



# Draft Oregon Dungeness Crab Fishery Management Plan

## Public comment responses

### Overview of Public Comment Process

The draft Oregon Dungeness Crab Fishery Management Plan (FMP) was developed between 2018-2021, then posted on Oregon Department of Fish and Wildlife's (ODFW) Marine Resources webpage on September 15, 2021, initiating a 30-day public comment period ending on October 15, 2021. ODFW advertised the opportunity for public comment through various outlets including a news release, commercial industry notices, and an email to all current recreational shellfish license holders. Input was received via phone calls, emails, letters, and submissions through an online form. ODFW also heard public testimony during a presentation of the plan to the Oregon Fish and Wildlife Commission (OFWC) on October 15, 2021.

Input was received from roughly 140 stakeholders affiliated with the recreational and commercial crab fishery sectors, non-governmental organizations, and the broader public. A summary of substantive comments pertaining to the draft crab FMP and ODFW's responses, including any changes made in the finalized FMP, are provided below. Feedback that did not result in any changes to the FMP at this time may still be considered for implementation in the future and would be addressed by initiating recommendations for regulatory changes through the OFWC hearings process, which includes public input opportunities. Comments are categorized by fishery sector (recreational, bay commercial, ocean commercial) or included as non-sector specific. Section references in this document refer to sections of the final crab FMP, posted [here](#) for viewing.

### Recreational Crab Fishery Comments

#### **3-S management system**

ODFW received significant input related to the recreational '3-S' (size, sex, season) Dungeness crab fishery management system (*Section B.III.d*). Crabbers recommended increasing the **legal size** or supported current size limits for recreational crab harvest. Minimum size limits are intended to allow male crab to reach sexual maturity and reproduce for one or two seasons before becoming subject to legal harvest (*Section B.III.d*). The legal size limit of 5 ¾" for recreational crabbers affords additional opportunity not available to commercial crabbers that require a minimum size of 6 ¼". ODFW would like to maintain this opportunity available only to recreational crabbers. A larger size limit would leave a higher proportion of large male crab available for mating; however, information suggests that the current reduced male population level from existing harvest practices is not likely to impair female mating success, which is critical for larval production and eventual recruitment in male-only fisheries (*Sections A.II.b* and *A.VII.k*). This demonstrates that the crab population is able to sustain the current smaller recreational size limit without crab recruitment being impaired. ODFW is not considering increasing the legal size at this time, but may consider an increase in the face of evidence-based resource concerns (*Section B.I.a*).

Other commenters offered scenarios for retaining **female crab**. Female crab are not allowed for any Dungeness crab sector to minimize impacts on the reproductive capacity of the stock. While Oregon allowed harvest in the past, information about the reproductive capacity and lower meat content of large female crab supported prohibiting harvest of female crab (*Section B.III.d*). ODFW will continue to prohibit harvest of female Dungeness crab.

Comments related to **season** included closing the fishery during summer months when crab are soft as well as opening the ocean to recreational crabbing Oct. 16 – Nov. 30. Whereas the season opening for the ocean commercial fishery is based in part on an assessment of meat condition (fill/content), recreational harvesters individually decide whether meat yield is acceptable for their own purposes (*Section B.III.d*). This provides greatest flexibility and opportunity for recreational crabbers. The fall closure period was originally instituted for a longer period (Aug. 15 – Nov. 30) to maintain orderly fisheries and remove crabbing gear from the ocean prior to the ocean commercial opener. In 2009, a regulation was passed extending the boat-based ocean recreational season end date from August 15 through October 15 as a compromise lobbied by recreational harvesters for longer access to high quality ocean crab (*Section B.III.d*).

There was mixed feedback related to recreational **bag limits**, with comments to maintain, decrease, or increase the current limit of 12 crab per person. Recreational crabbers travel various distances from local coastal areas to other states to crab in Oregon's estuaries and bays. The daily bag limit, originally established to better enforce fishing license requirements (*Section B.III.d*), aims to prevent overharvest while providing access to a reasonable catch to crabbers and maintaining regulatory stability (*Sections B.III.g* and *B.I.b*). In the absence of resource concerns, ODFW will maintain the current daily limit and maintains support for the '3-S' system. In the absence of a formal stock assessment, the precautionary '3-S' system supports sustainable crab fisheries in Oregon by prohibiting the harvest of female and undersized male crab to protect reproductive capacity. ODFW monitors the recreational fishery to track harvest and other informative measures for management. ODFW does not currently plan to adjust the size, sex, season, or bag limits for the recreational fishery.

