SEVENTH EDITION

2022 Washington Pink Shrimp Fishery Newsletter

Washington Department of FISH and WILDLIFE

Welcome to the latest WDFW Pink Shrimp Newsletter!

Inside you will find information about the 2021 commercial pink shrimp fishery season, historical trends and news about the upcoming 2022 season.

For additional fishery information go to: http://wdfw.wa.gov/fishing/commercial/shrimp/

Where to find it!

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Region 6 Shellfish Management Program
48 Devonshire Road, Montesano, WA 98563
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Increased productivity in 2021!

- **21.5 million pounds of shrimp landed.**
- **Total season value 4th highest on record.**
- **Increased CPUE.**
- **Average count per pound improved from 2020.**

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2021 Season Summary

The 2021 landings of pink shrimp into Washington ports were substancially higher than in both 2019 and 2020 (Figure 1). In fact, with the exception of the usually high landings that occurred in 2014 and 2015, the landings made in 2021 were the 3rd highest since 1990. The number of vessels making landings remained stable from 28 to 29 (Figure 2). Since the Washington Pink Shrimp Trawl fishery is under a limited entry program, any license that is not renewed annually year is returned to the state and not re-issued. From the inception of the limited entry program in 1996 the total number of licenses has declined from 129 to 74 in 2021. Most of the decline occurred by 2004, since then an additional 13 licenses have sunsetted. One measure of effort is the number of trips taken. The total made in 2021 was above the average excluding the two high seasons of 2014 and 2015 (Figure 3).

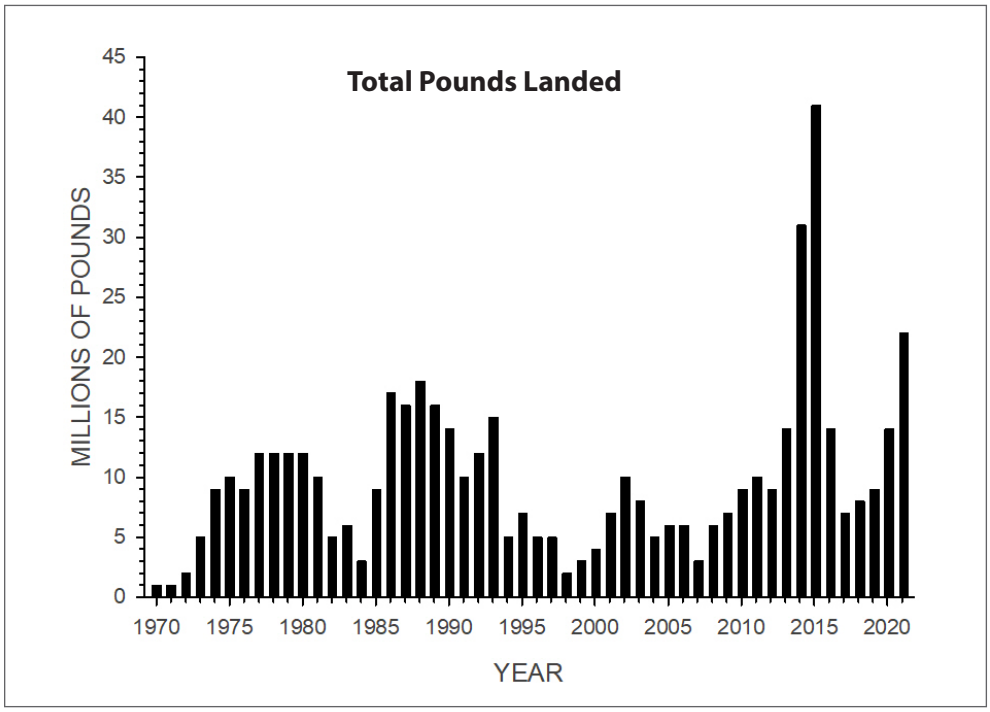


Figure 1. Annual landings (millions of pounds) of pink shrimp into Washington, 1970-2021.

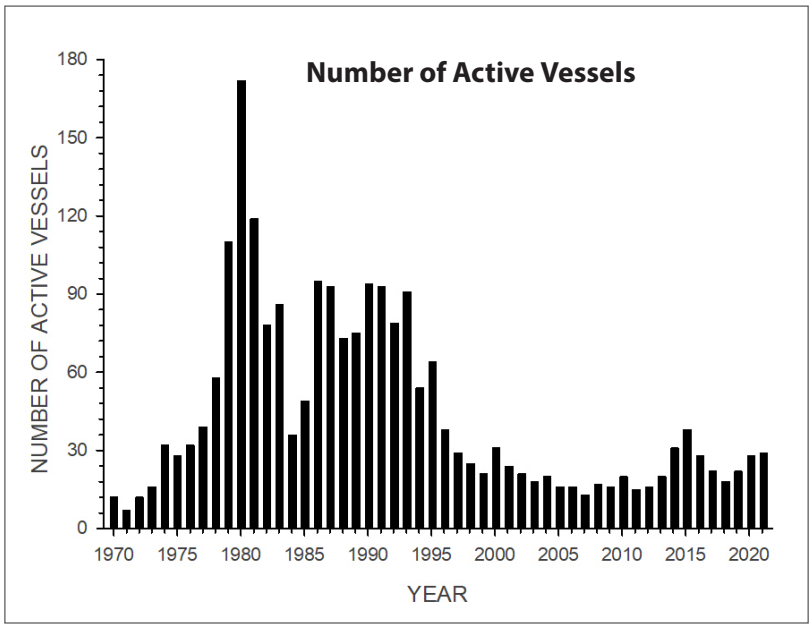


Figure 2. Number of vessels actively fishing, 1970-2021.

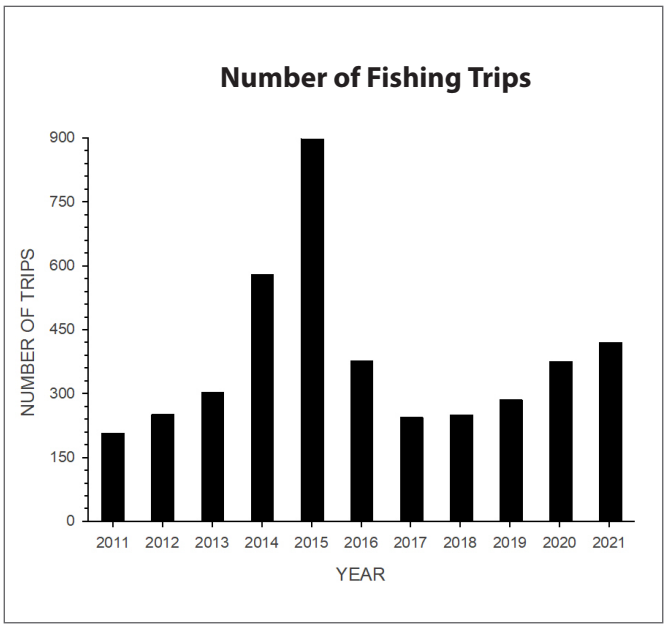


Figure 3. Number of fishing trips, 2011-2021.

Total 2021 fishery ex-vessel value (paid to the fisher at the time of landing) was $10.5 million, an increase of $4M from 2020 (Figure 4). Washington pink shrimp trawlers caught most (58%) of their 2021 shrimp from the south-coast of Washington, with just 7% coming from the north-coast, the lowest level since 2013. Out-of-state waters (Oregon and California; Figure 5) comprised 35% of landings, similar to 2019. Total monthly landings peaked in June and August (Figure 6). Except for early season landings in April and May, landings for each month in 2021 were higher than the 10-year average, and substantially higher than the previous two seasons. The average price per pound in 2021 was $0.48, which is below the 10-year average of $0.56, ranking it as the 19th highest on record (Figure 7).

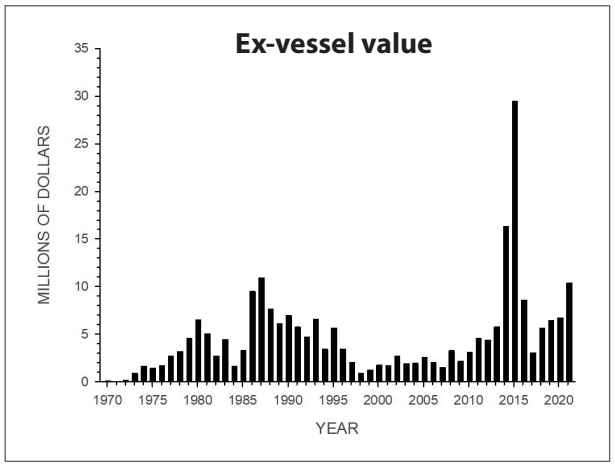


Figure 4. Ex-vessel value of Washington pink shrimp landings, 1970-2021.

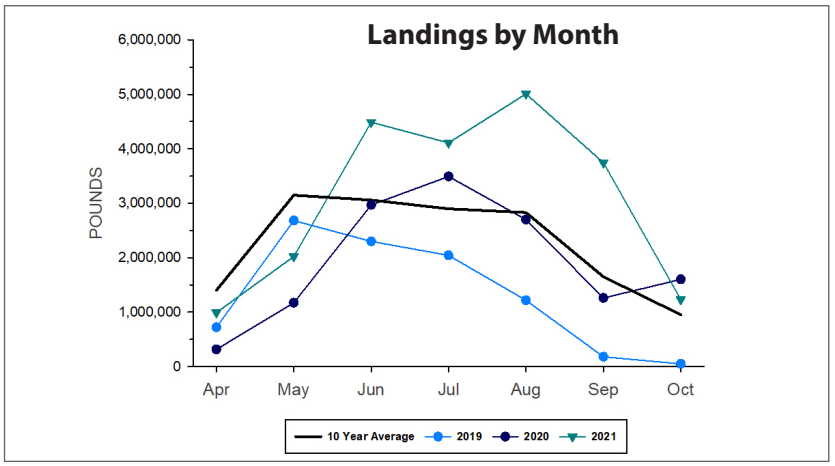


Figure 5. Pink shrimp landings by month for 2019-2021, and the 10-year average.

