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Oregon and Washington Pink Shrimp (*Pandalus jordani*) Trawl Fishery

Certificate No: MSC-F-31354 & MSC-F-31355

3rd Surveillance Report

Conformity Assessment Body (CAB)	MRAG Americas, Inc.
Assessment team	Tom Jagielo, Amanda Stern-Piriot, and Susan Hanna
Fishery client	Oregon Trawl Commission and Pacific Seafood Group
Assessment type	Third Surveillance Audit
Author name	Tom Jagielo, Amanda Stern-Piriot, and Susan Hanna
Date	

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2 Executive summary

The third surveillance audit in the third certification cycle for the OR and WA pink shrimp fishery was carried out remotely via teleconference on April 26th, 2021. This fishery has no conditions or recommendations.

As a result of this 3rd surveillance audit, the assessment team and MRAG Americas has determined that the fishery remains consistent with all aspects of the MSC standard. No changes to scores or addition of conditions is required. This continues to be a highly performing fishery and excellent example of state-level and coordinated management. In conclusion, MRAG Americas confirms that this fishery continues to meet the MSC Fisheries Standard and shall remain certified.

3 Report details

3.1 Surveillance information

Table 1 – Surveillance information

1	Fishery name	
	Oregon and Washington Pink Shrimp (<i>Pandalus jordani</i>) Trawl Fishery	
2	Unit(s) of Assessment (UoA)	
	<p>Species: Pink Shrimp (<i>Pandalus jordani</i>)</p> <p>Area: West Coast USA (Oregon, Washington, California)</p> <p>Method of capture: Demersal otter trawl</p> <p>The units of certification are:</p> <ol style="list-style-type: none"> 1. Pink shrimp landed at ports within the state of Oregon. 2. Pink shrimp landed at ports within the state of Washington 	
3	Date certified	Date of expiry
	14 th February, 2013 for OR 8 th October, 2015 for WA OR and WA both most recently recertified 13 February, 2018.	12 August, 2023
4	Surveillance level and type	
	Surveillance level 1, Remote audit (unchanged from PCR)	
5	Surveillance number	
	1st Surveillance	
	2nd Surveillance	
	3rd Surveillance	X
	4th Surveillance	
	Other (expedited etc)	
6	Surveillance team leader	
	<p>Ms. Amanda Stern-Pirlot will serve as team leader for the assessment. Amanda is an M.Sc graduate of the University of Bremen, Center for Marine Tropical Ecology (ZMT) in marine ecology and fisheries biology. Ms. Stern-Pirlot joined MRAG Americas in mid-June 2014 as MSC Certification Manager (now Director of the Fishery Certification Division) and is currently serving on several different assessment teams as team leader and team member. She has worked together with other scientists, conservationists, fisheries managers and producer groups on international fisheries sustainability issues for over 15 years. With the Institute for Marine Research (IFM-GEOMAR) in Kiel, Germany, she led a work package on simple</p>	

