AGENDA ITEM SUMMARY

BACKGROUND

The commercial market squid fishery is a relatively new opportunity in Oregon and the Commission adopted several rules in March 2021 and February 2022 to promote sustainability of the resource and fishery. At its February 2022 meeting the Commission directed staff to investigate and propose rules prohibiting the use of light boats in the fishery.

Most commercial market squid fishing in Oregon has occurred since 2016. It has long been a substantial fishery in California. Catcher vessels use purse seines to encircle and capture market squid in relatively nearshore waters, often as they aggregate to spawn. Light boats sometimes work together with the catcher vessels to locate and attract squid. Details on the history and operation of the fishery in Oregon and biology of the resource are described in Exhibit F, Commercial Market Squid Management Measures Agenda Item Summary, March 2021 (https://www.dfw.state.or.us/agency/commission/minutes/21/03_Mar/index.asp).

The distribution and abundance of market squid are associated with ocean temperature. Increased squid fishery catches in Oregon have usually coincided with warm water events like large El Niños and the recent marine heatwaves. Fishery-independent surveys conducted by the National Marine Fisheries Service from 1998 through 2019 found that the market squid resource off Oregon increased during that period, based on encounter rate and squid densities (Chasco et al. 2022). La Nina conditions that generally bring cooler waters off the Oregon coast have occurred over the last three years, which is unusual. The outlook as of this writing is that conditions will change from La Nina to ENSO (El Nino Southern Oscillation) neutral in February through April with an 82% chance of ENSO-neutral conditions by spring 2023. The most recent marine heat wave that started in 2022 is still lingering in the North Pacific but is not currently affecting nearshore waters off Oregon. It has been the 3rd longest and 4th largest in spatial area since records started in 1982. Based on these ocean conditions, it is not clear if market squid catch off Oregon in 2023 will increase or decrease. The latest information about El Nino/Southern Oscillation status can be found at https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.shtml and the latest information about California Current marine heatwaves can be found at https://www.integratedecosystemassessment.noaa.gov/regions/california-current/cc-projects-blobtracker. The long-term trend is for the ocean to warm, have more heatwaves, and become more acidic over time. The California Current Ecosystem has generally followed that trend which suggests that market squid are likely to become more abundant off Oregon over the long-term. However, temperature is just a proxy for the true mechanisms that drive changes in market squid distribution and abundance. So, this short-lived, opportunistic species' abundance may

vary dramatically year to year as ocean conditions change because the mechanisms are not well understood.

Rules adopted by the Commission in March 2021 included a requirement for a light boat logbook, prohibiting use of light boats to draw squid out of Marine Protected Areas (where commercial squid fishing or fishing with nets are not allowed), and weekend closures. The department maintains a "Frequently Asked Questions" document which describes the current commercial fishery requirements in detail (Attachment 4).

In February 2022 the Commission also adopted rules restricting net and mesh size, a control date of January 2022 for potential use if the Commission decides to make this a limited entry fishery, and prohibited the use of steel cable to purse the net (Commission Exhibit E, February 2022). The Commission also directed staff to investigate a prohibition on the use of light boats and bring back a proposal to that effect in early 2023.

PUBLIC INVOLVEMENT

After the March 2021 Commission meeting, staff selected 10 applicants representing the range of participant types (catcher vessels, processors, light boats, recent entrants, and longer-term participants) and location (Oregon, out-of-state) to serve as advisors as the Market Squid Advisory Panel (MSAP). ODFW held a meeting with the MSAP in July 2022 to discuss the Commission's directive for staff to investigate a prohibition on the use of light boats. More information on the MSAP, including membership and meeting agendas and summaries, can be found on the ODFW website at https://www.dfw.state.or.us/MRP/market_squid/index.asp. Staff conducted two surveys related to the use of light boats in the fishery after the July 2022 meeting with the MSAP, one mailed to all catcher vessels that have participated in the market squid fishery since 2016, and an online survey open to a wider audience of interested parties. Results from the surveys are provided in the analysis section.

ISSUE 1

Commercial Market Squid Regulations Restricting Light Boats

ANALYSIS

Light Boat Prohibition

Since the modern era of the Oregon market squid fishery in 2016, some fishery participants catching squid with purse seine vessels have used a separate light boat to attract squid using lights pointed into the water. This is a well-established practice in the California squid fishery. Department staff have not found any evidence in published literature or in discussions with fishery managers that this practice caused a significant resource concern for the California fishery.

Participation by seine vessels in Oregon has ranged from 11 to 40 participants in any given year since 2016. A total of 57 unique vessels have made at least one landing of market squid with seine gear in this period. Participation by light boats has been difficult to track as they seldom make landings, the requirement for a logbook was only established in 2021, and logbook records were not available until late that year. In 2022, ODFW received six light boat logbooks that indicate 4-10 lights of various types are being used on each vessel producing 1000 – 8000 Watts output in total. These light boats also utilize sonar when searching for squid. Some light boat logbooks indicate that they also participated in the fishery by catching squid either by hook and line or by scooping them with brail nets. Logbooks from these six light boats indicate they assisted nine different seine vessels (36% of the 25-boat fleet in 2022) in catching approximately 1.7 million pounds, or 31% of squid landings in 2022.