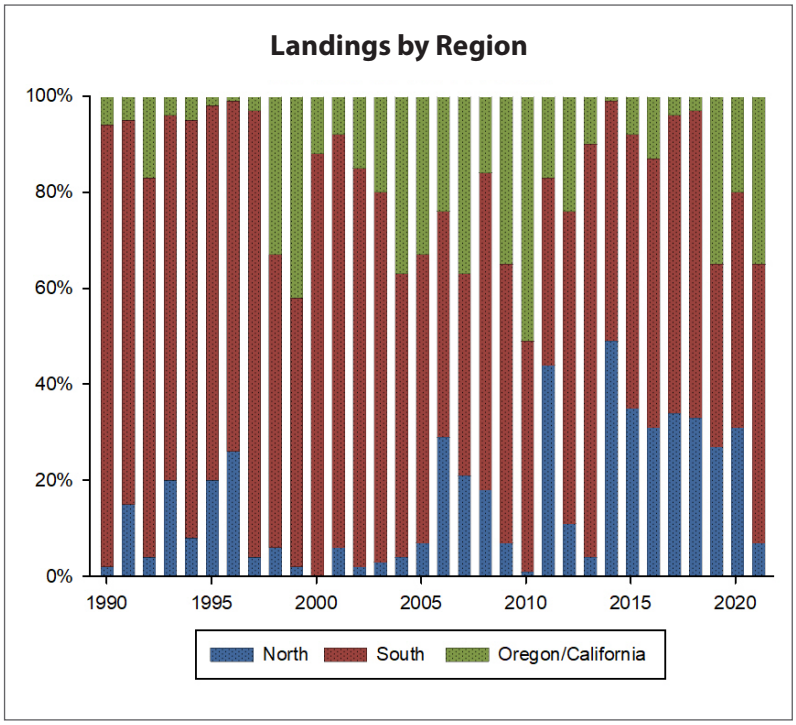


Figure 6. Shrimp fishery landings by region, 1990-2021.

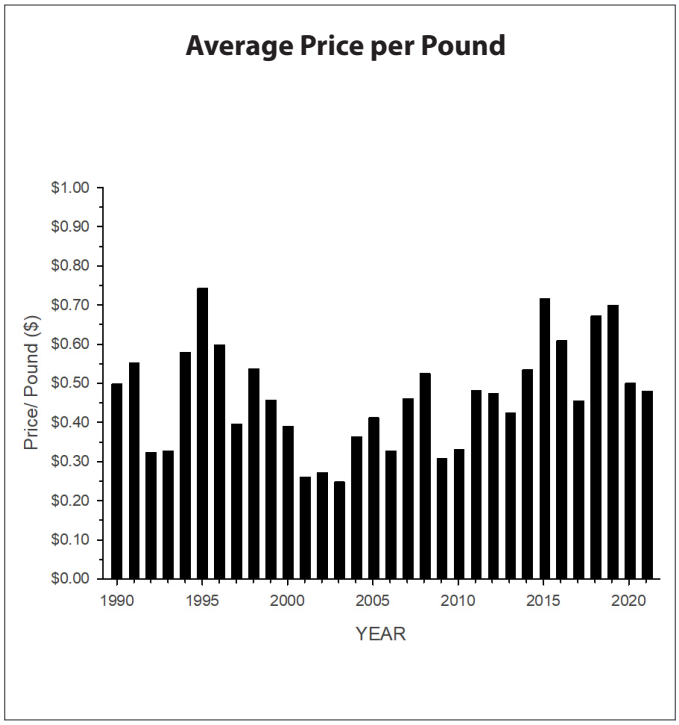


Figure 7. Average price per pound, 1990-2021.

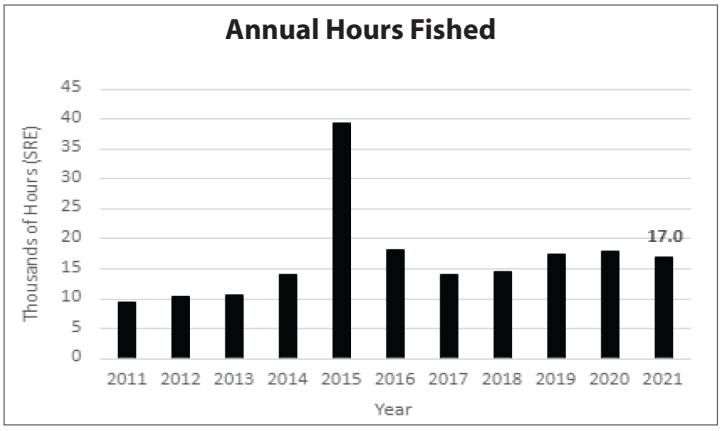


Figure 8. Estimated total annual hours fished (1000s), 2011-2021.

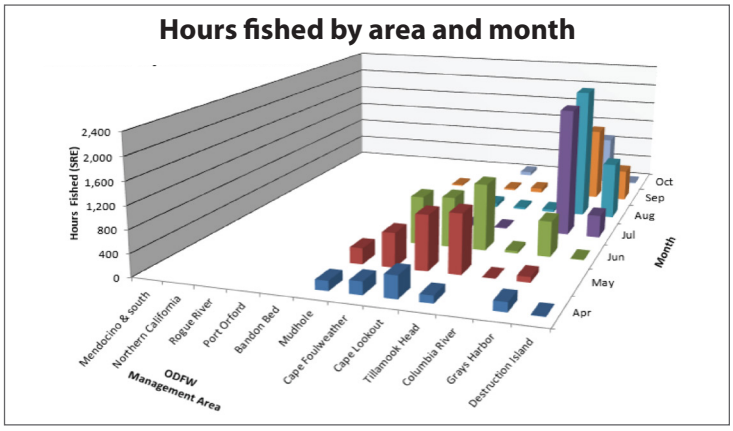


Figure 9. Estimated total hours fished by management area and month for 2021.

Effort

Effort is measured by the number of hours fished. In 2021, the number of hours fished decreased slightly from 2020 and 2019 (Figure 8). Here, fishing hours are estimated as "single-rig equivalents" or SREs. In the past, most vessels towed only one net, i.e., single rig. Now, double rig vessels are most common but to maintain a consistent data set, fishing hours for "double-rig" vessels are multiplied by 1.6.

Similar to past years, early to mid-season effort focused on southern shrimping grounds which accounted for nearly 40% of the year's total hours fished (Figure 9). From July through October, Washington shrimpers shifted their efforts north with effort in the Grays Harbor management area accounting for another 40% of the year's total hours fished.

Catch Distribution

The heat map (Figure 10) shows where the shrimp landed in Washington were caught. The deeper or darker the color the more catch that came from that location. Compared to recent years, catch overall shifted south in 2021. Destruction Island area catch dropped from an average of about 35% from 2017 to 2020 to 15%. Catch from the Grays Harbor catch area increased over 2020 slightly, from 47% to 54%. The largest gains were seen in Oregon catch areas, which overall accounted for 31% in 2021.

Figure 11 shows pounds landed by month and management area. Over the season the volume of landings tended to increase from spring into fall and from south to north. Peak months were June and August in the Grays Harbor management area. In 2021, 69% of the shrimp landed in Washington were caught off Washington, with most of that catch from the Grays Harbor management area.

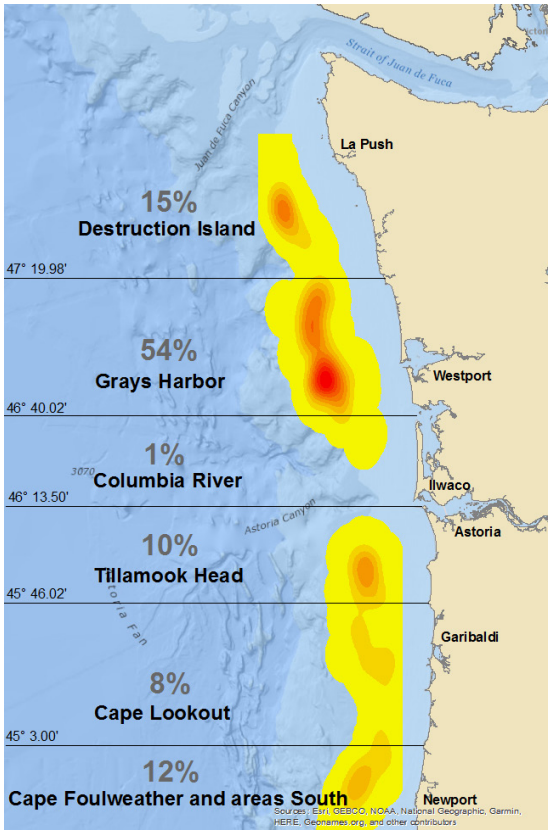


Figure 10. The percentage of 2021 catch by area.

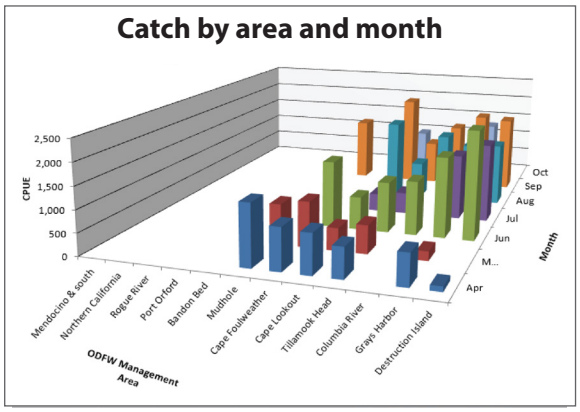


Figure 11. Estimated pink shrimp pounds landed into Washington by area and month, 2021.