	<p>indicators for sustainable within the EU-funded international cooperation project INCOFISH, followed by five years within the Standards Department at the Marine Stewardship Council (MSC) in London, developing standards, policies and assessment methods informed by best practices in fisheries management around the globe. Most recently she has worked with the Alaska pollock industry as a resources analyst, within the North Pacific Fisheries Management Council process, focusing on bycatch and ecosystem-based management issues, and managing the day-to-day operations of the offshore pollock cooperative. She has co-authored a dozen publications on fisheries sustainability in the developing world and the functioning of the MSC as an instrument for transforming fisheries to a sustainable basis.</p> <p>MRAG Americas confirms that Ms. Stern-Pirlot meets the competency criteria in Annex PC for team leader as follows:</p> <ul style="list-style-type: none"> • She has an appropriate university degree and more than five years' experience in management and research in fisheries; • She has passed the MSC team leader training; • She has the required competencies described in Table PC1, section 2; • She has passed the MSC Traceability training module; • She meets ISO 19011 training requirements; • She has undertaken two fishery assessments as a team member in the last five years, and • She has experience in applying different types of interviewing and facilitation techniques and is able to effectively communicate with clients and other stakeholders. <p>In addition, she has the appropriate skills and experience required to serve as a Principle 2 assessor as described in FCP Annex PC table PC3.</p> <p>MRAG Americas confirms that Ms. Stern-Pirlot has no conflicts of interest in relation to the fishery under assessment.</p>
7	<p>Surveillance team members</p>
	<p>Tom Jagielo has a wide breadth of experience in fisheries science and habitat studies in marine and freshwater systems. He has been a consultant in quantitative fisheries science since 2008. Previously he served for 24 years with the Washington Department of Fish and Wildlife, and 6 years with the Fisheries Research Institute at the University of Washington in Seattle. He has specialized in groundfish stock assessment and survey design, to assess marine fish populations for sustainable fisheries management. He has produced groundfish stock assessments for the Pacific Fishery Management Council, including analysis of lingcod, black rockfish, and yelloweye rockfish populations. Tom has experience working with government agencies, commercial and recreational fisheries groups, Native American tribes, community organizations, and both national and international advisory groups. He has received appointments to the Scientific and Statistical Committee of the Pacific Fishery Management Council, the Technical Subcommittee of the US-Canada Groundfish Committee, and the Pacific Coast Ocean Observation System. He has published in peer-reviewed journals and symposium proceedings, and has presented papers at national and international meetings. Tom received a B.S. degree in Biology from the Pennsylvania State University, and a M.S. degree in Fisheries from the University of Washington, where he also conducted post M.S. graduate studies in fisheries population dynamics and parameter estimation. Tom has served as an MSC Team Member and Peer Reviewer for fish populations in Europe, Australia, New Zealand and the US.</p> <p>MRAG Americas confirms that Mr. Jagielo meets the competency criteria in Annex PC for team members as follows:</p> <ul style="list-style-type: none"> • He has an appropriate university degree and more than five years' experience in management and research in fisheries; • He has undertaken at least two MSC fishery assessments or surveillance site visits in the last five years; and • He is able to score a fishery using the default assessment tree and describe how conditions are set and monitored. <p>In addition, he has the appropriate skills and experience required to serve as a Principle 1 assessor as described in FCP Annex PC table PC3, and MRAG Americas confirms he has no conflicts of interest in relation to the fishery under assessment.</p>

	<p>Dr. Susan Hanna is professor emeritus of marine economics at Oregon State University. Her research and publications are in the area of marine economics and policy, with an emphasis on fishery management, ecosystem-based fishery management, property rights and institutional design. Dr. Hanna has served as a scientific advisor to the U.S. Commission on Ocean Policy, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Minerals Management Service, Northwest Power and Conservation Council and the Pacific Fishery Management Council. She served on the Ocean Studies Board of the National Research Council (NRC), National Academy of Sciences, and several NRC Committees, including the Committee to Review Individual Quotas in Fisheries and the Committee on Protection and Management of Pacific Northwest Anadromous Salmonids.</p> <p>MRAG Americas confirms that Dr. Hanna meets the competency criteria in Annex PC for team members as follows:</p> <ul style="list-style-type: none"> • She has an appropriate university degree and more than five years' experience in management and research in fisheries; • She has undertaken at least two MSC fishery assessments or surveillance site visits in the last five years; and • She is able to score a fishery using the default assessment tree and describe how conditions are set and monitored. <p>In addition, she has the appropriate skills and experience required to serve as a Principle 3 assessor as described in FCP Annex PC table PC3, and MRAG Americas confirms she has no conflicts of interest in relation to the fishery under assessment.</p> <p>The whole assessment team collectively meets the requirements as described in FCP Annex PC table PC3.</p> <p>A discussion between team members regarding conflict of interest and biases was held and none were identified.</p>
8	Audit/review time and location
	The audit meetings were conducted remotely on 26 April 2021 via videoconference
9	Assessment and review activities
	The surveillance audit reviewed changes in science, management and operations of the pink shrimp fishery since the 2020 surveillance audit. There are no open conditions.
10	Stakeholder opportunities
	Stakeholders were invited to participate in the site visit and/or provide comments to the team via the MSC Template for Stakeholder Input into Surveillance Audits v1.0 (Ctrl+click to follow link).

3.2 Background

3.2.1 COVID-19 Impacts on Industry and Management

In April 2020 the U.S. Coast Guard issued a Marine Safety Information Bulletin outlining COVID-related requirements for vessels operating in U.S. waters (PFMC 2020a). Congress included financial assistance to fisheries in Section 12005 of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) (HR 748). The assistance is specified to be awarded on a rolling basis through September 2021 (PFMC 2020b).

Oregon

Delivery disruptions were caused by numerous COVID outbreaks at processing facilities. Processors were able to work through the disruptions by redirecting vessels to alternative plant locations within the same company or to other processors. Several deliveries were made by Oregon vessels into Washington ports (Nowak 2021).

The fleet and processing plants experienced cost increases associated with protecting health and safety of workers. Trip limits and rotation schedules for vessels were also affected (Nowak 2021).