## **Gear**

Feedback about recreational crabbing gear included reducing gear limits, prohibiting overnight crabbing, requiring weighted line and escape mechanisms on crab pots, restricting ocean depth, and prohibiting snares. There are modest gear requirements compared to commercial crabbing and recreational crabbing in other states (*Section B.III.e*). In Oregon, recreational crabbers may use three pieces of gear per person and can use pots, rings, snares, rods, rakes, or harvest crab by hand. Crab pots and rings deployed as fixed gear with a buoy must be marked with the owner's name and at least one other piece of approved identifying information. While ODFW is not currently planning any changes to gear requirements, ODFW may consider future requirements for recreational crabbing pots and has started surveying crabbers at outreach events and through the creel program to assess support and need for changes. Part of this assessment will determine the financial impact to crabbers, enforcement ability, impacts to navigational safety, and benefits to Oregon's crab resources and other marine organisms such

as whales. Potential requirements under consideration are requiring durable buoys, sinking line, escape rings, and other destruct mechanisms for derelict gear like the use of untreated cotton.

### **Biotoxin management**

For biotoxin management for recreational crabbing, two comments focused on increasing communication about biotoxin closures and allowing evisceration of crab caught instead of closures. ODFW's goal is to ensure that all consumers of Oregon crab have a safe product (*Section B.I.b*). Oregon Department of Agriculture (ODA) is responsible for protecting public health which includes working with partner agencies, including ODFW, to ensure the safety of food fish, such as recreationally and commercially harvested Dungeness crab. While there are mechanisms in place for biotoxin management for the processing of commercial crab (evisceration and seafood tracking requirements), there is no equivalent way to ensure awareness, tracking, and safety for the recreational harvest of crab (*Section B.IV.b*). Due to these limitations, evisceration is not a management tool used in the recreational crab fishery and ODFW has no plans to recommend that ODA consider changes. Instead, if domoic acid test results indicate that an alert level has been met, a recreational shellfish biotoxin closure is implemented to ensure public health and safety. Crabbers should call the ODA Shellfish Hotline (800-488-2474) for most up-to-date recreational shellfish closure information. ODFW also promotes awareness through new releases, signage, and updates to the [recreation report](#) for clamming and crabbing.

### **Green crab**

Crabbers are encountering the invasive European green crab (*Carcinus maenus*) more often as populations increase in Oregon bays and elsewhere in the Pacific Northwest. Crabbers requested an increase to the limit for this crab given this increased catch and overlap in habitat with juvenile Dungeness crab (*Section A.V.d*). The OFWC adopted a species-specific and increased bag limit for European green crab at their meeting on March 18, 2022. The OFWC is the rule-making body for fish and wildlife regulations. Brief language describing ODFW's rationale for recommending an increased limit has been added to *Section A.V.d* of the crab FMP in response to these comments.

### **Guides/charters**

Recreational crabbers sometimes hire guides or purchase trips with charter vessels to crab in nearshore ocean waters and bays. One comment suggested a limit on the total number of private guides available to provide service to recreational crabbers, and another asked to limit guides to one trip per day. One comment asked to limit the amount of crabbing gear that can be deployed by charter vessels. Another comment asked for restricting guides near the mouth of the Columbia River. ODFW staff held preliminary discussions regarding these issues. At this time, ODFW has determined that additional data collection or research efforts would be required to inform these proposals.