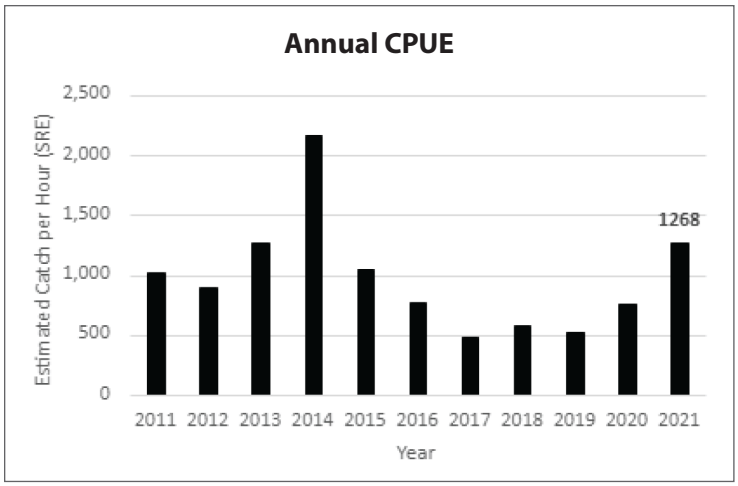


Figure 12. Estimated pounds of catch per SRE hour, 2011-2021.

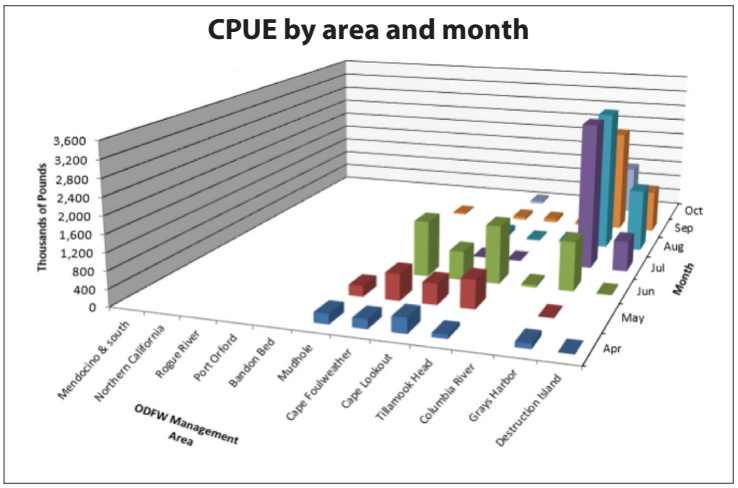


Figure 13. Estimated pounds of shrimp caught per hour (SRE) by area and month, 2021.

Catch Rates

Fishing efficiency or catch per unit of effort (CPUE) was 1,268 pounds per hour (in single rig equivalents) for the 2021 season (Figure 12) continuing the trend for increasing CPUE since the low of 480 in 2017. This 67% increase from the 2020 CPUE to the 2021 CPUE reflects strong shrimp abundance in 2021. Overall, CPUE was highest from mid-summer through fall off Washington (Figure 13), although September saw some of the highest CPUEs across all areas.

Biological Sampling

Our sampling program aims to collect count per pound, length, and sex data following protocols consistent with the ODFW. WDFW samples landings at Westport and Ilwaco weekly collecting data from catch that originates offshore Washington and Oregon. Similarly, ODFW samples catch landed at Oregon ports that was caught off Washington. Biological data is exchanged such that each state receives all the data collected for its respective catch areas.

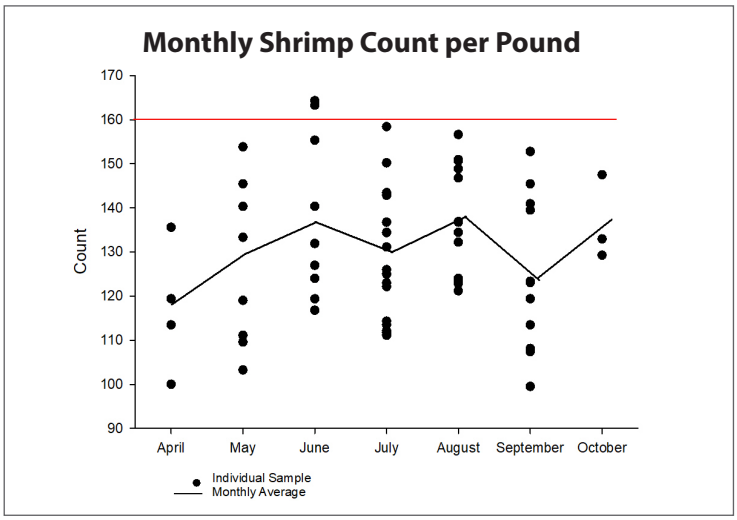


Figure 14 . Average count per pound from WDFW samples, 2021. Each point represents a sample of 100 shrimp.

WDFW technicians collected 50 samples (approximately 100 shrimp per sample) for length and sex, and count per pound data. Of these, 27 were from Washington catch areas and 23 were from Oregon catch areas. Oregon staff at Astoria collected another 20 samples of Washington caught shrimp.

In total, 47 samples representing shrimp caught off Washington were collected during the 2021 season by WDFW and ODFW staff.

Count per Pound

Shrimp size in the fishery is managed by count per pound. The legal maximum is 160 shrimp per pound.

- Number of counts = 46
- April counts are from Oregon catch areas and consistent with expectations that larger shrimp are found on more southerly grounds
- Only 2 samples landed into WA ports in 2021 exceeded the 160-count limit (Figure 14), both were shrimp caught in the Grays Harbor catch area.
- Season average for WA catch areas only: 134

Annual estimate of shrimp caught off Washington and landed in Oregon.

Not all the shrimp caught off Washington are landed here. If they hold the appropriate state license, shrimpers can land in either Washington or Oregon.

Year	Millions of Pounds
2021	5.4
2020	6.7
2019	5.1
2018	5.0
2017	2.8
2016	11.0

Shrimp Age Classes

Shrimp lack physical "age" structures or body parts like otoliths (ear-bones) or scales that are typically used to age fish. Instead, the carapace length is measured (see photo). Because shrimp eggs are released at the same general time, shrimp of similar size are assumed to be the same age. By grouping carapace lengths and plotting these data, we can visually characterize the age classes present in the fishery.

In Figure 15 each month of the season is shown in a separate panel, May through October. This figure includes only shrimp caught off Washington. Although technicians sampled landings in April, all were from Oregon catch areas. The blue line in each panel represents the relative amount that each age contributed to the catch for that month.

In 2021, we see three age classes of shrimp represented in the fishery. The oldest shrimp, age 3, were born in 2018 and the youngest, age 1, were born in 2020. Early catch was comprised fairly evenly of age 1 and age 2 shrimp; otherwise, age 1 shrimp were dominant throughout the season. Although both the 2018- and 2019-year classes experienced similar "so-so" conditions as

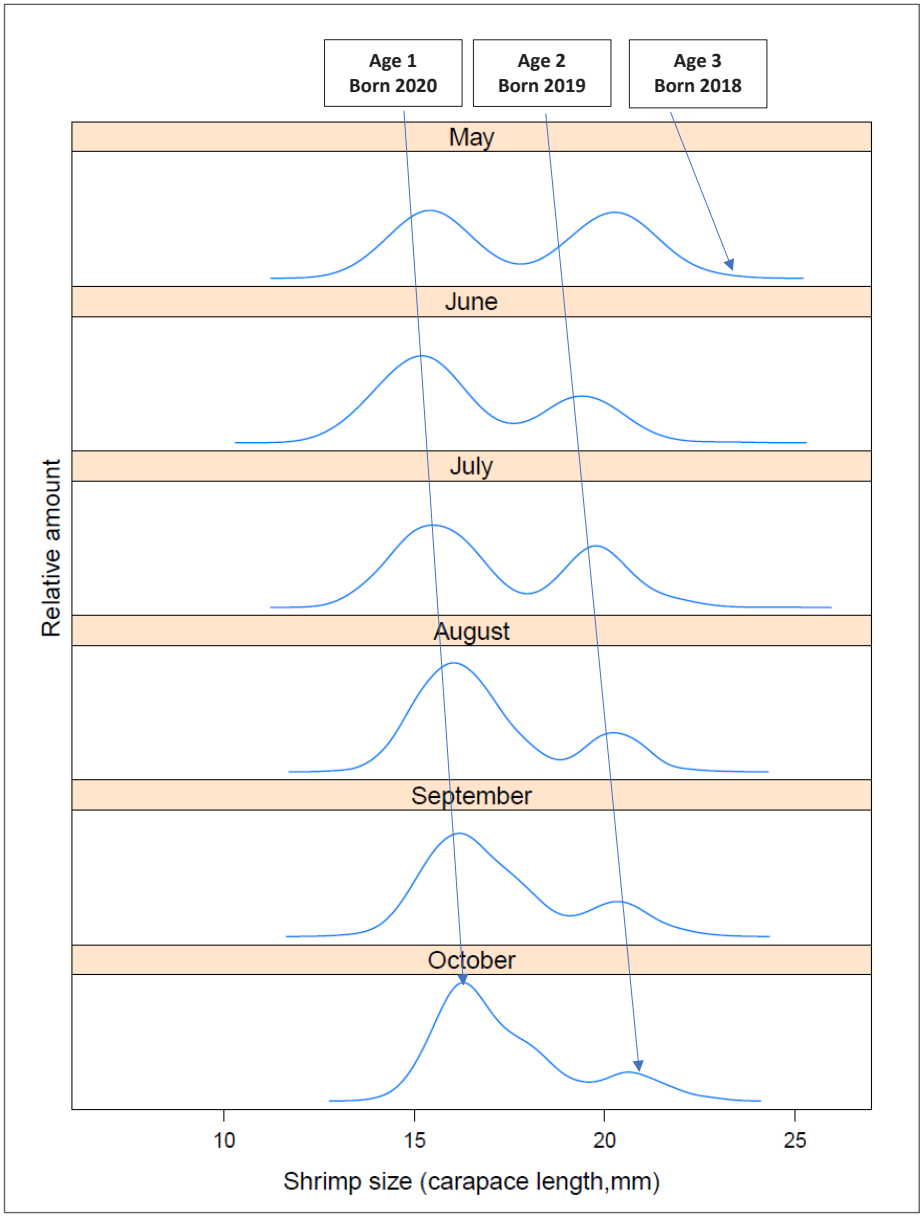


Figure 15. Size distribution of pink shrimp, April- October 2021.

larvae, the actual abundance produced by the 2019-year class was better than expected whereas the abundance from the age 3 class was fair and consistent with expectations. No age 0 shrimp were sampled but landings in the fishery also ceased by October 16 in Washington. And unlike 2020, in 2021 we did not see indications of primary females – which would be indicated on the plot as a bifurcation (two humps) of the blue line in September and October.