Average ex-vessel price for shrimp landed in Oregon was \$.52 in 2020, the lowest since 2013. However larger landed volumes resulted in an ex-vessel gross value of \$22.6m, an increase over 2019. The prolonged economic disruptions associated with COVID and the ongoing sluggish recovery of shrimp markets led to considerable amounts of unsold inventory carried over into 2021 (Groth et al. 2021; Nowak 2021).

ODFW employed a number of new guidelines to enable its biological monitoring program to proceed. All logbooks were obtained and sampling was robust. With more fishing more shrimp were measured in 2020 than in the previous year; enough were sampled to allow adequate sampling power for the ageing step of the Virtual Population Estimate (VPE) model. The success of the 2020 logbook and sampling programs was built on the good communication that exists between ODFW and the industry (Groth 2021b).

To reduce COVID exposure the Oregon State Police (OSP) placed restrictions on low level contacts for several months, affecting enforcement presence in several areas (Thompson 2021).

Washington

Commercial fishing is considered an essential activity in Washington State and was able to continue under COVID-19 protocols. Impacts to the industry included the costs to meet those protocols and the economic effects of disrupted markets. No new COVID-related requirements were imposed by WDFW (Wargo 2021b).

The intermittent closure of Oregon plants led to an influx of deliveries to Washington ports. Plants also closed at Westport at different times, temporarily suspending deliveries. Average ex-vessel price was \$.50, a decrease resulting from existing large inventories of frozen shrimp combined with low demand for fresh product. However, larger landed volumes resulted in a slight increase of total ex-vessel value to \$6.9m, despite the lower price (Wargo et al. 2021; Wargo 2021b).

The primary effect of COVID-19 on WDFW was on field sampling, which was suspended at times before official plant closures. Staff were instructed to avoid facilities with suspected cases and were expected to leave a facility or dock if they could not maintain agency-stipulated COVID 19 protocols, for example plant staff failing to mask or maintain social distancing in an area where the employee needed to work (Wargo 2021b).

Other than the disruptions related to plant closures, field operations were not severely impacted. WDFW acquired personal protective equipment and developed specific protocols for the situations or circumstances field staff might encounter, for example shared vehicles, solo travel or public dockside sampling (Wargo 2021b).

WDFW Police remained on the frontline conducting patrols and compliance inspections as usual. COVID-caused Oregon processing plant closures resulted in an increase in the number of Oregon vessels delivering shrimp into Westport and other Washington ports, adding to the enforcement workload through an increase in enforcement contacts and patrol hours (Wargo et al. 2021; Chadwick 2021b).

3.2.2 Potential changes to scientific information, including stock assessments

Target stock update (excerpted or summarized from Groth and Smith 2020 and Groth et al. 2021) for Oregon, and Wargo and Ayres (2020) and Wargo et al. 2021 for Washington.

Catch of the target species Pink Shrimp (*Pandalus jordani*) increased from 36.1 million pounds (m lbs) in 2019 (26.9 m lbs Oregon; 9.2 m lbs Washington) to 56.6 m lbs in 2020 (43.1 m lbs Oregon; 13.5 m lbs Washington). The combined Oregon-Washington ex-vessel value increased from 26.3 million dollars in 2019 to 29.5 million dollars in 2020.

In Oregon 74 vessels participated in 2020, making 1,098 individual trips. Catch in 2020 was highest in southern areas, but good throughout the region. Catch Per Unit of Effort (CPUE) in 2020 was double that of 2019, and on a par with levels observed in the productive 2009-2015 seasons. For the 2021 season, managers forecast 33 m lbs based on environmental conditions and 38 m lbs based on catch-at-age sampling data.

Oregon conducts an in-house review of the pink shrimp stock assessment and modelling process on a biennial basis, and 2020 was a review year. In addition to routine stock assessment activities, science in support of pink shrimp management included: 1) preparation of a draft historical gear survey study report, 2) publication of a sex-transition study produced in collaboration with the University of Utah (Charnov and Groth 2019), 3) an evaluation of the relative effects of fishing vs. the environment on model performance, and 4) a time series analysis of individual shrimp measurements for potential use as a new index of stock status with predictive value.

In Washington 28 vessels were active in 2020, making 375 trips. In 2020, effort shifted to the north and later in the season compared to 2019. Washington participated in increased collaboration with Oregon in 2020 with the continued exchange of biological data from port sampling; an important factor contributing to the pink shrimp stock assessment.

