (Pandalus jordani) is found on sandy and muddy bottoms in 40-150 fathoms along the West Coast of North America. Pink shrimp stocks have historically been centered in Oregon where they have been harvested since 1957. Populations, and consequently fishery landings vary widely from year to year. Landings in 2015 were 53 million pounds and have averaged 30 million pounds per year over the last 30 years. Oregon's pink shrimp fishery has been certified sustainable by the Marine Stewardship Council since 2007. This was the first shrimp fishery to be certified such [(see article)](https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/oregon-and-washington-pink-shrimp/). This certification, was achieved in large part via to cooperative work between industry and ODFW which implemented changes in gear reduce bycatch. The pink shrimp is a small shrimp in comparison to many shrimp and prawns seen in markets and restaurants. Pink shrimp are often marketed as "salad shrimp" or "cocktail shrimp". Pink shrimp in Oregon have a maximum life span of four years, natural mortality is high in each year, one and two year olds typically dominate the commercial catch. |
| Pink shrimp are harvested via trawling. Most of Oregon’s boats are “double rig” boats; meaning a net is set out from each of the trawl arms and independent of each other.  Oregon shrimp trawl boats typically work between 40 and 125 fathoms (240 to 750 feet) on mud and muddy-sand substrates. Shrimp migrate up off the bottom at night to feed, so vessels don't fish at night. Boats often work together to locate the highest densities and largest sizes of shrimp. |
| Codends, the terminal end of fishing nets, are emptied into a hopper, from which the catch is carried by conveyor belt for sorting. The catch is then sent to the hold where it is packed in ice for transport. Fishermen deliver the catch into coastal ports for processing, which is done with machines that cook and mechanically peel the shrimp. |
|  |
| Oregon’s pink shrimp resource is annually managed using season and size. Shrimping is open from April 1 to October 31 each year. This season nearly eliminates interference with their reproductive season which typically occurs from November to March. Oregon shrimpers are required to deliver shrimp that average 160 per pound or larger (lower count). Given this regulation regarding size, fisherman move out of areas containing a high percentage of small shrimp. |
| To assure long term sustainability, management focuses on 1) long term understanding of stock trends (via fishery monitoring, e.g. logbook analysis and dockside sampling) and 2) bycatch reduction (via gear research). |

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

***New recruits***

In Oregon, pink shrimp larvae are released in early spring, and are planktonic for about 7-8 months before settling to the bottom in the fall. In the plankton, they pass through a series of zoeal growth stages or "instars" before they become recognizable as small shrimp. These young of the year or "zero age" shrimp are often found much higher in the water column than their adult counterparts.

***Maturing shrimp***

After one year pink shrimp between 13 and 17 mm in carapace length, and are reproductively mature. Oregon’s pink shrimp like many other shrimp are protandrous hermaphrodites, meaning they begin life as a male and over time will change to a female.

Generally, this transition takes place between its 1st and 2nd year, however there are a number of factors that can alter this cycle. For example, in a year that populations are dominated by a 1 year old shrimp, which are normally male, it is common to see the largest 1 year olds mature first as females and become viable for winter reproduction. These are known as “primary females”.

***The next year class***

By the second year of life, pink shrimp are generally all females, between 18 and 25 mm in carapace length. In the fall, female shrimp begin producing eggs, which are carried attached to their abdomen over the winter. A female prodces from 1,000 to 3,000 eggs, which hatch in early spring to begin the cycle again.

Three year olds, which are exclusively female, only comprise a small percentage of Oregon’s pink shrimp population. Three year old pink shrimp are usually between 25 and 29 mm in carapace length. Four year olds are not normally found in pink shrimp populations; nearly all three year old females will die following their third clutch of eggs hatching.

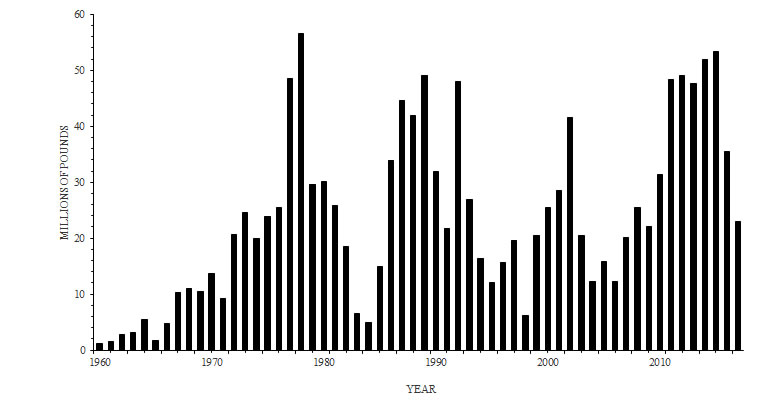
Due to predation on shrimp by fish and man alike shrimp’s life history is a successful design for continued persistence of sustainable populations.