At-sea Fishery Observation and Bycatch

Two decades of research, gear innovation, and regulatory actions have reduced bycatch in the Washington pink shrimp fishery, a priority for 20 years. Driven initially by rockfish and eulachon conservation concerns, over a decade of onboard monitoring data also helps us understand the fishery's interactions with other living marine organisms. Species of particular concern include eulachon (*Thaleichthys pacificus*) which are federally listed as a threatened species, Yelloweye rockfish (*Sebates ruberrimus*) which are under a federal rebuilding plan, and Chinook and coho salmon.

The West Coast Groundfish Observer Program (WCGOP) has been deploying federal observers on Washington licensed shrimp vessels since 2010 to document bycatch. Coverage of the fishery is measured as the proportion of total observed shrimp pounds to total shrimp pounds landed and has averaged 13% since 2011 (Figure 16). The number of vessels, trips, and tows observed each year from 2011 to 2020 are shown in Figure 17, and Tables 1 and 2 include published bycatch data for marine fish and shellfish species.[1,2] Since observation began, estimated bycatch in the Washington fishery has averaged 381 mt (SD 253). As a percentage of total catch (sum of WA fish landing receipts and WCGOP bycatch estimator), bycatch has ranged from 2% to almost 12%, averaging about 6% (Figure 18).

Altogether, observers have documented nearly 184 bycatch species or species groups. The top 20 species ranked by cumulative weight from 2011 to 2020 are presented in Table 1. By this measure, **eulachon** ranked second as the dominant bycatch species and Pacific hake was third. Rounding out the top ten are soles, salps (a pelagic tunicate), smelt species, Pacific herring, and eelpouts. Table 2 lists another 22 species/groups frequently caught but in low volume, including additional species of rockfish, spiny dogfish shark, and northern anchovy. The total combined weight of these for the 2011-2020 period was 56 mt. Otherwise, the remaining approximately 142 species/groups that have been recorded are infrequently caught, i.e., one or two instances, and in low volumes. Included among these are species of particular management interest. In 2015, five (5) pounds of coho and four (4) pounds of chum salmon were documented in two (2) out of 9,745* hauls where at least part of the tow was off Washington.[3] No chinook salmon have been observed. Yelloweye rockfish were observed in 2012 (1.3 pounds) and in 2019 (less than one pound).

Care should be taken when evaluating trends in bycatch. Gear underwent significant change during years the fishery has been observed so there is no clear "before" or "after" point in time over which to compare bycatch in the fishery. When observation of Washington licensed vessels began, bycatch reduction devices or excluders were mandatory and the most popular bar spacing on the excluder panels was about 1 ½ in. although rules allowed up to a 2 in. spacing. Regulations reduced the bar spacing to ¾" in 2012 based on research that narrower bar spacing improved exclusion of eulachon. When new research in 2014 demonstrated further reductions in eulachon bycatch could be achieved when footropes were outfitted with LED lights voluntary usage quickly became widespread. Rules requiring their use went into effect in 2018.

Stock dynamics must also be considered when evaluating bycatch in the fishery. For example, a study looking at the distribution (in space and time) of eulachon and shrimp

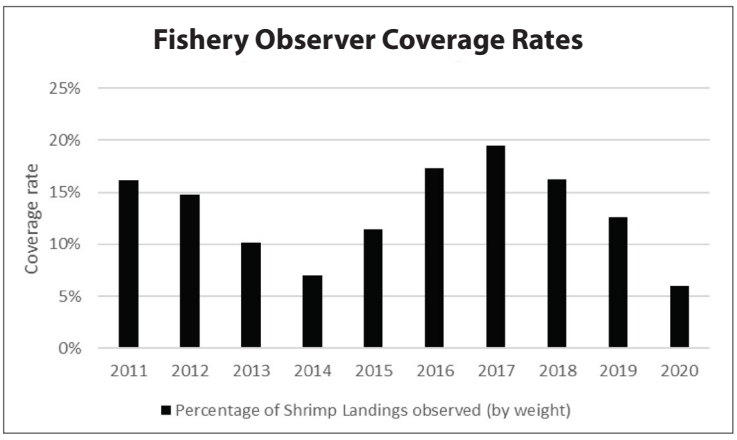


Figure 16. Federal observer coverage rate of Washington vessels, in terms of pounds of shrimp caught.[3]

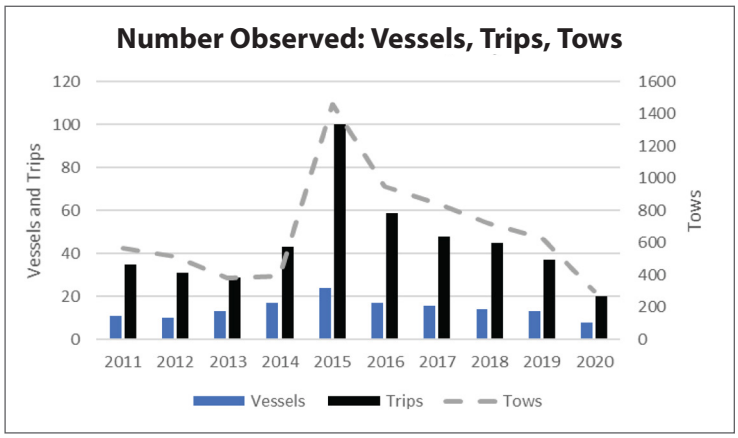


Figure 17. The number of Washington pink shrimp vessels, trip and tow observed since 2011.[3]

* The total number of hauls is from any vessel that participated in the 2015 shrimp fishery and completed at least a partial tow in Washington, not just vessels licensed in Washington that were observed. Hence this value is greater than the number of observed tows depicted in Figure 17.

compared fishery data and NOAA research bottom trawl survey data and found that increases in eulachon bycatch in 2012 could be attributed to increases in eulachon abundance.[4] The eulachon bycatch of 139 mt in 2019 compared to 32 mt in 2018 is attributed to trends in higher abundance of eulachon (R. Gustafson, personal communication, January 12, 2021). Similarly, the bycatch of 132 mt of eulachon in 2020 is presumed to reflect a higher abundance of eulachon that year (Laura Heironimus, personal communication, January 21, 2022).

Historically, eulachon have supported directed commercial and recreational fisheries in the mainstem Columbia River and the Cowlitz River, respectively. Closed most years since eulachon were federally listed, recent year indications of stronger run size supported some limited directed fishing. A 2-day commercial fishery authorized in 2020 in the mainstem Columbia River harvested 10,255 pounds (4.65 mt). In addition, a 2020 directed recreational fishing for eulachon was opened on a segment of the Cowlitz River. This very popular dip netting fishery harvested an estimated 35,040 pounds (15.89 mt). The only other prior directed opportunity was a one-day recreational fishery in 2017 that landed 541 pounds (0.25mt).

Federal observers also collect data on marine mammal bycatch. Previous newsletters have reported no marine mammal bycatch in the Washington shrimp fishery based on available information, i.e., through 2016.[5] Updated information is anticipated to be published in 2022 (Jason Jannot, personal communication, January 25, 2022).

Note, due to the availability of final observer data or reports the information here lags coastal shrimp fishery data by a year.

