



**Fishery Improvement Project (FIP) Work Plan for the Oregon Dungeness Crab Fishery**  
**Fishery Client: Oregon Dungeness Crab Commission (ODCC)**  
**FIP Lead: ForSea Solutions LLC**

**Table 1**

<b>Workplan Version and Date</b>	<b>Version 3, October 2025</b>
<b>Start date (expected)</b>	<b>End date (anticipated month/year)</b>
<b>August 2020</b>	<b>August 2026</b>
<b>FIP Lead (organization/individual responsible for Action Plan)</b>	<b>Improvements recommended by (meeting/group that supported the development)</b>
<b>Natasha Novikova</b>	<b>ForSea Solutions</b>
<b>FIP Coordinator (organization/individual responsible for reporting on FisheryProgress)</b>	<b>Workplan developed by (consultant or person)</b>

Natasha Novikova	Natasha Novikova
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**Unit of Assessment(s)**

*Fill in the following table, which will be considered the scope against which the fishery is assessed against the MSC Fisheries Standard.*

**Table 2. Unit(s) of Assessment (UoA)**

<b>UoA 1</b>	<b>Description</b>
<b>Target species (common and scientific name)</b>	<b>Dungeness crab (<i>Metacarcinus magister</i>)</b>
<b>Stock</b>	<b>U.S. West coast (California to Washington)</b>
<b>Geographical area</b>	<b>Oregon coast</b>
<b>Fishing method or gear type</b>	<b>Pot</b>
<b>Fishing fleet or group of vessels, or individuals fishing operators pursuing stock</b>	<b>Oregon fishery (all commercial Dungeness crab fishers in Oregon, managed by Oregon Department of Fish and Wildlife, with support from Oregon Dungeness Crab Commission)</b>

## FIP Actions

Table 3. Performance Indicator Action Plan Table

				August 2025 Update
Goal / Performance Indicator	Actions	Due Date	Responsibilities	Progress Notes
1. <a href="#">Demonstrate there is sufficient relevant information to support the harvest strategy.</a>  <a href="#">PI 1.2.4</a>	A. Work with the University of Oregon to develop an index of crab stock status that takes uncertainty into account and assures that abundance stays in a productive zone (e.g., explore potential indices mentioned in the 2014 Oregon Dungeness Research Plan).	Aug 2026	Francis Chan, UofO	<b>Task 1A</b> – As reported previously, work under a NOAA-funded grant to investigate how climate change is impacting Dungeness crab and the fishery is ongoing. This expands on existing research into the 3S management and environmental factors influencing Dungeness crab abundance to predict how 3S management will perform under climate change and how it might be adjusted to account for climate change. Dr. Chris Free of the University of California, Santa Barbara, provided an interim report (Doc 14) noting that work to generate an index of relative abundance was being undertaken at this time. The index uses data from the NOAA West Coast Bottom Trawl Survey, which occurs in waters deeper than 55 m and samples crabs at an average weight of 0.51 kg, which corresponds to a carapace width of 145mm and age of 1.6 years (males) and 2.0 years (females). The index will allow for year class strength to be estimated and will be helpful in forecasting the fishery catch two years ahead, as the fishery only retains crabs ≥4-year-old. The index will also support the assessment of past management performance in achieving sustainability objectives. The Bottom Trawl Survey occurs mainly outside the area in which the commercial fishery operates, and so a separate index of abundance for legal-sized male crabs (≥4-years-old) in the nearshore where the commercial fishery operates based on logbook data is planned for development, as well as analyses of the relationship between
	B. Demonstrate that there is an assessment of stock status that is appropriate for the stock (e.g., through the development of indices of abundance to provide early indication of stock health) and the harvest control rule, and provide evidence that the assessment is subject to peer review.	Aug 2026	To be determined	