Non-target species and habitat interactions, including Pacific eulachon.

Two-hundred fifty species of fish and other marine life were recorded as caught in the pink shrimp fishery between 2015 and 2019, with over 95% of catches being pink shrimp. The top ten species in the catch are given in Table 1 below (NWFSC FRAM Data Warehouse, accessed on June 21, 2021). Non-target catches are consistent and low over the past 5 years, however eulachon smelt are not included in this dataset.

Table 1. Top 10 species groups in the 2015-2019 pink shrimp catch composition (weight in metric tons). Data source NWFSC FRAM Data Warehouse.

Species	Year					2015-2019 Catches	Percentage catch
	2015	2016	2017	2018	2019		
Pink Shrimp	46,408.90	23,881.67	15,009.27	22,333.58	17,479.42	12,5112.84	95.83%
Pacific Hake	1156.90	524.33	376.62	118.61	39.24	2215.71	1.70%
Shrimp Unid	474.47	368.23	143.64	311.38	144.12	1441.84	1.10%
Slender Sole	120.68	70.14	71.62	145.15	115.24	522.84	0.40%
Non-Humboldt Squid Unid	43.19	4.61	6.11	87.61	130.01	271.52	0.21%
Rex Sole	42.25	33.88	31.16	28.28	26.98	162.55	0.12%
Salp Unid	0.18	1.41	60.48	67.14	0.07	129.28	0.10%
Jellyfish Unid	9.97	13.67	0.40	69.98	2.48	96.51	0.07%
Eelpout Unid	8.55	14.03	9.79	20.05	22.49	74.90	0.06%

High bycatches of eulachon smelt, a protected species, in the coastal pink shrimp fishery was an issue until footrope lighting BRDs (LED lights) were introduced into the fishery in 2016 (see previous MRAG full assessment and surveillance reports for more details). A considerable uptick in eulachon bycatch was recorded in 2019, however not as high as pre 2016 levels (see the 2019 row of Table 2; Gustafson et. al. 2020). Gustafson et. al. (2020) hypothesize that the effectiveness of BRDs is hampered in times and areas with high eulachon abundance, and the increasing abundance in 2019 may account for the increase in bycatch in this fishery. This hypothesis is supported by correlations in the eulachon abundance and bycatch rates since LED lights were mandated (Figure 1). The assessment team will monitor this trend closely in future surveillances.

Table 2. Eulachon bycatch in the pink shrimp fishery 2015-2019, excerpted from Appendix Table A5 of Gustafson et. al. 2020.

Year	Eulachon bycatch (mt)					Eulachon bycatch (numbers of fish)				
	WA	OR	CA	Coastwide	95% CI	WA	OR	CA	Coastwide	95% CI
2015	217.94	360.13	32.34	610.42	441.39	22,292,347	35,445,296	2,234,225	59,971,868	41,121,997
					815.39					82,972,192
2016	31.78	66.07	1.96	99.81	65.45	1,499,088	2,862,045	51,688	4,412,821	2,768,978
					144.09					6,390,508
2017	11.50	3.93	0.00	15.43	8.63	442,022	207,577	31	649,630	350,299
					23.53					1,050,269
2018	32.32	26.88	0.05	59.26	21.43	1,405,326	1,793,646	3,503	3,202,475	1,039,965
					119.35					6,388,117
2019	139.41	300.12	0.02	439.55	300.84	6,540,749	13,254,945	938	19,796,632	13,899,886
					599.14					26,169,417