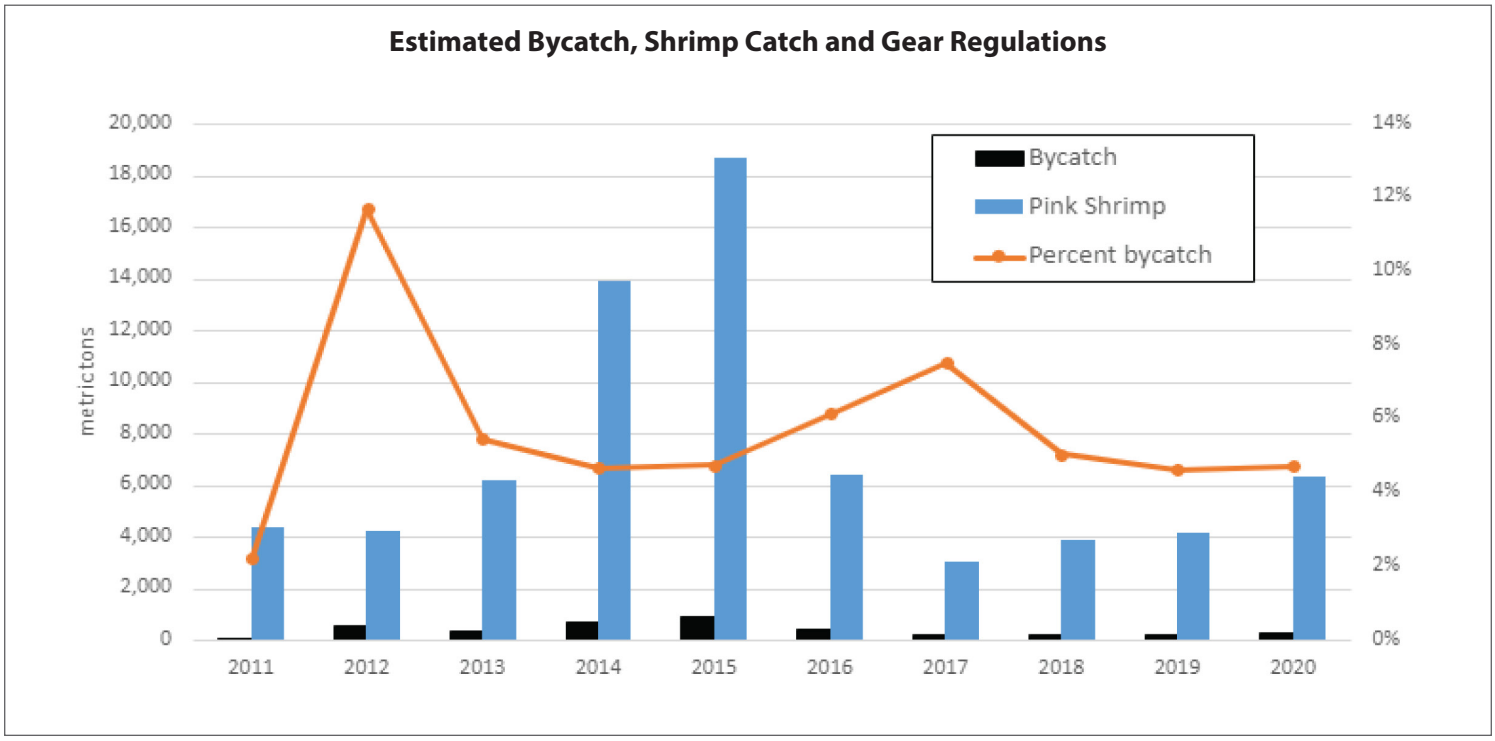


Figure 18. Estimated bycatch (mt), pink shrimp catch (WDFW WaFT), percent bycatch, and excluder panel and fishing light gear requirements for vessels landing in Washington.[3]

Table 1. The top 20 bycatch species ranked by total cumulative metric tons for the 2011-2020 period.

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Shrimp Unidentified	17.03	355.88	112.40	363.26	184.92	179.81	14.38	74.73	18.52	130.24
Eulachon	**5.68**	**156.69**	**202.83**	**142.76**	**217.94**	**31.78**	**11.50**	**32.32**	**139.41**	**135.72**
Pacific Hake	21.15	0.15	0.03	0.01	399.85	170.92	157.38	36.58	2.70	0.85
Slender Sole	24.27	20.25	21.06	30.07	40.10	13.73	6.31	7.54	18.73	24.14
Salp Unid				0.01	0.02	0.29	29.42	30.68	0.00	0.02
Non-Eulachon Smelt Unidentified	0.32	0.86	1.21	42.54	12.14	0.03	0.85	0.04	0.02	3.58
Rex Sole	7.75	4.03	4.42	3.98	11.55	3.86	7.50	6.78	6.83	1.75
Whitebait Smelt	2.33	2.49	3.28	44.52	1.42	0.01				
Pacific Herring	1.33	0.25	0.21	8.35	13.90	2.98	1.42	0.95	0.91	1.35
Eelpout Unidentified	1.97	2.00	5.01	4.93	2.46	4.31	1.42	3.30	3.41	1.52
Non-Humboldt Squid Unidentified			1.95	8.15	8.75	0.65	0.42	0.16	1.30	2.27
Darkblotched Rockfish	1.40	1.59	0.44	6.40	1.99	2.90	3.63	1.20	0.71	0.53
Arrowtooth Flounder	2.08	2.50	1.04	1.45	2.96	0.25	0.27	0.16	0.25	0.66
Pacific Sanddab	0.15	0.10	0.01	2.98	5.36	0.55	0.19	1.05	0.31	0.23
Jellyfish Unidentified	0.03	0.09	0.25	0.60	8.71	0.28	0.10	0.03	0.33	0.13
Flathead Sole	0.20	1.76	0.52	0.20	4.63	0.68	0.33	0.09	0.05	0.05
Pacific Ocean Perch	0.14	0.05	0.07	6.57	0.08	0.02	0.19	0.04	0.06	0.10
Shortbelly Rockfish	0.00			0.31	0.18	0.24	5.05	0.97	0.31	0.03
Smelt Unidentified	0.65	2.80	0.27	3.26		0.05				
Dover Sole	0.95	0.46	0.22	0.47	1.40	0.57	0.39	0.39	1.05	0.66

Table 2. List of 22 documented bycatch species or groups in rank order (top to bottom, left to right) by total weight for the years 2011-2020. During this period these species had at least one year in which documented total bycatch exceeded 1 mt. The combined total weight across all years for these 22 species was 56 mt.

Shelf Rockfish Unid	Greenstriped Rockfish	Walleye Pollock
Invertebrate Unid	Longnose Skate	Octopus Unid
Petrale Sole	Irregular Echinoid	Anchovy Unid
Hagfish Unid	Sea Cucumber Unid	Squid Unid
Spiny Dogfish Shark	Yellowtail Rockfish	Sea Star Unid
Splitnose Rockfish	Flatfish Unid	Northern Anchovy
Poacher Unid	Lingcod	
Herring Unid	Bobtail Squid	

Eulachon Management and Research

While WDFW shrimp managers strive to reduce bycatch and thereby improve the fishery's sustainability, our colleagues in the Columbia River Management Unit (CRMU) based at the WDFW Southwest Region 5 office in Ridgefield lead Eulachon management and research. CRMU managers provided the following to highlights of 2021 WDFW accomplishments to better understand Eulachon population abundance and dynamics:

- Continued annual spawning stock biomass estimation for the mainstem Columbia River Eulachon population (upstream from the estuary).
- Compared the patterns of SSB estimations for the Columbia River Eulachon populations with those from other populations, such as the Fraser River (Figure 19).
- Continued collaboration with Eulachon Technical Recovery and Implementation Team (ETRIT).
- Completed the 2022 Oregon Department of Fish & Wildlife (ODFW) and WDFW joint staff report concerning stock status and fisheries for sturgeon and smelt found here.

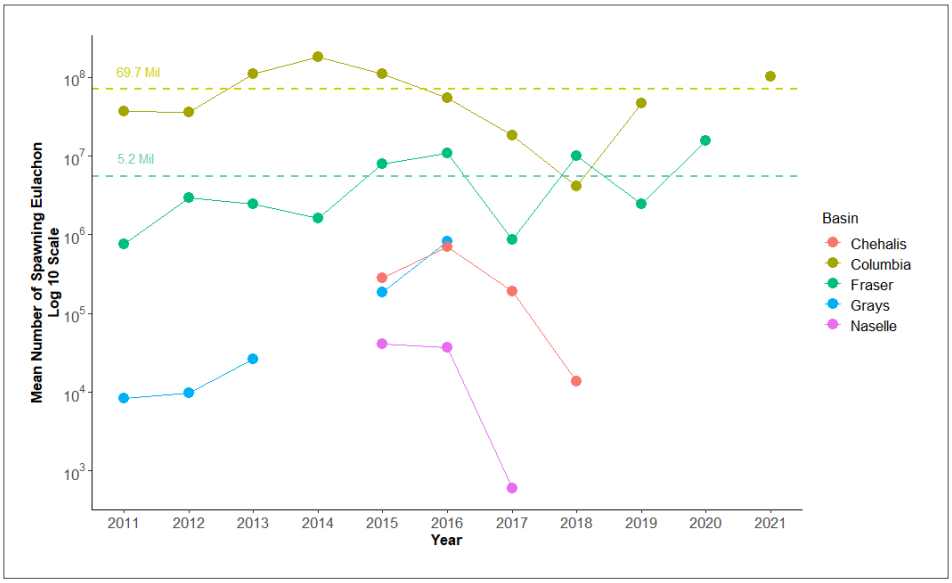


Figure 19. The estimated number of Eulachon spawning in the Columbia, Fraser, Chehalis, Naselle, and Grays rivers in 2011–2021. Estimates are calculated by multiplying the annual Spawning Stock Biomass (SSB) total weight by a standard mean of 11.16 fish per pound. Estimates for the Fraser River derived from data provided by the Canadian Department of Fisheries and Oceans (DFO). The Fraser River estimate for 2021 was not finalized at the time of this publication. No estimate for the Columbia River is available for 2020 due to truncated sampling.

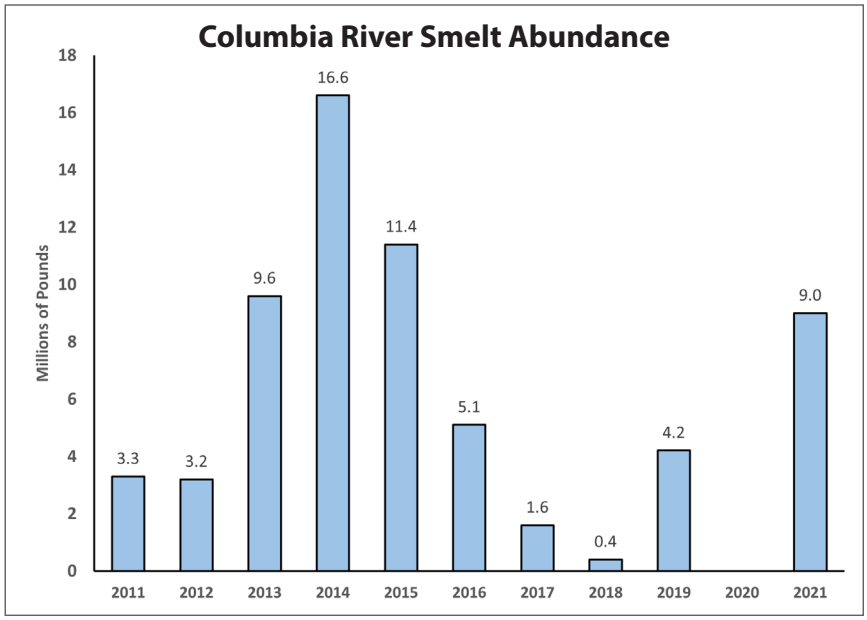


Figure 20. Columbia River smelt abundance, 2011–2021.