				<p>the different indices and the catch. The Project is due to complete in August 2025 in line with FIP timeline.</p> <p>Dr. Francis Chan of Oregon State University also reported to the team that a project to undertake a census of sub-legal Dungeness Crab using video-cameras attached to commercial crab pots is also underway. The first set of cameras and ocean sensing equipment is about to be placed, and AI tools to identify and sex Dungeness Crab and Red Rock Crab are in development. It is anticipated that this work will support the development of additional stock monitoring approaches, where future year-class strength may be determined and tracked in the years leading up to the point at which the animals are exploited in the fishery.</p> <p><b>Task 1B</b> – There is no peer review currently scheduled for any assessment of the Dungeness Crab stock, but the timeline for this work was extended previously to Aug 2025. It remains plausible that this could be undertaken as part of the process to adapt and operationalize the Richerson et al. 2020 code to accept new data, annually.</p> <p><b>This action is considered 'on track'. There is no change of score at this time.</b></p>
<p>2. <a href="#">Identify the main non-target species and provide information on the status of these species.</a></p> <p>PI <a href="#">2.1.3</a> and <a href="#">2.2.3</a></p>	<p><del>A. Assess the amount (weight) of bait used by species in the fishery each year and identify which species are actively managed (i.e. for management targets such as an LRP).</del></p> <p><del>B. Provide available stock status information on bait species that account for 5% or more of the total catch (by weight) in the fishery.</del></p>	<p>Feb-2024</p> <p>Feb-2024</p>	<p>Troy Buell (ODFW)</p> <p>Troy Buell (ODFW)</p> <p>Troy Buell (ODFW)</p>	<p>Updated information on progress on this action was provided by ODFW in the attached progress report (Doc 15: <a href="#">FIP ODFW ProgressUpdate Sept2024 FINAL</a>).</p> <p><b>Task A – This task was CLOSED in FEB 2024.</b></p> <p><b>Task B – This task was CLOSED in FEB 2024.</b></p>

	<p><del>C. Provide encounter rates and/or catch data (numbers) for out of scope species (non-ETP amphibians, reptiles, birds, mammals, e.g. pelagic cormorant).</del></p>	<p><del>Aug 2024</del></p>		<p><b>Task C – This task was CLOSED in SEP 2024.</b></p> <p><b>Task C</b> is completed with information provided through the review of the data collected during the pre-season (2010-2023) and in-season (2013-2023) ride-along trips, and with further data collected on potential crab buoy line entanglement that show only Pelagic cormorant is recorded as a main secondary species (whale entanglement is considered under the ETP species PIs). With Completion of Task A and Task B, previously, and Task C now completed, PI 2.1.3 and 2.2.3 can be rescored at 80+ and this action can be Closed.</p> <p><b>With three tasks completed, this Action was completed and closed in September 2024.</b></p>
<p>3. <del>Demonstrate that the main non-target species are above biological based limits</del></p> <p>PI <a href="#">2.1.1</a> and <a href="#">2.2.1</a></p>	<p><del>A. For species that account for 5% or more of the total catch (if any) and have management targets such as an LRP), provide annual stock status information over the past 40-15 years relative to the target.</del></p> <p><del>B. For species that account for 5% or more of the total catch (if any) and do not have management targets and all out of scope species, provide available abundance trend information (catch or CPUE data, observer data, abundance surveys, etc).</del></p>	<p><del>Feb 2024</del></p> <p><del>Aug 2024</del></p>	<p>Troy Buell (ODFW)</p> <p>Troy Buell (ODFW)</p>	<p>ODFW reported the following new reports developed to address this Action (Doc 5).</p> <p><b>Tasks A and B</b> - ODFW assessed non-target species discarded and landed in the ocean commercial crab fishery. No non-target species exceeded the 5% of total catch threshold. A full report is included (Doc 6). Regarding out of scope species, according to ODFW, there has been 1 pelagic cormorant documented in the entire observer data series (preseason and in-season) in 2015 and no other bird, reptile or mammal species have been caught as bycatch in crab pots (Kelly Corbett, pers. comm.).</p> <p>As no non-target species exceed the 5% threshold, further information on stock status is not needed for any non-target species, so Task A and B are complete.</p>