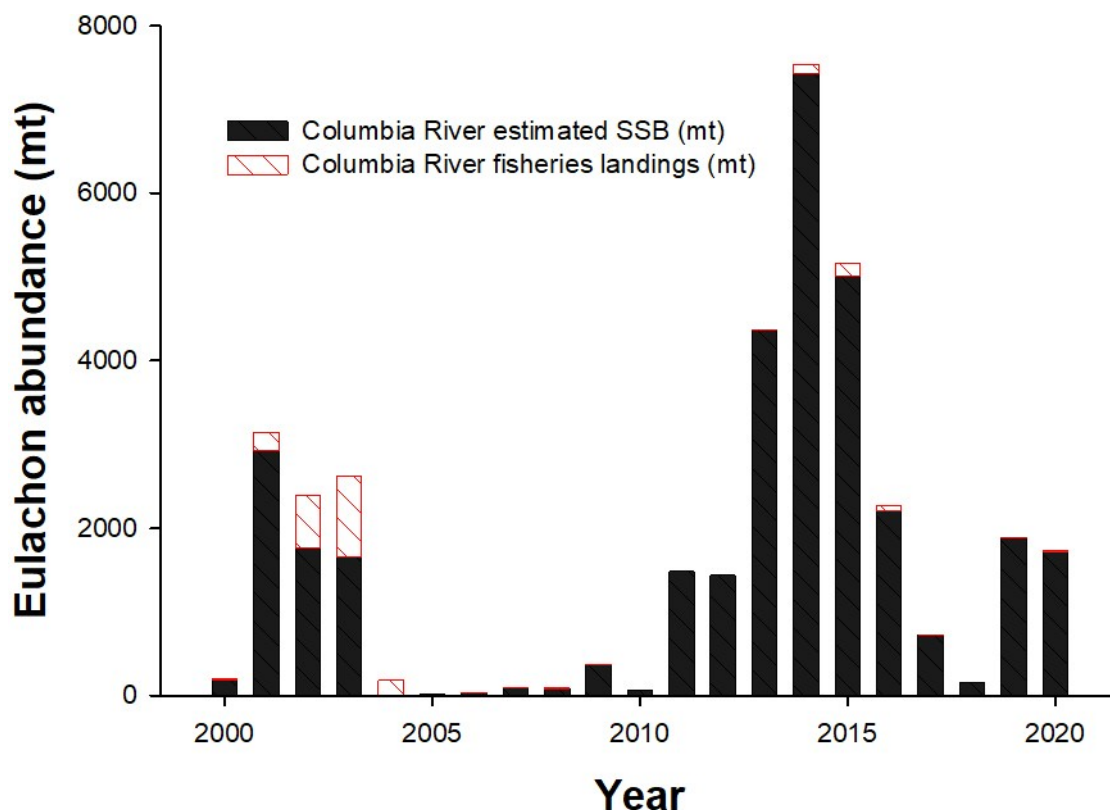


Figure 1. Eulachon abundance and Columbia River fisheries landings since 2000 (Reproduction of Figure 4 in Gustafson et. al 2020).

Data on seabird bycatch in the pink shrimp fishery is available through 2018, however the marine mammal and other endangered species reports have not been updated since our last surveillance. There have been no significant changes to seabird interactions in the pink shrimp fishery, with roughly 20 sooty shearwaters and 2 pink shearwaters encountered across the three coastal states in 2018, which is consistent with previous years (Jannot et. al. 2021).

3.2.3 Potential or Actual Changes in Management Systems

Oregon

The Fishery Management Plan for Oregon's Trawl Fishery for Ocean Shrimp (*Pandalus jordani*) (FMP) adopted in 2018 continues to provide the framework for shrimp fishery management. No changes were made to the FMP in 2020. No new regulations were adopted (Hannah et al. 2018; Groth 2021b).

The 2020 season began on April 1 with fishing mainly by North Coast vessels. Fishing expanded to the full fleet by mid-May and continued through the normal October 31 season end date (Groth 2021b).

In 2019 the Oregon Trawl Commission surveyed pink shrimp license holders to assess opinions on the possibility of changing the season start date (currently April 1). The underlying issue is how to maximize the value of landed shrimp, balancing avoiding fishing on egg shrimp, avoiding count-per-pound problems of small shrimp, and making most effective use of fleet time. The survey found a distribution of preferences for start date, including April 1 (no change), April 15, May 1 and May 15.

ODFW sent a follow-up survey in 2020 to understand more about preferences for the season start date and to assess whether it was a problem needing agency attention. Although 59% of those responding supported a start date later than April 1, opinions were mixed as to the preferred date. There was a geographic component to responses; for example, people who fish off the North Coast tend to favour an earlier start date than those who fish further south. ODFW is exploring the nature of the differences in opinion to better understand how to achieve the objective of maximizing fishery value while improving operating logistics for the fishery as a whole (Groth 2021a; Groth 2021b).

In 2020 NOAA scientists began working on a bioeconomic model of the shrimp fishery to address some of the questions surrounding optimal fishery operation (Groth and Smith 2020). Changeover in post-doc personnel as well as well as the need to conduct some additional supporting data analysis have delayed progress on model development. Modelling work will continue in 2021 (Groth 2021b).

No conflicts with federal fisheries were reported by ODFW in 2020. No legal challenges were mounted against the fishery.

Collaboration among ODFW and enforcement personnel as well as with WDFW and the WDFW Law Enforcement Program (LEP) continued to be effective. There were no management changes affecting enforcement (Thompson 2021; Groth 2021b).