Information on crab gear deployed and crab harvested by charter vessels is provided by several surveys. ODFW's Ocean Recreational Boat Survey (ORBS) collects crab harvest data from all recreational angler interviews, and these data are used to estimate total crab harvest and the

number of angler-trips (*Section A.III.g*). Additionally, through the Marine Non-Salmonid Recreational Fishery Studies (MNSRFS), Pacific State Marine Fisheries Commission (PSMFC) observers collect Dungeness crab catch and discard data and the number of pots fished aboard recreational bottomfish charter vessels that participate in the recreational crab fishery (*Section A.III.h*). However, several information gaps currently exist. With the exception of MNSRFS data on charter vessels, there is limited knowledge of the number of recreational pots fished by private, guide, and charter vessels in the ocean, and limited anecdotal information on where those pots are fished and how long pots are soaked. Additionally, there is very limited data on pot loss in the recreational fishery. Finally, certain biases in the current methods for estimating the number of recreational ocean crabbing trips are likely to result in trips being overestimated. Management would benefit from additional data on crabber participation on these trips to allow for refined estimates to be made. ODFW has therefore concluded that it is premature at this time to consider specific limits on utilization of guides and/or charter vessels for recreational crabbing. ODFW will continue to consider opportunities to better understand the dynamics of the guide and charter crabbing operations in Oregon, and brief language has been added to *Section A.VII* identifying these information gaps as priorities for additional research.

### **Shore-based access**

ODFW received comments asking for better shore-based access to crab. Shore access is not conferred solely by ODFW. Many docks and piers are privately owned or operated by ports that maintain authority over access. However, whereas recreational ocean crabbing has a closed season from Oct 16 – Nov 30, shore-based crabbing in the ocean and estuaries is open year-round to provide additional access to a reasonable catch.

### **Signage**

ODFW received a comment requesting better signage of recreational shellfish regulations along the coast. ODFW is in the process of reviewing shellfish regulations and will update signage coastwide once new rules or amendments are in place. Regulation signs are posted at common access points at beaches, boat ramps, ports, docks, and kiosks coastwide.

## **Bay Commercial Crab Fishery Comments**

The FMP public process yielded substantial feedback regarding prohibiting or restricting bay commercial crabbing. Oregon's bay commercial crab fishery (*Section B.III.a*) provides opportunity for crabbers during the closed ocean season, is one of the few fisheries that does not require substantial capital to participate, and fills a need from Oregon businesses for fresh, local crab during the closed ocean season. This small fishery is dynamic and participation in particular bays varies greatly by year. Additionally, there was mixed feedback about the need for a bay commercial crab fishery logbook. ODFW recommended a required bay commercial crab logbook as one of the FMP implementing rules to the Oregon Fish and Wildlife Commission (*Section A.III.b*). The OFWC adopted a rule to require a logbook in October 2021. A logbook brings this fishery in line with other fixed gear commercial fisheries, provides more information to better understand commercial crabbing activity in Oregon bays, and enables better

enforcement. Logbook information will also aid ODFW with managing the fishery in specific bays by providing better information about this fishery to other stakeholders. The Dungeness crab FMP was amended to reflect this regulation update.

The bay commercial crab fishery fills a marketing niche by providing local markets with fresh crab when the ocean season is closed. Two comments requested the bay commercial fishery to remain open in December regardless of the ocean commercial opener. The current bay commercial season only remains open for the month of December if the adjacent ocean area opens. ODFW supports the rule to reduce potential avenues for poached crab to be sold by ensuring that all commercial fishing remains closed during the lead up to ocean commercial season open (*Section B.III.d*).

## **Ocean Commercial Crab Fishery Comments**

### **3-S management system**

ODFW received several comments requesting that ODFW consider shortening the length of the ocean commercial season. For this sector of the fishery, the management system is designed to provide equitable access to crab harvest (i.e., economic value) for a diversity of business plans. As described in *Section B.I*, this means that there are meaningful opportunities for participation by different vessel sizes, classes, and/or pot tiers, during different times of the year and/or servicing different markets. Fleet equity is the basis of fair start provisions, collective measures that work to allow small vessels to remain competitive (e.g., gear setting, barging), and efforts to enhance enforcement (e.g., hold inspections) (*Section B.III.f*). It is also central to the maintenance of a summertime crab fishery, which represents a small amount of fishery effort and contributes a relatively small portion of crab landings each season but is a key business component for certain participants or vessels. ODFW does not plan to recommend permanently adjusting the length of the ocean commercial season at this time.