				<b>With both tasks completed, this Action was completed and closed in February 2024.</b>
<p>4. <del>Demonstrate that there is a strategy in place that is designed to maintain the main non-target species at sustainable levels.</del></p> <p><a href="#">PI 2.1.2</a> and <a href="#">2.2.2</a></p>	<p>A. <del>For species that account for 5% or more of the total catch (if any) describe the strategy used to maintain these species at or above biological based limits or if none, develop and implement such a strategy.</del></p> <p>B. <del>For species that account for 5% or more of the total catch (if any) provide an objective rationale and evidence for why the above strategy will work based on some direct information the UoA and/or species involved.</del></p>	<p>Aug-2025</p> <p>Aug-2025</p>	<p>Troy Buell (ODFW)</p> <p>Troy Buell (ODFW)</p>	<p>ODFW reported the following new reports developed to address this Action (Doc 5).</p> <p><b>A and B</b> - ODFW assessed non-target species discarded and landed in the ocean commercial crab fishery. No non-target species exceeded the 5% of total catch threshold. A full report is included (Doc 6).</p> <p>As no non-target species exceed the 5% threshold, no strategies for maintaining stock status of non-target species are required, so Task A and B are complete.</p> <p><b>With both tasks completed, this Action was completed and closed in February 2024.</b></p>
<p>5. <a href="#">Provide evidence that the fishery does not hinder recovery of ETP species.</a></p> <p><a href="#">PI 2.3.1</a></p>	<p>A. Continue to participate in and support the Oregon Whale Entanglement Working Group (OWEWG) and/or the Crab Advisory Committee to develop short- and long-term options for reducing whale entanglements in Dungeness crab fishing gear.</p> <p>B. Continue research to monitor whale distribution off the Oregon coast to identify whale hotspots.</p> <p>C. Continue to develop the Conservation Plan for endangered and threatened whales.</p>	<p>Ongoing (through Aug 2026)</p> <p>Ongoing (through at least August 2026)</p> <p>Aug 2026</p>	<p>Crystal Adams (ODCC)</p> <p>Leigh Torres (OSU)</p> <p>Crystal Adams (ODCC) and Troy Buell (ODFW)</p>	<p>Updated information on progress on this action was provided by ODFW in the attached progress report (Doc 27: Progress Report...).</p> <p><b>Task A</b> – ODFW convened a recruitment process for OEAC member vacancies in October 2024 (see <a href="https://www.dfw.state.or.us/news/2024/10_Oct/100224.asp">https://www.dfw.state.or.us/news/2024/10_Oct/100224.asp</a>). In November, ODFW added two new commercial industry members, one new conservation group member and one new recreational crab harvester member. There were no OEAC meetings during this reporting period. Up to date information about this group, including current membership, is posted at: <a href="https://www.dfw.state.or.us/MRP/entanglement/oeac.asp">https://www.dfw.state.or.us/MRP/entanglement/oeac.asp</a>.</p> <p><b>Task B</b> – ODFW and OSU continued work on</p>

			<p>a second Section 6 grant funded project titled 'Enhancing Co-occurrence Assessment of Whales and Fishing Gear in Oregon Waters through Incorporation of Prey Data and Residency Analysis.' This project has continued work to expand the initial modeling efforts by incorporating whale prey distribution for investigation of co-occurrence of whales and the crab fishery off Oregon. The most recent progress report is included as attachment A of Doc 27.</p> <p>Independent of Section 6 funding, ODFW and ODCC funded monthly aerial surveys for rorqual whales off Oregon throughout this reporting period.</p> <p><b>Task C</b> – ODFW continues development of a comprehensive conservation plan (CP) to minimize the risk of marine life entanglement in commercial Dungeness crab gear (Doc 27: Progress Report). The CP will be the main supporting document in the application for an incidental take permit (ITP) application to the National Marine Fisheries Service (NMFS). During this reporting period staff finalized development and presented a comprehensive line marking regulatory proposal for the Oregon Fish and Wildlife Commission (OFWC). Line marking has been identified across the West Coast as a key method for improving gear identification when buoys, pots, or tags are not visible, identifiable, or present. It is also a critical component of ODFW's CP monitoring plan to assess any future entanglement events (take levels) involving Oregon Dungeness crab gear, which is a required part of the CP. The OFWC adopted staff's recommended line marking approach with the modification to start surface line marking requirements one year later than proposed (2026-27 season). The OFWC</p>
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<p>6. <a href="#">Demonstrate that there is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to the habitats.</a></p> <p><a href="#">PI 2.4.2</a></p>	<p>A. Develop and implement new technologies to monitor crab vessel locations and compliance with closed areas.</p> <p><del>B. Describe any additional closed areas imposed on other fisheries along the Oregon coast. (Action Com).</del></p> <p>C. Provide quantitative information on compliance with closed fishing areas.</p>	<p>Aug 2026</p> <p><del>Aug 2022 (completed)</del></p> <p>Aug 2026</p>	<p>Crystal Adams (ODCC)</p> <p>Troy Buell (ODFW)</p> <p>Lt. Ryan Howell (OSP)</p>	<p>Updated information on progress on this action was provided by ODFW in the attached progress report (Doc 23).</p> <p><b>Task A</b> - ODFW has continued to work with third-party software developers on a vessel tracking integrated electronic logbook application to incorporate users feedback from phase 2, improve the performance of the application and incorporate a fourth VMS model. ODFW has also continued to work on integrating the new data stream into internal databases and with PSMFC to develop a data dashboard to view and use the data in near real-time.</p> <p>In this reporting period ODFW was notified of selection for partial funding of a NOAA Fishery Information Systems (FIS) grant proposal to finalize a production logbook application and implement the system broadly within the Oregon crab fleet by offering partial reimbursement for VMS units purchased. Work on this grant will begin when funds are received, which are anticipated in summer 2025.</p> <p>ODFW remains committed to working with industry to test electronic monitoring (EM) systems for vessel tracking and developing procedures for how systems can be used to provide near real-time fishery data by the 2026-27 crab season (see Section 5.3.3.3 starting on page 94 of Doc 24, titled "Electronic</p>