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

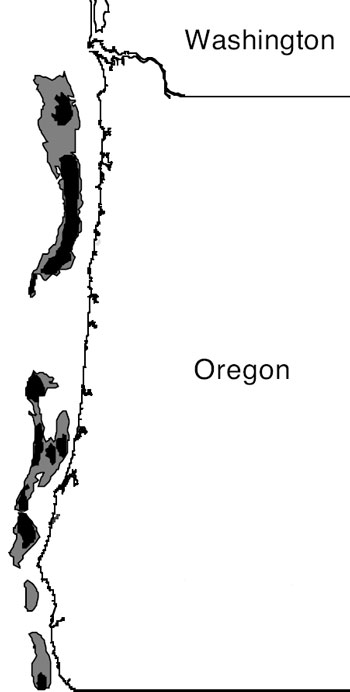
### Commercial Pink Shrimp Landings

## Pink shrimp landings/area:

Pink shrimp live short lives and annual recruitment levels are linked to environmental conditions, primarily the strength, duration and timing of ocean currents, these two factors result in very high year to year varibility of landings. Landings in 2015 were at a near record high of 53 million pounds and have averaged 29 million pounds per year over the last 30 years.



|  |  |  |
| --- | --- | --- |
| Pink shrimping areas |  | |
| Pink shrimp are generally fished at depths of 40 to 125 fathoms (240 to 750 feet) in areas of soft substrate. Shaded areas of the map on the right show approximated commercial concentrations of pink shrimp stocks. These data are resultant of fishery logbook information. Dark areas show the approximate minimum aerial extent of shrimp grounds (1984) and the lighter shaded areas show the largest aerial extent observed from 1980-96. | |  |



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Key regulations that apply to **Oregon** pink shrimp deliveries | | | | |
|  | | Fishing off CA\* | Fishing off OR\*\* | Fishing off WA\*\*\* |
| Areas | 0-3 miles | No fishing | OR permit needed | No fishing |
| 3-200 miles Key closed areas | Delgada Canyon, Tolo Bank, other closed areas (see [CA regs here](https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=123803&inline)) | Nehalem Banks, Daisy Bank, Stonewall Bank, Heceta Bank, Coquille Banks | Grays Canyon (see [WA regs here](http://wdfw.wa.gov/fishing/commercial/shrimp/license_permit_requirements.html)) |
|  |  |  |

<https://fisheries.msc.org/en/fisheries/oregon-and-washington-pink-shrimp/@@view>

Certifier :

MRAG Americas, Inc.

Certified status :

Certified

Certified since :

18 Nov 2010

Certificate expires :

13 Feb 2023

### At a glance

https://fisheries.msc.org/static/img/icon-species.gif

##### Species

Shrimp (Oregon pink) (Pandalus jordani)

https://fisheries.msc.org/static/img/icon-geartype.gif

##### Gear type

Trawls - Bottom trawls - otter trawls

https://fisheries.msc.org/static/img/icon-location.gif

##### Location

Northeast Pacific (FAO Area 67)

https://fisheries.msc.org/static/img/icon-tonnage.gif

##### Tonnage

23947 (2017)

The fishery operates off the coast of Oregon in the western United States and 80-90 vessels are covered under the existing MSC certification. The primary fishing method is otter [trawling](https://www.msc.org/healthy-oceans/sustainable-fishing/fishing-methods-and-gear-types/demersal-bottom-trawls), which derives its name from the "trawl doors" or "otters" which are used to keep the mouth of the net open. The use of bycatch reduction devices are mandatory. Since the discovery of LED lights' effectiveness in reducing bycatch of Eulachon smelt, juvenile flatfish and juvenile rockfish by an additional 78-90%, almost 100% of the fleet have employed such lights on a voluntarily basis.   
  