There were no areas of conflict within the fishery and overall compliance with regulations remained high. Two “not in compliance” enforcement contacts were made during the fishing season, out of 1098 trips (.2%). One vessel captain was cited for a count per lb. violation, fined and forfeited the load of shrimp. No information was available on the nature of the second contact (Thompson 2021).

Collaboration among ODFW, WDFW and CDFW continued in 2020. The Saltonstall-Kennedy “Section 6” grant of 2019 was concluded, with some continuing distribution to deckhands of waterproof information sheets on bycatch species identification (Groth 2021b).

Washington

The Washington Coastal Pink Shrimp Fishery Management Plan (FMP) adopted in December 2018 continued to provide the framework for shrimp fishery management (Wargo and Ayres 2017).

The 2020 season began on April 1, with the first shrimp landed on April 6th, the earliest landings since 2015 (Wargo 2021b). Overall the April 2020 landing pattern falls within observed patterns of the past decade. There have been Aprils with later starts (2016, 2018, 2019) and fewer number of landings (zero in 2017, 10 and 13 in 2016 and 2018, respectively) (Wargo 2021b).

WDFW plans to conduct a survey of industry preferences on season start date in 2021. The agency has sought input from ODFW on survey question elements and structure to ensure that the two states’ results are comparable. WDFW will conduct the analysis in a manner consistent with state and agency confidentiality standards and expectations for Washington license holders and operators, followed by discussions with ODFW to compare survey results. Results of the survey will be reported in the 2022 Washington Pink Shrimp Fishery Newsletter (Wargo 2021b).

No specific management action on season start date is anticipated at this time. The primary purpose of the survey and a public meeting planned for Fall 2021 is to solicit input from the fleet on changing the season start date that can be summarized and shared. Currently only anecdotal or individual comments exist; the survey is intended to provide a fleet-wide perspective (Wargo 2021b).

There were no interstate conflicts or conflicts with federal fisheries during the 2020 season. No legal challenges were mounted against the fishery in 2020 (Chadwick 2021a; Wargo 2021a).

Communication and support for accessing federal observer data has improved substantially over the years the newsletter has been produced. The newsletter has received positive comments from NOAA staff; information has been more readily shared as the purpose and intent of the requests for information (not just data) are made evident in the newsletter itself. The newsletter section on bycatch is provided to NOAA for review prior to publication (Wargo 2021b; Wargo et al. 2021).

Collaboration among WDFW and ODFW remained strong. ODFW continues to provide support to augment WDFW operations where resources to manage and monitor the pink shrimp fishery are limited, e.g. ODFW providing biological sampling data collected at Astoria from vessels fishing off Washington. Collaboration is also occurring on logbook design, collection and distribution. Regular contact is maintained through informal contacts through the year (Wargo 2021a; 2021b).

Collaboration among WDFW management and enforcement programs continues to be strong, supported by weekly cross-program leader meetings (Wargo 2021b).

Work under the Saltonstall-Kennedy “Section 6” Grant has concluded, with a final distribution of remaining LED lights (Wargo 2021b).

Logbook data entry continues to be challenged by significant competing demands on Shellfish Program staff. However, the closure of the razor clam fishery in 2020 due to domoic acid eased workloads and this benefited logbook processing. It is anticipated that the recent restructuring of staff responsibilities will also help going forward (Wargo 2021b).

Collaboration among WDFW and enforcement personnel, as well as with ODFW and the OSP Marine Fisheries Team and USCG, continued to strengthen. For example, the single undersize shrimp case made in 2020 was the result of an OSP trooper contacting WDFW enforcement to advise about a vessel fishing on small shrimp (Chadwick 2021b).

There were no areas of conflict within the fishery and overall compliance with regulations remained high. Twelve violations were reported by enforcement for the fishing season out of a total of 375 trips (3%). A majority (9) of these violations were unlicensed crew members on Oregon boats who failed to get Washington crew member licenses when making deliveries into Washington ports (Alexander 2021; Chadwick 2021b).

Overall, the 2020 fishery was orderly. One vessel captain was cited for an undersize shrimp violation, resulting in a \$1000 fine and a deferred sentence for 18 months (Alexander 2021; Chadwick 2021b).

3.2.4 Changes or Additions/Deletions to Regulations

Oregon

Oregon regulations requiring the use of LED lights and bycatch reduction devices (BRDs) on shrimp trawl gear remained unchanged in 2020, as did all other regulations, and did not pose any compliance or enforcement problems (Groth et al. 2021; Thompson 2021).