				Monitoring”).  <b>Task B</b> – This task was CLOSED in FEB 2023.  Task C – Oregon State Police Fish & Wildlife Division provided an update on enforcement activities related to the commercial crab fishery (Doc. 25). For the latest period for which data were provided (August 2024 – Jan 2025), there were 1,132.25 hours of enforcement effort in the fishery, with 1,208 'contacts'. These resulted in a total of 61 citations and 80 warnings, none of which were for fishing in closed areas. When compared to previous enforcement updates, these data demonstrate a continued increase in enforcement activity.  <b>Task B was closed previously, and Tasks A and C are considered 'on track'. There is no change of score at this time.</b>
7. <a href="#">Demonstrate that information is adequate to determine the risk posed to the habitat by the fishery.</a>  <a href="#">PI 2.4.3</a>	A. Continue research and monitoring of coastal habitats identified in the Oregon Nearshore Strategy, including: <ul style="list-style-type: none"> <li>• Survey of seafloor structures and habitat composition</li> <li>• Examination of species, communities, and habitat relationships to habitat monitoring priorities.</li> </ul>	Ongoing (through Aug 2026)	Scott Marion (ODFW)	Updated information on progress on this action was provided by ODFW in the attached progress report (Doc 9).  <b>Task A</b> - Nearshore shallow rocky reef habitats in previously un-mapped regions of Rogue Reef, off Gold Beach, were surveyed in October 2024 using a multibeam sonar system. In addition, 58 remotely operated vehicle video transects were conducted in the multibeam survey area to assess ecological condition and provide ground-truth data for future seafloor classification efforts. Sonar and video data were reviewed and processed. Full-coverage, high-resolution bathymetry data for this major reef system will be available for the first time by July 2025.  In September 2024, ODFW acquired aerial images from fixed-wing aircraft for the majority of Oregon's kelp-bearing coastline. These

				<p>images are being analyzed to document changes in kelp canopy over time. This survey supports concurrent monitoring work of other nearshore species in decline (red sea urchin, red abalone, sunflower sea star).</p> <p><b>This action is considered 'on track'. There is no change of score at this time.</b></p>
<p>8. <u>Demonstrate that the management policy's long-term objectives that guide decision-making incorporates the precautionary approach.</u> (Goal Closed)</p> <p><u>PI 3.1.3</u></p>	<p>A. Develop a Fisheries Management Plan (FMP) for the Oregon Dungeness Crab fishery that explicitly incorporates the precautionary approach<sup>1</sup>. (Action Completed)</p>	<p>Aug-2022 (Completed)</p>	<p>Troy Buell (ODFW)</p>	<p>ODFW finalized the Dungeness crab Fishery Management Plan (FMP) after public review and evaluation (see ODFW Dungeness Crab FMP). The FMP has now been adopted by ODFW, as all the rules and regulations associated with it have been approved by the OFWC. <b>This Action was completed and closed in August 2022.</b></p>
<p>9. <u>Demonstrate that the fishery specific management system has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principle 2.</u> (Goal Closed)</p> <p><u>PI 3.2.1</u></p>	<p>A. Update ODCC's mission to be consistent with MSC's Principle 2 (e.g. to maintain the structure, productivity, function and diversity of the ecosystem). (Action Completed)</p> <p>B. Incorporate explicit short and long-term objectives into the FMP consistent with achieving the outcomes expressed by MSC's Principle 2 (sustainability of non-target species, ETP species, habitats and ecosystem). (Action Completed)</p>	<p>October-2021 (Completed)</p> <p>Aug-2022 (Completed)</p>	<p>Hugh Link (ODCC)</p> <p>Troy Buell (ODFW)</p>	<p><b>Task A</b> - This was completed in October 2021 per the board approval of the new ODCC mission statement published on the ODCC website (<a href="https://oregondungeness.org/about-the-oreg-on-dungeness-crab-commission/">https://oregondungeness.org/about-the-oreg-on-dungeness-crab-commission/</a>). In adopting the Dungeness crab FMP, the OFWC formalized a suite of goals and objectives for the management of the Dungeness crab fishery in Oregon and adjacent waters (see ODFW Dungeness Crab FMP). This FMP includes directives to implement strategies that will ensure the sustainability of non-target species and preserve ecosystem health. <b>All components of Action 9 were completed and the action closed in August 2022.</b></p>