The annual catch landed at Oregon ports averages about 11,000 tonnes, with an overall average shrimp size of approximately 3 inches.   
  
During the fishery’s first 5-year certification period, considerable improvements were made. More and better information for stock assessment has been gathered through the introduction of comprehensive logbooks for recording total catch and discards. Expanded observer coverage, harvest control rules and electronic reporting were also introduced.     
  
The scope of the fishery was extended during the second certification period with the Washington pink shrimp operation becoming certified in October 2015.    
  
"Oregon’s pink shrimp fishermen are proud that their fishery has been recertified to the MSC Standard.  It’s a testament to the cooperative relationship that exists between the fleet and the Oregon Department of Fish and Wildlife, to continually improve their fishery and make it one of the cleanest shrimp fisheries in the world."   
- **Brad Pettinger, director of the Oregon Trawl Commission**

## Market Information

The shrimp are sold primarily into US west coast retail and food service markets in a cook and peeled product form. During seasons of high abundance and/or depending on market conditions, a significant amount of shrimp can be exported to European markets.

# OR and WA Shrimp Surveillance Report – Draft 2 2017.pdf

**Update on the fishery since the 2016 surveillance audit**

Target stock update (excerpted or summarized from Groth et al. 2017, with some additions from Wargo and Ayres 2017)

Over 52m lbs of pink shrimp were landed on the West Coast in 2016, down from 102m lbs in 2015. Landings into Oregon ports were highest (35.5m lbs), followed by Washington (14.1m lbs) and California (3.0m lbs). The total value of the catch declined from over $75m in 2015 to $36m in 2016 (Groth 2017; Wargo 2017; Coates 2017). The decline in catch from 2015 to 2016 is largely attributed to the maturation and passing of the historically exceptional 2013 year class of pink shrimp through the fishery.

Though down from 2015, landings in Oregon exceeded the 20 year average (29.4m lbs from 1996-2015). While the number of active vessels (75) and trips (1051) remained similar to recent years, the average price per lb ($0.71) was the 3rd highest on record.

Much of the 2016 catch in Oregon (87%) was of one-year-old shrimp from the strong 2015 year class that was not detected until June 2015. Given their small size and large volume, fishermen actively avoided or mixed this year class with older/larger shrimp until they grew into legal size by late 2016. These shrimp grew quickly, resulting in good catches toward the end of the 2016 season.

In 2016, the Oregon fleet focused on different areas, depending on seasonal stock conditions. As the year began, fishing was best in the southern areas; mid coast abundances were low and northern area shrimp were too small. By mid-summer, northern area shrimp had grown to legal size and were fished intensely. By the end of the year, catch and effort increased again in the south.

In Oregon, annual efficiency, measured in catch per unit effort (CPUE) declined to levels similar to those seen in the mid-2000s. The reduced CPUE in 2016 indicates that abundance had declined, likely due to the weak 2014 year class of shrimp (the 2 year olds in 2016). Over the course of 2016, CPUE was steady in the south, while consistently improving in northern areas, as the dominant 1 year old year class grew to legal size.

While Washington’s 2016 total landings of 14.1m lbs. were significantly lower than the 2014 and 2015 totals (of just over 30m lbs. and 40m lbs. respectively), this total remained above the historical seasonal average of 9.8m lbs (between 2009 and 2013). The number of active vessels decreased from 40 in 2015 to 28 in 2016. The total ex-vessel value of the fishery declined from over $29m in 2015 to $8.6m in 2016; the average price per lb was $0.57. As in 2015, the majority of the landed catch came from the mid-coast of Washington in 2016. The 2016 season started slowly, with only 199,000 pounds landed in April, the slowest season start since 2008. However, as the season progressed the catch improved to more typical levels, peaking in the months of July and August.

Fishery managers in Oregon and Washington expect the 2017 catch will be heavily influenced by the strong 2015 year class which will be present as age 2 shrimp in the fishery.

**Columbia Returns/Ocean Abundance**

Spawning stock biomass estimations of eulachon in the Columbia River have ranged from a low of 783,400 fish in 2005 to a high of 185,965,200 fish in 2013, with an estimated 54,556,500 fish in 2016.