The Oregon State Police (OSP) Marine Fisheries Team (MFT) sampled a few vessels early in the 2020 season for compliance with minimum size regulations. One sampled vessel was found to be keeping shrimp >160 count per lb.; a fine was assessed and the load was forfeited. For several months of the 2020 season OSP placed restrictions on low-level contacts in an effort to reduce exposure to COVID-19 (Thompson 2021).

ODFW management staff and the OSP MFT worked together on two issues that may possibly lead to future regulatory change. The first is the potential change in the season start date, as discussed in Section 3.2.3. The second is the question of how best to measure ice weight in landed catch in order to calculate the net weight of shrimp. Shrimp and ice are weighed together at the docks. Samples are taken to determine the amount of ice in the gross weight, then extrapolated to the entire landed catch to calculate the net shrimp weight. The methodology used is required to be as specified in Oregon Administrative Rules (OAR). The plan for 2021 is to document current sampling and calculation methodologies and update their representation in OAR (Groth 2021b; Thompson 2021).

Overall the OSP assess the Oregon pink shrimp fishery to be a well-run fishery with a high level of compliance and few enforcement concerns (Thompson 2021).

Washington

A requirement to use approved LED lighting on trawl footropes in the coastal ocean pink shrimp fishery has been in place since 2018. The LED regulations did not present enforcement problems in 2020 and compliance continued to be high. LEP enforcement remained active throughout the season, patrolling and conducting compliance inspections (Chadwick 2021a; Chadwick 2021b). No new regulations were added in 2020 (Wargo 2021b).

The E-Tix system of electronic fish tickets is now in place. In 2020 100% of fish ticket reporting was done using this system (Wargo et al. 2021). The rule-making process to make E-Tix mandatory has been initiated with the expectation of presenting the proposal to the Washington Fish and Wildlife Commission in June 2021 for their consideration and adoption. If adopted the change would be effective in 2022 (Wargo 2021b).

COVID-19 outbreaks in some Oregon processing plants resulted in their closure which led in turn to an increase in the number of Oregon vessels delivering shrimp into Westport and other Washington ports. This change added to the enforcement workload through an increase in enforcement contacts and patrol hours (Wargo et al. 2021; Chadwick 2021b).

WDFW Police monitored landings of small shrimp (>160 count per lb.) through dockside sampling during offloads. One early season offload was determined to have high counts of small shrimp (approximately 73% of the offload). For this violation the skipper was cited, pled guilty, fined \$1000 and given a deferred 18-month sentence. The violation was flagged through cooperative work between WDFW Police and OSP (Alexander 2021; Chadwick 2021).

Overall WDFW Police assess the pink shrimp fishery to be an orderly fishery with high levels of compliance (Alexander 2021; Chadwick 2021a; 2021b).

3.2.5 Personnel changes in science, management or industry and their impact on the management of the fishery.

Oregon

In 2019 ODFW created a new management position divided equally between crab and shrimp, which was subsequently left vacant by a transfer to another agency. In 2020 the position was made permanent and filled by Eric Anderson (Groth 2021b).

The ODFW Shellfish Program also works closely with the Groundfish Program to ensure good coverage at the port of Brookings. Valerie Miranda joined the Brookings staff and will work on logbooks. Brookings groundfish personnel has experienced some turnover, but there are currently two full-time staff being trained in sampling methods (Groth 2021a; 2021b).

Since 2015 the OSP MFT has been organized under a single supervisor to promote more consistent enforcement across ports. The COVID-19 pandemic led to several changes in MFT personnel in 2020. In March 2020 OSP lost 15 Fish and Wildlife (FW) positions statewide due to the budget shortfall associated with COVID-19. One MFT trooper was reassigned to the Patrol Division along with several coastal FW troopers. These reassignments increased the burden on the remaining FW troopers in maintaining coverage. The MFT trooper was reinstated in September of 2020. The MFT Supervising Sergeant Todd Thompson was also reassigned to an out of class position as the NW Region Fish and Wildlife Lt. in August 2020, remaining in that position until April 2021. During Sergeant Thompson's absence an MFT trooper covered the sergeant position, creating a trooper vacancy. In January 2021 an MFT trooper transferred to the Criminal Division. Currently there is one MFT vacancy in Astoria (Thompson 2021).

Washington

No WDFW staff were added or lost in 2020. However, through a restructuring of duties Zachary Forster, Senior Coastal Shellfish Biologist, will play a more active role in fishery monitoring, and data and management support. His duties include overseeing the logbook and fishery monitoring programs. He will also support data analysis and contribute to the newsletter. Zach directly supervises Travis Haring, WDFW lead shrimp sampler (Wargo 2021b).