### **Derelict gear**

ODFW received two comments about modifying and increasing efforts to recover derelict gear. Derelict crab gear has been shown to contribute to ghost fishing, gear conflicts, navigation hazards, and marine mammal entanglements. To address this issue, ODFW has implemented several management measures to reduce the incidence of pot loss and minimize the impacts posed by derelict gear (*Section B.III.i*). This management approach includes vessel and pot limits, seasonal closure, in-season derelict gear allowances, and a post-season gear retrieval program. For over ten years, processes for the in-season and post-season derelict gear retrieval efforts have been established and refined. ODFW is committed to maintaining these measures and others that facilitate in-season and post-season derelict gear recovery, while continuing to evaluate the effectiveness of existing measures and augment regulations where improvements can be made.

## **Safety**

ODFW received one comment about the need to take safety of the industry into consideration when making management decisions that affect the operation of the fishery. Commercial fishing is a high-risk occupation associated with several safety hazards and relative to other fisheries, the West Coast Dungeness crab fishery is particularly hazardous due to certain characteristics outlined in the FMP. The U.S. Coast Guard (USCG) is the primary agency responsible for maintaining vessel safety, conducting rescue operations, and providing at-sea enforcement of fishery regulations (e.g., season closures, gear removal requirements). The USCG has regulatory authority to develop and implement basic safety regulations, largely pertaining to safety and survival equipment (e.g., immersion suits, life rafts, visual distress signals, emergency position indicating radio beacons, and fire protection equipment). To minimize risk at-sea, the USCG also conducts required dockside safety examinations and safety spot checks and engages with vessel operators through various education and outreach efforts (*Section B.IV.d*). While specific safety decisions are largely left to vessel operators, several existing ODFW management measures have components intended to maintain at-sea safety (e.g., gear setting, barging). ODFW plans to maintain vessel safety as a strong consideration during management decision-making and ODFW staff will continue to engage with the commercial crab industry about the impacts of potential management actions, including vessel safety concerns and options for minimizing risk (*Section B.IV.d*).

ODFW received one comment for ODFW to consider no-crabbing zones (recreational and commercial) around all mouths of bays due to safety concerns with running over gear. ODFW acknowledges safety hazards accompany participation in both recreational and commercial fisheries and considers safety decisions and practices the responsibility of individual vessel operators. ODFW does not intend to recommend creation of no-crabbing zones around the mouths of bays at this time; however, ODFW will continue to consider boating safety when evaluating current and future management actions.

## **Non-Sector-Specific Comments**

### **Enforcement**

ODFW received several comments about the need for greater ODFW presence and enforcement for the Dungeness crab fishery. ODFW works with the Oregon State Police (OSP) to enforce fish and wildlife regulations. OSP has a dedicated Fish and Wildlife division with a specific "Marine Team" to provide enforcement of marine fishery regulations coastwide. ODFW maintains recreational and commercial sampling programs where staff inspect catch and interview crabbers (*Section A.III*). These opportunities are used as a way identify crabbing violations and provide education. ODFW and OSP meet annually to revisit and set enforcement priorities throughout the year, which are informed by public input. Additionally, ODFW received comments suggesting increases to fines for various recreational crabbing violations. Violations are set in statute. The level and class of violation is determined in ORS 496.992. Fines for violations, including fish and wildlife violations, change annually by the Oregon Legislature (ORS 153.019).

## **Area-specific management**

ODFW received one comment recommending implementation of bay-specific regulations for bay commercial and recreational crabbing, taking into consideration the size and level of activity in each bay. Recreational and commercial crabbing activity varies greatly between bays and by year. Regulations are consistent across the coast in order to provide regulatory stability and transparency, and to ease enforcement. Recreational crabbers, in particular, travel various distances and from various locations to the Oregon coast and continuity of regulations is important for ensuring compliance.