Survey Results – Excluder Lights, Ground Gear, and Season Start Date

In an effort to help us better understand efficiencies in the Washington pink shrimp fishery a survey was sent to Washington license holders and alternate operators in November. The survey included questions on quantity, type-color, arrangement, and effectiveness of LED lights as part of the fish excluder system. In addition, we also asked what type of ground gear vessels use while pink shrimp fishing.

Observations regarding the effectiveness of the LED lights included:

"very effective" " work great" "no problem with fish" "super effective" "plain and simple work" "big difference on small fish" "less effective in certain conditions" "work very well" "provide enough light to allow bycatch under the net" "work very well"

Below is a diagram of the most commonly used light and ground gear configuration.

Lastly, due to concern raised by some shrimpers about the impacts of early-season fishing we solicited input on modifying the season start and end dates. The Oregon Department of Fish and Wildlife surveyed Oregon license holders (138) in 2020. Since many shrimp fishery participants hold licenses in both states, many of you may have received the Oregon questionnaire. The purpose for our survey was to similarly gather feedback from Washington license holders.

With a 20% response rate from Washington license holders (74), a majority (54%) favored a later start. Of three choices, May 1 was first, followed by April 15, and then by May 15. A majority of responses (60%) were from active permits having made at least one delivery of pink shrimp into WA in the last 5 years.

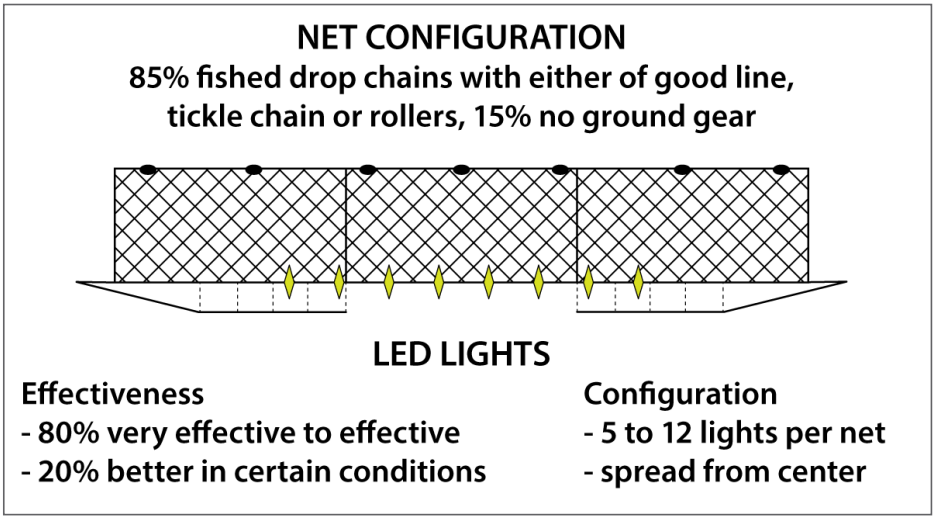


Figure 21. Net and light configuration.

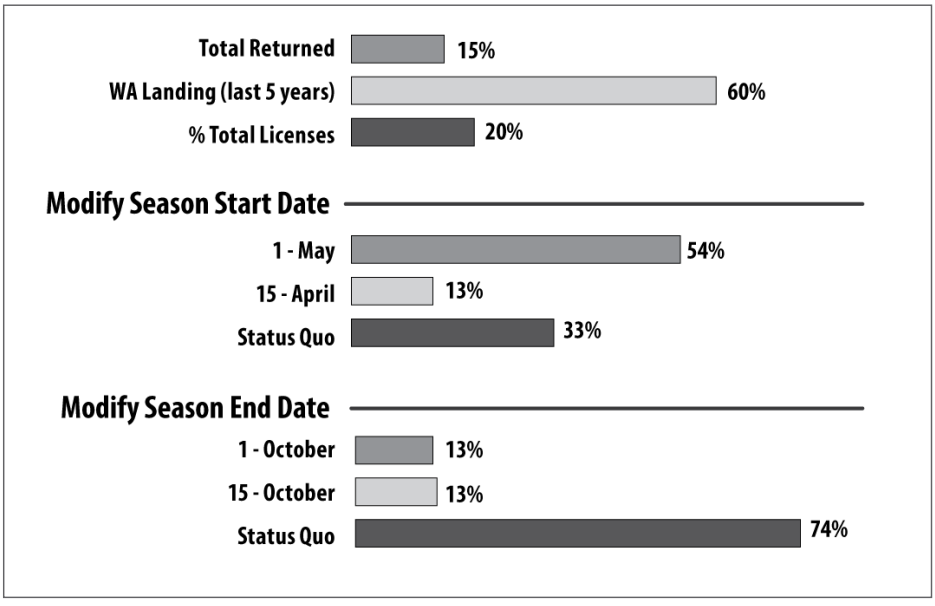


Figure 22. Survey results

Logbook Reporting – Improved Submission Rate

Logbook compliance improved in 2021 with 95% of the trips having a completed logbook, which is an increase of 5% from 2020 (Figure 20). This is the first season since 2014 we have achieved the goal of having a completed logbook for 95% of the shrimp trips. Great work! Please continue to do your part and submit logbooks regularly through the entire season.

The drop box located at WA crab is a convenient way to submit logbooks, we are hoping that as awareness increases it will become a habit to use each trip. Logbooks can also be mailed and or handed to the WDFW shellfish technician. Logbooks are legally due by the 10th of the month following any month you've actively fished, and on our end, turning your logbook in on time helps us to process and enter the data as it comes in.

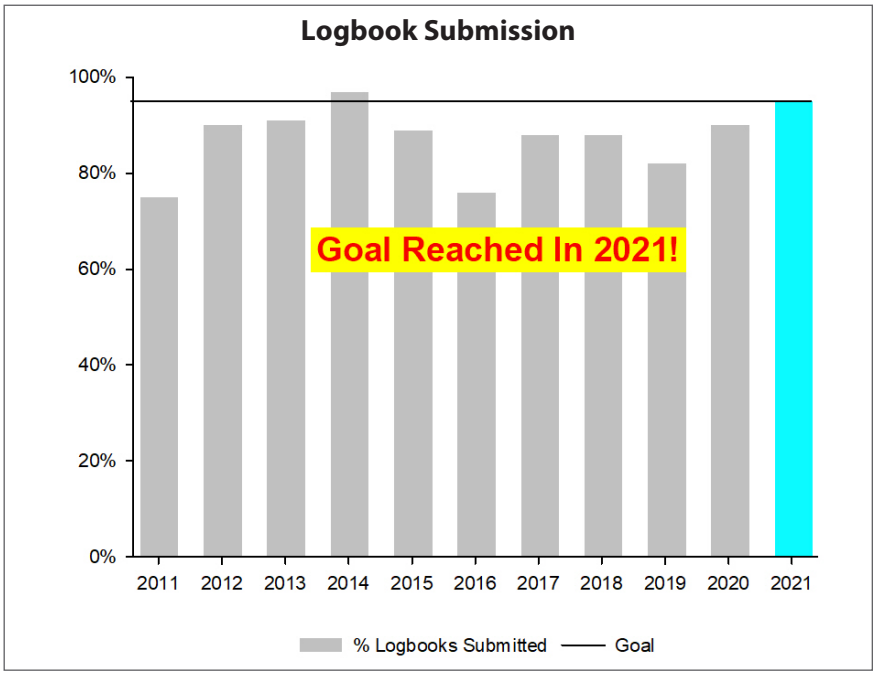


Figure 23. The percentage of trips each year with a submitted logbook

Marine Stewardship Council Certification

Fishery performance is audited annually by independent reviewers. In 2021, the audit found the fishery "to be a highly performing fishery and an excellent example of state-level and coordinated management" and "…this fishery continues to meet the MSC Fisheries Standard and shall remain certified."[6]

The current Oregon/Washington MSC certification expires August 2023.

The MSC is proposing changes to the fisheries standards, certification process, and related documents. Stakeholders have until April 4, 2022 to provide feedback. The final changes will be released June 2022. Already certified fisheries like the Washington pink shrimp fishery have a three-year period to transition to the new standards.

To view the new standards and provide feedback go to: https://www.msc.org/standards-and-certification/developing-our-standards/the-fisheries-standard-review/consultation#documents

To find general information about the MSC program go to: https://www.msc.org/

To find notices, assessments, and audit reports specific to the Oregon-Washington ocean pink shrimp fishery go to: https://fisheries.msc.org/en/fisheries/oregon-and-washington-pink-shrimp/@@view

Why is certification important?

Markets are dynamic but preference for responsibly harvested seafood continues to grow. As much as 50% or more of the shrimp landed in Washington and Oregon are destined for markets that demand sustainably sourced seafood. Fishery sustainability has long been a factor for gaining and maintaining access to European markets; this is true for the US as well.

Shrimp and Ice

Washington regulations for pink shrimp require that the original total weight in round pounds of shrimp be recorded on the fish receiving ticket. However, protocols for determining the percentage of ice in an offload are not described in regulation. Fish ticket weight represents the official record of catch and understanding how each dealer arrives at total shrimp weight is important. We are interested in documenting the procedures dealers are using to estimate the net weight of shrimp in an offload. This will be a focus area for 2022.

Buying Shrimp in 2022?

Read this!

WAC 220-352-040 (iii) The original total weight in round pounds of all shellfish or fish, except that pounds of legally dressed fish and shellfish may be recorded in original dressed weight so long as dressed fish and shellfish are designated as dressed on the fish receiving ticket.