WDFW Police had no personnel changes in 2020. Additional officers will be added to the coastal detachments in 2021 when three officers graduate from the Police Academy. The LEP plans to add more officers to the coastal detachments in the next two years (Chadwick 2021b).

3.3 Version details

Table 2 – Fisheries program documents versions

Document	Version number
MSC Fisheries Certification Process	Version 2.2
MSC Fisheries Standard	Version 2.01
MSC General Certification Requirements	Version 2.4.1
MSC Surveillance Reporting Template	Version 2.1

4 Results

4.1 Surveillance results overview

4.1.1 Summary of conditions

This fishery has no open conditions.

4.1.2 Total Allowable Catch (TAC) and catch data

Table 3– Total Allowable Catch (TAC) and catch data

TAC	Year	2020	Amount	n/a
UoA share of TAC	Year	2020	Amount	n/a
UoA share of total TAC	Year	2020	Amount	n/a
Total green weight catch by UoC	Year (most recent)	2020	Amount	<ul style="list-style-type: none"> • OR: 43.1 million lbs • WA: 13.5 million lbs
Total green weight catch by UoC	Year (second most recent)	2019	Amount	<ul style="list-style-type: none"> • OR: 26.9 million lbs • WA: 9.2 million lbs

4.1.3 Recommendations

No recommendations.

4.2 Re-scoring Performance Indicators

No performance indicators have been rescored.

4.3 Conditions

This fishery has no new or open conditions.

4.4 Client Action Plan

Since there are no conditions, there is also no client action plan.

5 References

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6 Appendices

6.1 Evaluation processes and techniques

6.1.1 Site visits

The CAB shall include in the report:

- An itinerary of site visit activities with dates.
- A description of site visit activities, including any locations that were inspected.
- Names of individuals contacted.

Reference(s): FCP v2.2 7.28

The surveillance audit process as defined in the MSC Fishery Certification Process version 2.2 was followed in this audit.

Information supplied by the clients and management agencies was reviewed by the assessment team ahead of the offsite (remote) meeting, and discussions with the clients and management agencies centred on the content within the provided documentation. In cases where relevant documentation was not provided in advance of the meeting, it was requested by the assessment team and subsequently supplied during, or shortly after the meeting.

Thirty days prior to the remote audit, all stakeholders from the full assessment were informed of the visit and the opportunity to provide information to the auditors in advance of, or during, the audit. We received no requests from outside stakeholders to take part in meetings or provide information remotely.

The audit visit was held remotely via teleconference on April 26, 2021.

The following participants were in attendance:

Name	Affiliation
Amanda Stern-Pirlot	MRAG Americas, Assessment team
Susan Hanna	Oregon State University, Assessment team
Tom Jagielo	TJC, Assessment team
Yelena Nowak	Oregon Trawl Commission, Client
Charlie Kirschbaum	Pacific Seafood Group, Client
Scott Groth	Oregon Department of Fish and Wildlife (ODFW)
Steven Rumrill	ODFW
Eric Anderson	ODFW
Lorna Wargo	Washington Department of Fish and Wildlife (WDFW)
Dan Ayres	WDFW
Zach Forster	WDFW
Capt. Dan Chadwick	WDFW Enforcement Division

The table below summarizes the agenda for the meeting, held on March 18th, 2020 via teleconference. Unless otherwise specified, the Assessment Team comprises Amanda Stern-Pirlot, Susan Hanna and Tom Jagielo,

Time	Item	Attendees
9:00	Opening meeting, introduction to surveillance process and expectations for the meeting and process as a whole	Assessment Team, Yelena Nowak, Charlie Kirschbaum
10:00	ODFW and WDFW 2020 updates	Assessment Team, Yelena Nowak, Charlie Kirschbaum, Scott Groth, Steven Rumrill, Eric Anderson, Lorna Wargo, Dan Ayres, Zach Forster, Dan Chadwick
11:30	Closing meeting with clients	Assessment Team, Yelena Nowak, Charlie Kirschbaum
12:00	End Site Visit	

6.1.2 Stakeholder participation

See above for remote site visit attendees. The list of stakeholders for this fishery were contacted directly via email 30 days before the site visit, and no further stakeholders participated or submitted comments.

6.2 Stakeholder input

No written stakeholder input was received prior to this surveillance audit.

6.3 Revised surveillance program

The surveillance program has not been revised. Next year is the 4th surveillance and reassessment audit.