## **Whale entanglement**

ODFW received one comment regarding concern that the management response to address whale entanglements is oversized relative to the number of confirmed entanglements in Oregon crab gear. ODFW also received a couple comments supporting several potential future management measures to reduce entanglement risk, and one general comment supporting the preservation of whales and cetaceans first and foremost. ODFW acknowledges that the number of confirmed entanglements in Oregon crab gear is lower relative to the other West Coast states. ODFW has a responsibility to both conserve wildlife and provide harvest opportunity, and whale entanglements require a state response on this basis. However, in recent years, most whale entanglements were of humpbacks, which are listed under the Endangered Species Act (ESA), while in earlier years most entanglements were of gray whales (not ESA-listed); this adds a nexus between state responsibilities and federal management under the ESA. Additionally, across all three West Coast states, there is a significant increase of confirmed entanglements from 2014 through 2019. Section 9 of the ESA and federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Under section 10 of the ESA, a non-federal entity may seek authorization for the incidental take of a federally listed species that occurs during otherwise lawful activities through issuance of an Incidental Take Permit (ITP). To apply for an ITP, ODFW must take steps to reduce the risk of entanglement to the maximum extent practicable.

To maintain a thriving Dungeness crab fishery, assist in the recovery of ESA-listed species and to bring the fishery into compliance with federal law, ODFW is committed to reducing risk of marine life entanglement in Oregon Dungeness crab gear (*Section B.IV.a*). This commitment includes drafting a Conservation Plan (CP) that documents ODFW's strategy to address entanglements and is a required document to apply for an ITP for Oregon's ocean commercial crab fishery. Additionally, adaptive management is a fundamental element of ODFW's CP to minimize entanglement risk. The plan includes two categories of adaptive management actions which may be considered throughout the duration of an ITP. First, there are short-term adaptive management responses that are ready to implement in response to an indication that entanglement risk is elevated. Second, there are future potential measures that require some level of additional development time, which may be considered in addition to, or in place of, existing measures in the future. Future potential measures may also include a more stringent or relaxed version of the conservation measures that are currently in place. Additional information regarding these measures can be found in ODFW's [draft CP](#).

## **Stock status**

ODFW received a few comments related to concerns about the current and future health of the Dungeness crab stock due to climate change and suggestions for reducing allowable catch, area closures, and consideration of a moratorium on all crabbing. Currently, ODFW considers the Dungeness crab population resilient to current levels of fishing pressure and that the management strategy in Oregon has been effective at maintaining Dungeness crab at or above the levels necessary to ensure their continued productivity, which is a key element of ODFW's management objectives (*Section B.I.b*). Additionally, as described in *Section A.VI*, a conservative limit reference point (LRP) based on both landings and abundance indices accounts for uncertainty regarding the productivity of the Dungeness crab stock. If triggered, ODFW can implement an adaptive management response through temporary rules based on the determined causes of the observed decline. The primary adaptive management response will focus on ocean commercial sector which accounts for the vast majority of direct crab harvest; however, ODFW will consider measures for other fishery impacts that affect the crab stock, including the recreational and bay commercial fisheries.

Fishery management that is responsive to changing conditions is essential to Oregon's management strategy for Dungeness crab. This includes working with researchers and other partners to anticipate climate and ocean change impacts on the fishery and implementing management decisions that allow for flexibility to adapt to future scenarios. Oregon has a long history of innovation and applying creative solutions to fishery management challenges including implementing biological reference points for the fishery (*Section B.VI.a*), enhancing crab traceability to enable continued harvest through biotoxin events (*Section B.IV.v*), and building explicit adaptive management provisions to address marine mammal entanglement risk (*Section B.IV.a*). This out-of-the-box thinking will be increasingly important moving forward. To articulate how all these different management measures contribute to preparing Oregon's crab fisheries for a changing climate, ODFW has added specific language to *Section B.VIII.b* in the final FMP.