<sup>1</sup>The precautionary approach shall be interpreted to mean being cautious when information is uncertain, unreliable or inadequate and that the absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures (The UN Fish Stocks Agreement, 1995).

<p>10. <a href="#">Demonstrate that monitoring, control and surveillance mechanisms ensure the management measures in the fishery are enforced and complied with.</a></p> <p><a href="#">PI 3.2.3</a></p>	<p>A. Develop and implement new technologies to streamline logbook submittals and to monitor compliance with closed or restricted fishing areas (marine reserves).</p> <p>B. Work with fishermen to educate them on the importance of reporting whale entanglements.</p> <p>C. Provide information on compliance with logbook submittal requirements and closed fishing areas.</p>	<p>Aug 2026</p> <p>Ongoing (through Aug 2026)</p> <p>Aug 2026</p>	<p>Crystal Adams (ODCC) / Troy Buell (ODFW)</p> <p>Crystal Adams (ODCC) / Troy Buell (ODFW)</p> <p>Lt. Ryan Howell (OSP)</p>	<p>Updated information on progress on this action was provided by ODFW in the attached progress report (Doc 19).</p> <p><b>Task A</b> – ODFW has continued to work with third party software developers on a vessel tracking integrated electronic logbook application to incorporate users feedback from phase 2, improve the performance of the application and incorporate a fourth VMS model. ODFW has also continued to work on integrating the new data stream into internal databases and with PSMFC to develop a data dashboard to view and use the data in near real-time. In this reporting period ODFW was notified of selection for partial funding of a NOAA Fishery Information Systems (FIS) grant proposal to finalize a production application and implement the system broadly within the Oregon crab fleet by offering partial reimbursement for VMS units purchased. Work on this grant will begin when funds are received, which are anticipated in summer 2025. ODFW remains committed to working with industry to test electronic monitoring (EM) systems for vessel tracking and developing procedures for how systems can be used to provide near real-time fishery data by the 202627 crab season (see Section 5.3.3.3 starting on page 94 of the draft CP titled “Electronic Monitoring” (Doc 20)).</p> <p><b>Task B</b> – In this reporting period ODFW developed and widely distributed an annual crab fishery newsletter that included comprehensive updates on ODFWs efforts to reduce risk of marine life entanglement. These updates also highlight how to report entanglements and encourages ocean users to get level 1 first responder training to learn proper assessment, documentation and reporting of entangled whales. The newsletter is posted at</p>
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11. <u>Demonstrate there is an effective and</u>	A. <u>Arrange for an external review (conducted by another agency,</u>	<u>Aug-2022 (Completed)</u>	Hugh Link (ODCC)	In a recent comprehensive study (see

<p><u>timely review of the fishery specific management system. (Goal Closed)</u></p> <p><u>PI-3.2.4</u></p>	<p><u>organization or by expert reviewers) of key parts of the Oregon Dungeness crab fishery management system. (Action Completed)</u></p>			<p>Richerson et al 2020 - Sustainable Exploitation in Dungeness Crab Fishery), the management system for Dungeness crab was evaluated. Under current management, crab landings have remained stable or increased over the last several decades. An earlier literature review of Dungeness crab biology and management found no evidence that the current fishery management strategy had an adverse impact on crab recruitment or reproduction (see Rasmuson 2012 - Dungeness Biology Review). Although neither of these studies is based on data more that is now at least years old, the relatively stable pattern of crab landings in more recent years reported by ODFW is evidence that the current management system has remained effective (see Oregon Dungeness crab harvest 1978 -2021). <b>This Action was completed and closed in August 2022.</b></p>
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