**Table from NMFS (2016b):** Annual Columbia River eulachon run size 2000-2016; pounds converted to numbers of fish at 11.16 fish/pound (WDFW 2016). The estimates were calculated based on methods developed by (Parker 1985), Jackson and Cheng (2001), and Hay et al. (2002) to estimate spawning biomass of pelagic fishes. For 2000 through 2010 estimates were back-calculated using historical larval density data

Oregon:

By the 4th surveillance audit, the client must provide evidence to show that the direct effects of the Oregon pink shrimp fishery are highly unlikely (as defined by the MSC) to create unacceptable impacts to ETP species, in particular eulachon.

Washington:

By the 4th surveillance audit of the combined WO fisheries, the client must provide evidence to show that the direct effects of the WO pink shrimp fishery are highly unlikely (as defined by the MSC) to create unacceptable impacts to ETP species, in particular Pacific eulachon

<http://www.dfw.state.or.us/OARs/05.pdf>

Oregon Administrative Rules

Oregon Department of Fish and Wildlife

DIVISION 005

Commercial Shellfish and Marine Invertebrate Fisheries

635-005-0575

Pink Shrimp Fishery Defined

“Pink shrimp fishery” means the commercial fishery targeting smooth pink or ocean shrimp (Pandalus jordani) in the Pacific Ocean.

635-005-0585

Pink Shrimp Permit Fee

1. The annual fee for a Pink Shrimp Permit is $200.00 (plus a $2.00 license agent fee) for resident applicants and $250.00 (plus a $2.00 license agent fee) for non-resident

applicants.

635-005-0610

Lottery for Limited Entry Pink Shrimp Permits

1. If the number of Pink Shrimp Permits issued in accordance with ORS 508.892 falls below 150, the Department may issue Pink Shrimp Permits by a lottery system pursuant to ORS 508.904. However, the total number of Pink Shrimp Permits issued shall not exceed 150.

. 635-005-0625

Closed Season–Pacific Ocean Pink Shrimp Fishery

1. It is unlawful to take, land, or possess pink shrimp from the Pacific Ocean from November 1 of any year through March 31 of the following year.
2. Notwithstanding the provisions of section (1) of this rule, it is lawful to possess pink shrimp taken from the Pacific Ocean during the period November 1 of any year through March 31 of the following year, if such shrimp were taken north of 48°30' north latitude (U.S.-Canada border).

635-005-0630

Fishing Gear-Pink Shrimp Fishery

1. It is unlawful to take pink shrimp for commercial purposes by any means other than trawl net or pots.

(2) It is unlawful to fish with trawl gear for pink shrimp for commercial purposes unless an approved rigid-grate bycatch reduction device is used in each net. A rigid-grate bycatch reduction device uses a rigid panel of narrowly spaced bars to guide fish out of an escape hole in front of the panel, generally in the top of the net. The panel may be hinged to facilitate rolling over a net reel. An approved rigid-grate bycatch reduction device must meet the following criteria:

(a) The exterior circumference of the rigid panel must fit completely within the interior circumference of the trawl net, such that there is no space between the panel and the net that will allow a 110 mm sphere to pass beyond the panel, into the terminal area of the codend;

(b) None of the openings between the bars in the rigid panel may exceed 0.75 inches.

(c) The escape hole must, when spread open, expose a hole of at least 100 square inches; and

(d) The escape hole must be forward of the rigid panel and must begin within four meshes of the furthest aftpoint of attachment of the rigid panel to the net.

(3) It is unlawful to fish with trawl gear for pink shrimp for commercial purposes unless footrope lighting devices that have been approved by the Department are used in each net. A list of approved footrope lighting devices is available from the Department. Footrope lighting devices must meet the following criteria:

(a) Lighting devices must be operational

(b) Lighting devices must be securely attached within 6 inches of the forward leading edge of the bottom panel of trawl netting; and

(c) Each trawl net must have a minimum of five lighting devices, spaced 4 feet apart in the central 16 feet of each net.

(4) All bycatch reduction devices, codends, and footrope lighting devices used for trawl fishing for pink shrimp must be readily accessible and made available for inspection at the request of an authorized agent of the state. No trawl gear may be removed from the vessel prior to offloading of shrimp.

(5) It is unlawful to modify bycatch reduction devices or footrope lighting devices in any way that interferes with their ability to allow fish to escape from the trawl.