## **Climate change and estuaries**

ODFW received one comment that the use and importance of estuary health and habitat should be more fully explored in the FMP, particularly anticipated climate change impacts to Dungeness crab in estuarine environments. Ecological information on Dungeness crab, including a description of habitat use, is provided in *Section A.II.c* of the FMP. Potential climate change impacts to Dungeness crab are described throughout the FMP and specifically in *Section A.V.e*. In response to this comment, additional language was added to *Section A.II.c* of the FMP to further describe the importance of estuarine habitat to Dungeness crab and specifically the role estuaries may play as refuge for juvenile crab from unfavorable oceanic conditions resulting from climate change. Importantly, the FMP also acknowledges that the dependency of Dungeness crab on different habitats, including estuaries, is not well understood. ODFW has identified the role of estuaries at different crab life stages, as well as potential climate change impacts on Dungeness crab and their habitat, as research priorities in the FMP (*Sections A.VII.d*

and *A.VIII.g*). ODFW will continue to seek collaborations and funding opportunities to address these research priorities.

### **Education and outreach**

ODFW received one comment recommending that the Department provide the public with more educational events about Dungeness crab. ODFW regularly participates in several educational events about Dungeness crab including the Hatfield Marine Science Center's Marine Science Day, the Oregon Coast Aquarium's Crab Fisheries Day, the Oregon State Fair, sportsman shows, and others. ODFW will continue to seek new opportunities for Dungeness crab education and outreach, as resources allow.

ODFW also received one comment recommending that ODFW publish a summary of accomplishments made by ODFW's recreational crab fishery monitoring and assessment program. While a broad summary of accomplishments has not been published to date, a description of monitoring protocols and some results are available on ODFW's recreational crabbing webpage and a comprehensive [Informational Report](#) was produced by ODFW in 2012 describing key recreational crab fishery survey efforts along with estimates of boat-based crabbing catch and effort in Oregon. Data are also analyzed and presented in *Section A.IV.b* of the crab FMP.

### **FMP document/process**

ODFW received a number of comments related to the length and level of detail of the FMP document, with several requesting that a summary of specific proposals or a survey for input be provided. The crab FMP is intended to be a comprehensive reference document that describes the current state of knowledge on the status of the Dungeness crab resource and the historical and current management strategy, which can be used by managers and a range of stakeholders for a variety of purposes. A brief description of the crab FMP and summary of minor implementing regulations associated with the plan are included in the [agenda item summary](#) for the October 15, 2021 meeting of the Oregon Fish and Wildlife Commission. Implementing regulations are also listed in *Appendix B* of the document itself.

ODFW received one comment that a detailed budget for the FMP should be available to the public. The vast majority of management tools and activities described in the FMP have already been implemented and are included in the cost of ODFW's existing crab management programs. No major fiscal impacts are expected from the minor implementing regulations associated with the plan, as described in the [Fiscal Impact Statement](#) provided for the October 15, 2020 meeting of the Oregon Fish and Wildlife Commission.

ODFW also received one comment that the crab FMP is disproportionately focused on commercial crab fisheries, and that it may be better to separate recreational and commercial fisheries into separate plans. The crab FMP is designed to take a resource-level perspective and to provide transparency between management strategies for the various crab fishery sectors. The level of detail for each crab sector is based on data and information availability and is influenced by the size and level of complexity of each sector.

### **FMP language**

ODFW received several comments recommending specific changes to FMP language related to sustainable harvest levels and management goals and objectives. ODFW considered those suggestions carefully and adjusted FMP language, where appropriate. This resulted in slight changes to the language used in *Sections A.VI, B.I.a, and B.I.b.*

### **Tribal consultation**

ODFW received one comment that it was unclear from the FMP discussion whether Oregon's coastal tribes were consulted regarding the development of this plan. ODFW participates regularly in consultation with the federally recognized tribes along Oregon's Coast regarding harvest of shellfish from Oregon marine waters. These interactions include annual meetings (to discuss fishing, hunting, and shellfish harvest) with the Siletz Tribe and Coquille Tribe, and meetings with the Grand Ronde Tribe and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI) to address specific needs. Implementing regulations in the FMP (*Appendix B*) have gone through the Department's routine, formal rulemaking procedure, which includes opportunity for tribal consultation.

### **Comments recommending no change**

ODFW received significant input recommending that no changes be made to the management of Oregon's crab fishery sectors. Stakeholders cited a number of reasons for recommending no change, ranging from appreciation for the crab FMP and strong support for the current management system to general apprehension about any additional regulations being implemented. ODFW will continue to consider the broad range of perspectives during crab management decision-making processes moving forward.