Logbooks!

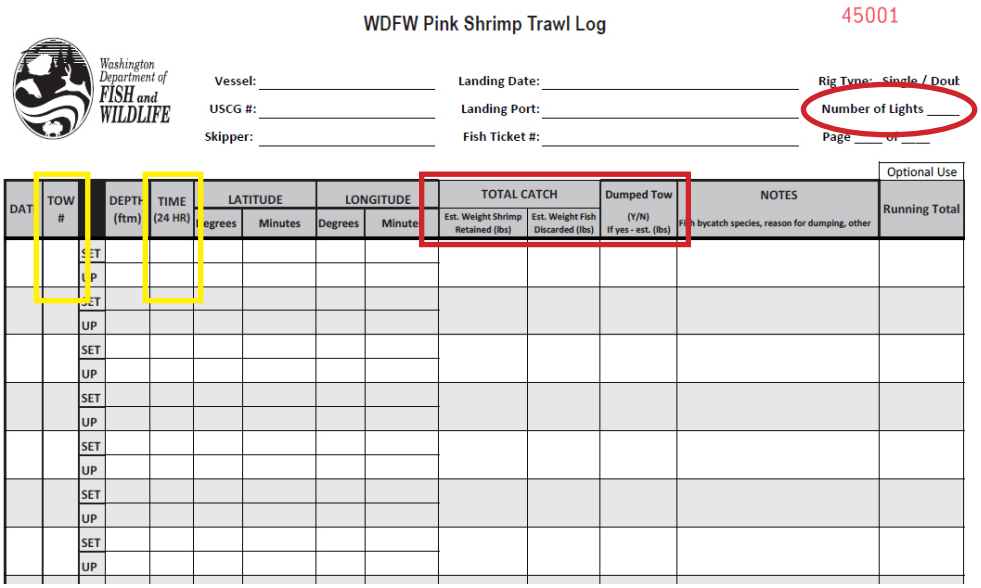
Please obtain the 2021 logbook version before fishing. Logbooks may be obtained by contacting Travis Haring – WDFW or Jill Smith – ODFW or a processing facility.

We continue to emphasize accurate, complete reporting and timely submission. Logbook data inform us about the fishery, inaccurate or missing data negatively affect our understanding. If shrimpers get it wrong, so will managers.

In 2022 we will be focusing on bycatch and haul dumped reporting.

Shrimpers are reminded, when filling out your logbook record:

- **Total Catch** – In the first column write your estimate for the total catch of pink shrimp for each tow. Record zero only if there is absolutely no catch.
- **Bycatch** – In the second column write your estimate for fish bycatch. Record zero only if there is absolutely no bycatch.
- **Haul Dumped** – If you dumped a tow, or a portion of the tow, record estimated pounds dumped. If no shrimp were dumped write 'N'.
- Record **Number of Lights** on the page header i.e., how many lights you are currently using on your rig?
- **Time** is recorded on a 24-hour clock, commonly known as military time.
- Record the first tow of each day under the **Tow#** column as 1, the second tow of the day as # 2, etc.… Please do not run TOW# numbers consecutively through the entire trip.



WDFW Pink Shrimp Trawl Log

45001

Washington Department of FISH and WILDLIFE

Vessel: _____ Landing Date: _____ Rig Type: Single / Doul

USCG #: _____ Landing Port: _____ Number of Lights ____

Skipper: _____ Fish Ticket #: _____ Page ____ of ____

DAT	TOW #		DEPTH (ftm)	TIME (24 HR)	LATITUDE		LONGITUDE		TOTAL CATCH		Dumped Tow	NOTES	Optional Use
					Degrees	Minutes	Degrees	Minute	Est. Weight Shrimp Retained (lbs)	Est. Weight Fish Discarded (lbs)	(Y/N) If yes - est. (lbs)	h bycatch species, reason for dumping, other	Running Total
		SET											
		UP											
		SET											
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Figure 24. The 2021 edition logbook with changes highlighted in red and sections to review in yellow

Shrimping Prospects for 2022

We look to two models developed by ODFW and the relative strength of the year classes in 2022 to forecast shrimp production for the coming season.

For 2022, the models suggest Oregon landings will be up at around 33 million pounds and 42 million pounds. The models predicted 35 and 38 million pounds for the 2021 season against actual Oregon landings of about 46.7 million pounds.7

Three year classes will contribute to shrimp catch in 2022:

- 2021 – Age 1
- 2020 – Age 2
- 2019 – Age 3

The environmental conditions for larval shrimp in 2021 were excellent and that means we should see good numbers of age 1 shrimp in the coming season. Likewise, the 2020 age class producing this year's Age 2 shrimp experienced even better environmental conditions and should be a strong contributor to this season's catch. Age 3 shrimp will round out the catch and although few live to their third year due to natural and fishing mortality the ones that do survive are large and can contribute substantially by weight.

Models and projections are never certain, but indications point to another good year of fishing in 2022.

Fishing Light Added to Approved List

Lights from **Fish Tek Marine, NetLight and PotLight** have been added to the approved list of devices (see Fishing Regulations section).

Buying Shrimp in 2022?

Read this!

Electronic Fish Tickets "E-tix"

WDFW adopted permanent rules in November requiring the use of electronic fish tickets for several coastal and Puget Sound commercial shellfish fisheries including Dungeness crab and ocean pink shrimp starting on January 1, 2022. However, due to delayed deployment and required training time for department developed tools including mobile applications an emergency rule was filed to postpone the implementation until further notice.

As this newsletter goes to press, the timeline for the implementation of mandatory E-tix is tentative but likely to be effective by April 2022.

The option to submit fish tickets electronically to WDFW through the Pacific States Marine Fisheries Commission's E-Tix Portal through a voluntary agreement will remain in place until the permanent rule is effective. We do not anticipate this will change how shrimp dealers currently submit fish tickets. In 2021 shrimp dealers submitted 100% of shrimp fish tickets electronically.

2021 Enforcement Report

As in previous seasons, the WDFW Region 6 Coastal Police Detachment did not report any significant enforcement issues in 2021. Coverage specific to the pink shrimp fishery included:

- License inspections
- Monitoring offloads
- Vessel/processor contacts
- Gear compliance checks

Industry Engagement

Effective management depends on hearing from shrimpers and processors first-hand. In the past managers were able to piggy-back on industry pre-season meetings. With the challenges posed by the Covid-19 pandemic, in person meetings have become more difficult to conduct. One benefit (although some might argue the opposite) is that meeting virtually has become common practice. While we continue to value in person meetings, we also recognize a virtual format allows greater participation and anticipate holding one each year in February or March. Notices will be sent to all license holders, vessel operators, processors, and interested stakeholders.

Coastal pink shrimp fishery listserve

If you would like to receive coastal pink shrimp notices from wdfw, please send your email address to Zachary Forster at zachary.forster@dfw.wa.gov

Annual Meeting – February 2022

Following a two-year hiatus, WDFW staff, shrimpers, and industry representatives met virtually on February 16, 2022. The agenda include a review of 2021, results of the 2021 Washington survey, and general discussion.

Staff presented a summary of 2021 landings. At 21.5 million pounds, total catch ranked 3rd highest. Fishery value increased $4 million dollars from 2021 to $10.5 million, ranking 4th highest.

Data quality and timeliness were reviewed. Shrimpers were commended for excellent logbook compliance in 2021 and reminded that the data from logbooks are valuable for understanding the fishery, particularly for marine spatial planning. Fish ticket data accuracy is equally crucial, following the adage of "garbage in, garbage out."

Shrimpers were updated on MSC certification. The annual audit is scheduled for April 2022. Flagged for attention were the proposed new MSC standards which focus on fishery interactions with ESA listed species and lost gear. Lost gear is not a specific concern for the fishery, but bycatch of eulachon smelt, listed as an ESA threatened species was mentioned as an ongoing concern for shrimpers. Discussion about ways to mitigate bycatch interactions included ideas such as varying fishing line height with fishing conditions. It was noted that bycatch also appears to be higher in spring.

Staff shared the start date change survey results. Good discussion ensued, with different viewpoints expressed. Unlike the survey which indicated some support for a season start date change (see 2021 Accomplishments section), most of the participants on the call preferred keeping the status quo. For those that only shrimp, protecting opportunity was important. A couple maintained a later start date was needed to keep the fishery off undersize shrimp. At least one commented that fishing responsibly would solve the problem. There was some discussion as to whether gear modifications, for example using California-legal codends, would help with grade issues, although opinions differed as to the effectiveness. Managers shared that WDFW will not be taking any action to change the season start date at this time but will continue to monitor this issue, agreeing that shrimpers should fish responsibly! Absent a change to the season start date, shrimpers can avoid fishing at times or in areas with small shrimp. Shrimp grow quickly and undersize shrimp will gain in size and value as the season progresses. Similarly, shrimpers can move on when bycatch is evident.

We thank everyone that attended the meeting and appreciate that your time is valuable. The input and viewpoints were very informative and help us to understand the needs and interests of all fishery participants more fully.

Collaboration

The ODFW and WDFW pink shrimp teams continue to benefit from a long-standing collaboration, and coordination of management activities, including data sharing, cross-training, enforcement activities, and regular communication.

Collaboration is expanding as managers from Washington and California are increasingly consulting with each other and sharing information in joint emails or meetings with ODFW.

Essential Fish Habitat

Essential fish habitat (EFH) conservation areas are intended to protect the waters and substrate necessary for fish to spawn, breed, feed or grow to maturity.

As a reminder, NOAA Fisheries announced new rules for Essential Fish Habitat Conservation Areas (EFHCAs) in January 2020 that changed where bottom trawling is prohibited. This prohibition applies to pink shrimp trawling. The longitude and latitude coordinates are available digitally for downloading to your vessel plotters. Go to: https://www.fisheries.noaa.gov/action/amendment-28-pacific-coast-groundfish-fishery-management-plan

We mapped 2021 Washington pink shrimp logbook data and the revised/new EFH areas (Figure 21). For confidentiality purposes individual tow data cannot be depicted here, but in developing the map we examined data at the vessel level and found compliance to be excellent.