635-005-0640

Incidental Catch Limit

1. It is unlawful for a commercial fishing vessel taking shrimp for commercial purposes to land an incidental catch of groundfish in excess of 500 pounds per day, multiplied by the number of days of the fishing trip, not to exceed 1,500 total pounds of groundfish for the fishing trip.
2. In addition to section (1) of this rule, the following sublimits also apply and are counted toward the daily and fishing trip limits:

(a) Lingcod: 300 pounds per month; and

(b) Sablefish: 2,000 pounds per month.

(3) The amount of groundfish landed described in sections (1) and (2) of this rule

shall not exceed the amount of pink shrimp landed on any single fishing trip.

1. It is unlawful to have on board a commercial fishing vessel taking pink shrimp for commercial purposes any canary rockfish, yelloweye rockfish, and any species of thornyhead.

635-005-0645

Maximum Count Per Pound

1. It is unlawful to possess or land pink shrimp from any one trip or landing which exceeds an average count of 160 whole shrimp per pound. This rule shall not apply to landings or possession of less than 3,000 pounds of pink shrimp.
2. To determine average count per pound when a landing exceeds 3,000 pounds of shrimp, one sample must be taken from each one thousand pounds up to a maximum requirement of 20 samples. The sampling unit shall consist of at least one pound of whole unbroken shrimp.
3. For the purpose of determining count per pound "whole shrimp" and "whole unbroken shrimp" are defined as shrimp in which the body is substantially intact, including an identifiable carapace, abdomen, and telson (tail). It is

not intended to require shrimp to have an unbroken rostrum, complete set of legs, antennae, or other appendages.

<http://www.oregonlive.com/business/index.ssf/2013/05/oregons_once-tiny_shrimp_fishe.html>

By [Lori Tobias | For The Oregonian/OregonLive](http://connect.oregonlive.com/user/ltobias/posts.html)   
on May 08, 2013 at 7:04 PM, updated May 09, 2013 at 6:13 AM

"Most people don't even know we have a shrimp fishery off of Oregon," said Brad Pettinger,  director of the [Oregon Trawl Commission](http://www.ortrawl.org/). "Oregon is the center of the grounds. We count for 75 percent of the landings on the west coast."

Last year's catch of 49.1 million pounds – worth about $24 million – was second only to the record high of 56 million pounds in 1978.

"That's one-fifth of Oregon's total commercial fishery value for 2012," said Pettinger. "It is a major employment factor for five Oregon fish plants seven months of the year that normally run two 10-hour shifts.

"Outside of the 64 boats and processing plants, support businesses such as fuel docks, gear and grocery stores, net shops, packaging companies, trucking and distribution to both regional and international markets all contribute to the fishery as an economic driver."

And yet, until the 1960s the fishery didn't even exist. Joe Rock, a recently retired fishermen of 54 years, recalls the early days.

A couple of fishermen tried to fish for shrimp in the 1950s, Rock said. "They were catching the product, but the markets weren't there."

About a decade later, another fisherman ordered a net from a maker in the Gulf of Mexico through shop in Astoria. Cost him $350, Rock recalled.

"He came into Newport and had a bag of shrimp on the deck. He probably had 2,500 to 3,000 pounds. It was a big surprise. We were all amazed. About six or seven boats started fishing for shrimp after that."

The fishermen sold the shrimp to fish plants, where 30 to 35 women handpicked the meat.

"I had one women that could pick nine pounds of meat an hour," Rock said. "They peeled them by hand. When you get them cooked just right, you squeeze them, the head pops off and the tail pops off."

Not long after the fishery caught on, a few of the fishermen went to the gulf and brought back trawlers built there.

"They used two nets," said Rock. "We laughed at them at first. But we could see it really worked. They didn't have as much by catch. So the fishery went into a double rig system, with net and big booms off each side."

That was the start of the fishery's serious effort toward sustainability – in short, harvesting in such a way that allows the species to maintain healthy numbers, while doing as little harm as possible to the marine environment and other species.

More recently, the fishery has moved to using nets that release young smaller shrimp and other bycatch, capturing only the older, larger shrimp. They also work just above the bottom to avoid catching the skates and other fish, Rock said.

The Marine Stewardship Council recognized the fishery's efforts in 2007 and recertified it in February 2013.

Last year's catch pens out to about 750,000 to 800,000 pounds per boat, Pettinger said, and this year could be just as bountiful.

<https://permanent.access.gpo.gov/gpo88483/final_eulachon_recovery_plan_09-06-2017-accessible.pdf>