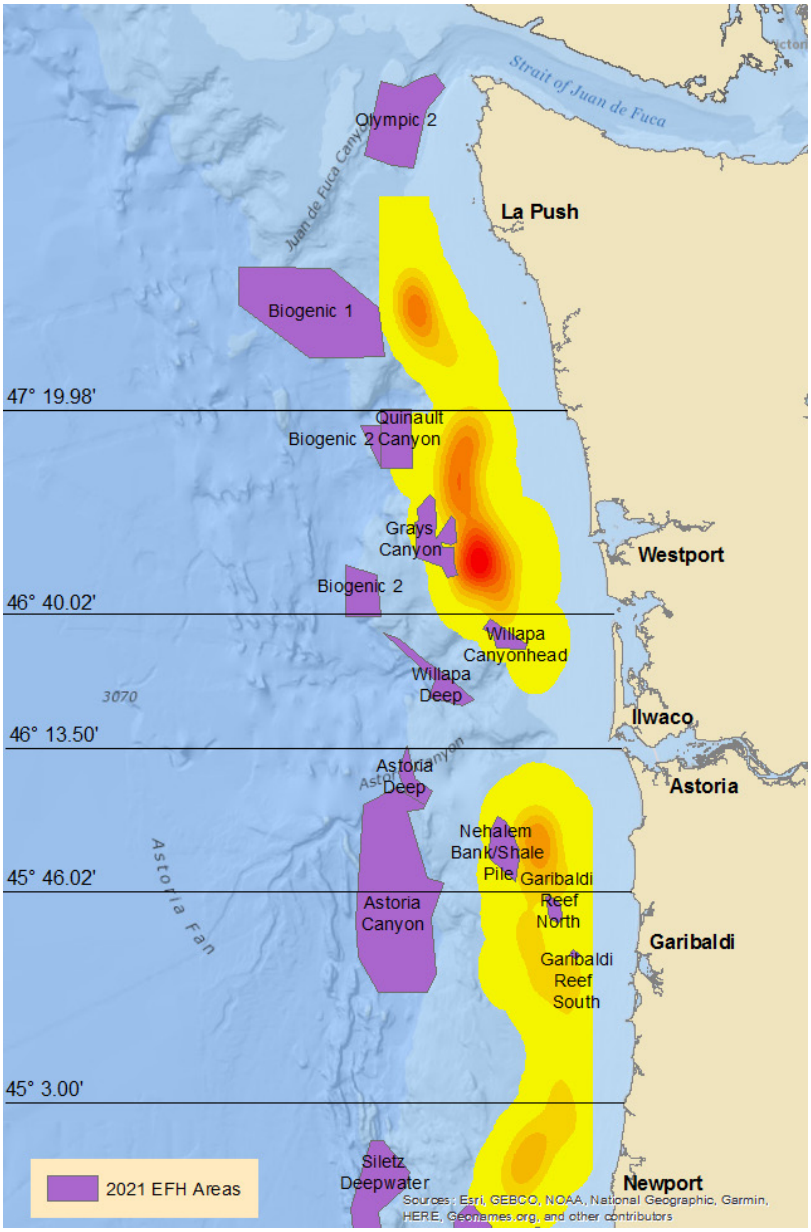

Figure 25. Washington shrimp trawling (depicted in yellow to red) and EFH (depicted in purple), 2021.

Coordination with Oregon and California

While most regulations are similar, when fishing offshore another state shrimpers are reminded to confirm that their operations conform to that state's regulations. For example, Oregon law does not authorize the landing of frozen shrimp, whereas this activity is permissible via permit in Washington. Also, Oregon licensed shrimpers can trawl in that state's territorial waters; conversely, Washington does not allow any trawling in its coastal territorial waters (0-3 miles).

Fishing lights are required in all three states.

Shrimp trawl logbooks are required by both WDFW and ODFW, and each agency will accept the other state's logbook.

Freezing at Sea

Washington regulations do not explicitly prohibit freezing catch at sea. However, to address fishery specific needs, the pink shrimp trawl fishery permit requires those who intend to process shrimp at sea off Washington by freezing their catch to:

- notify the WDFW their intent to do so;
- notify WDFW personnel 24 hours in advance of landing; and,
- provide (upon request) WDFW a sample of 25 pounds of whole shrimp processed at sea by freezing and a sample of 25 pounds of fresh shrimp from the same trip.

Vessel Monitoring System (VMS)

The National Marine Fisheries Service requires any vessel using non-groundfish trawl gear in federal waters to have VMS installed. Declaration reports are also mandated prior to fishing. Specific compliance information can be found at the NMFS Vessel Monitoring System website at: http://www.westcoast.fisheries.noaa.gov/fisheries/management/vms.html or contact the NMFS Office of Law Enforcement (OLE) at 206.526.6140

The need to minimize bycatch is important NOT ONLY when bycatch volumes are high. Low bycatch volumes can reflect poor abundance, making the use of lights even more important.

Groundfish Limits

Limits have not changed from 2021.

Shrimp trawlers are limited to 1,500 pounds of groundfish per TRIP with a daily limit of 500 pounds. Included in the daily and trip limits are sub-limits for: lingcod at 300 pounds per month with a 24" minimum size, and sablefish at 2000 pounds per month. Canary rockfish, yelloweye rockfish and thornyhead rockfish are all PROHIBITED. All other groundfish species taken count towards the 500 per day or 1,500-pound trip limits and do not have species-specific limits. The amount of groundfish landed may not exceed the amount of pink shrimp landed. The pink shrimp fishery is not subject to Rockfish Conservation Area (RCA) provisions.

A complete copy of Pacific Coast Groundfish Fishery management measures for 2022 as well as in-season adjustments to trip limits can be here: https://www.fisheries.noaa.gov/species/west-coast-groundfish#commercial under Open Access (OA) Gears North of 40°10' N Lat.

Fishing Lights

Washington shrimpers are required to use fishing lights on the footrope of each trawl net. Similar rules apply when fishing off Oregon. Shrimpers fishing both Washington and Oregon should note the specifications are the same for both states.

Footrope lighting devices must meet the following criteria:

- Lighting devices must be operational,
- Lighting devices must be securely attached within six inches of the forward leading edge of the bottom panel of trawl netting; and,
- Each trawl net must have a minimum of five lighting devices, spaced four feet apart in the central sixteen feet of each net.

Four lighting devices are approved for use. Green is the only approved color.

- Rock-engineering "LED Rope Light"
- Fish Tek Marine, NetLight and PotLight (added in 2022)
- Catch All Tackle "Deep Drop LED Fishing Light"
- Lindgren-Pitman "LP Electrolume Light"

Crewmember License

Crewmember licenses are required for all individuals age 16 and older working on-board all commercial fishing vessels that land fish or shellfish in Washington State.

- An individual can purchase their own crewmember license that is valid for participating in all Washington commercial fisheries.
- A vessel operator can purchase up to two undesignated crewmember licenses to accommodate crewmembers who do not have their own individual crewmember license. The undesignated crewmember license is assigned to the vessel and covers only one crewmember at a time but will allow for frequent crewmember changes.
- Primary and alternate operators are exempt from needing to purchase a crewmember license if they are on board a vessel that designates them as an operator. Immediate family members, including spouses, children, or grandchildren of the license owner or alternate operator are exempt from the crewmember licensing requirement.

Individual crewmember licenses can be purchased at any license vendor or online through WILD. The cost is $40.50 for Washington state residents and $123.00 for non-residents. Undesignated individual crewmember licenses cost $35 for Washington state residents and $110.00 for non-residents and can only be purchased when applying for or renewing a commercial fishing license.

For more information or to purchase a crewmember license go to: https://wdfw.wa.gov/licenses/commercial/miscellaneous

Reminder:
Logbooks are due by the 10th day of the month following any shrimp fishing activity

Logbook Drop Box

With cooperation of Washington Crab Producers, WDFW installed a secure logbook drop box in Westport. You will find this in the Washington Crab weigh shack or buying station on the Dock Street dock, in Westport.

Feel free to use this location to drop off your logbooks at the time of landing. Only our staff will have access to the contents of the box, and they will regularly collect logbooks from this location. It is our hope that this convenience will make it easier for you and provide us logbooks in a timely fashion. Of course, you are still welcome to mail your logbooks to us, drop them off at our Montesano Office or hand them to a WDFW shrimp technician at port.

Our office location and mailing address are:

WDFW, Region Six Office
48 Devonshire Road
Montesano, WA 989563

Sources:

1. Somers, K. A., J. E. Jannot, K. E. Richerson, V. J. Tuttle, and J. T. McVeigh. 2021. Fisheries Observation Science Program Coverage Rates, 2002–20. U.S. Department of Commerce, NOAA Data Report NMFS-NWFSC-DR-2021-02. https://doi.org/10.25923/9rpa-9t92
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4. Ward, E.J., J.E. Jannot, Y.-W. Lee, K. Ono, A.O. Shelton, and J. T. Thorson. 2015 Using spatiotemporal species distribution models to identify temporally evolving hotspots of species co-occurrence. Ecological Applications, 25: 2198-2209.
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6. MRAGS Americas. 2021. Oregon and Washington Pink Shrimp (Pandalus jordani) Trawl Fishery 3rd Surveillance Report. 8950 Martin Luther King Jr. Street N. #202, St. Petersburg, Florida, 33702-2211. 16pp.
7. Groth, S.D., Blume, M., and J.M. Smith (2022). 33rd Annual Pink Shrimp Review. Oregon Department of Fish and Wildlife Marine Resources Program, Newport, Oregon. 11 pp.

Our Website:

http://wdfw.wa.gov/fishing/commercial/shrimp/

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