The MSAP discussed light boats in July 2022 noting that approximately 15 different light boats have participated in the modern Oregon fishery with approximately 5-6 active in any given year. To obtain additional information, the MSAP recommended staff conduct surveys of both seine catcher vessels and a broader audience that included others interested in the squid fishery. As described above, staff conducted these surveys in July 2022. The questions were similar on both surveys (Attachment 5) with the exception that the online survey included background demographic questions, and the catcher vessel survey asked about the respondent's role (captain, crew, etc.) related to the catcher vessel and the vessel's use of light boats. Both surveys also provided an opportunity for comments.

The catcher vessel survey was mailed to the 57 seine vessels that have made at least one market squid landing since 2016 and 31 (54%) responded, with 20 respondents (65%) identifying themselves as owner/captains, 9 (29%) as owners, and 2 (6%) as captains. Responses were limited to one per catcher vessel, with 19 (61%) indicating they had utilized a light boat in one or more years since 2016. Estimates provided by 16 of the vessels using light boats indicated 0-80% of their catch occurred when using a light boat. Most respondents (69%) reported that less than half of their landings occurred when they were utilizing a light boat. Understanding the socio-economic impact to individual fishery participants resulting from a prohibition of light boats in this fishery is beyond the scope of staff's capacity and the available data.

Respondents were also asked to rank three options for light boat restrictions in order of preference. The options were total prohibition, limiting the number, or not restricting light boats at all. Most respondents chose a prohibition of all light boats as their preferred option, with all light boats free to operate as the second-most popular choice, and the fewest chose a limited number of light boats allowed. Many respondents did not provide a second choice ranking, but instead voted for two of the options as their first or third choice, reflecting their strong preference either for or against the use of light boats. So, although there were 30 respondents to the survey, we received 32 first choice responses, 13 second choice responses, and 43 third choice responses. Of the 28 survey responses addressing light boat interactions with crab pots, 89% felt

there was either no effect or they reduced interactions while 11% thought use of light boats increased interactions. Of the 27 survey responses addressing whether light boats affected bycatch in the squid seine, 78% felt there was either no effect or bycatch was reduced and 22% felt light boats increased bycatch.

Sixteen respondents provided comments on the use and management of light boats in the market squid fishery. Many noted the importance of anonymity of their responses to be able to provide feedback, so the comments are listed below.

- Light boats only benefit a few select seiners creating an unfair advantage.
- Overcapitalization in the fishery.
- Potential impacts of light boats on the resource through disruption of spawning
- Some light boats being used are not adding to operational effectiveness as they do not have the proper equipment or expertise.
- Observation of potentially dangerous operations of light boats.
- Consider putting a moratorium on light boat use for a set duration and then investigate the difference of catch with and without light boat participation during 2016 to 2022 to inform decision making.
- Light boats provide opportunities for small businesses with smaller vessels to enter the fishery as light boats.
- Light boats decrease fossil fuel emissions by reducing search time by the larger, less fuel-efficient purse seine vessels.
- Importance of allowing light boats during the developmental stage of the fishery before enacting a prohibition as light boats are viewed as vital to the success of the fishery.
- The fishery is already over regulated and does not need additional constraints.

The online survey was open to anyone with an interest in the market squid fishery. Not every respondent answered every question on the survey and some questions (e.g., role or interest in fishery) asked respondents to check all that applied. A total of 453 respondents participated in the online survey resulting in 656 responses related to their interest in the fishery, with potential future squid harvesters being the largest group (189), followed by participants in other fisheries (181), recent or current squid harvesters (120), members of the public/interested parties (102), potential future light boat (25), current/recent light boat (17), current/recent processor (12), and potential future processor (10). Most of the respondents had participated in a variety of commercial fisheries since 2016 including Dungeness crab, market squid, or other coastal pelagic species fisheries in Oregon as well as in California, Washington, and Alaska. Respondents to the online survey used the full range of choices when ranking their preferences regarding the use of light boats. The overwhelming majority ranked prohibition of all light boats as their first choice, all light boats allowed as their second choice, and a limited number of light boats allowed as their third choice. Unlike the results of the catcher vessel survey, the overwhelming majority of respondents to the online survey thought that light boats increased

interactions with crab pots (74% of 447 respondents) and increased bycatch (76% of 446 respondents).

Responses to the online survey included 77 comments related to the use and management of light boats in the market squid fishery. Comments in support of prohibiting light boats are listed below.

- Light boats are not needed to catch squid
- Light boats create space conflicts for catcher vessels not using light boats
- Light boats increase crab gear interactions
- Light boat cost is too high
- There is a need for education on proper use of light boats
- Excess light is disturbing to onshore communities
- Light boats cause unspecified impacts to harbors and the ocean

The reasons provided in support of allowing light boats included:

- Light boats are necessary
- Light boats make catching squid more efficient
- Light boats provide fuel efficiency by reducing search time by the larger less fuel-efficient vessels
- Light boats provide economic opportunities
- A need to collect more data on light boat use

Other comments included:

- Suggestions to limit the number of light boats
- Limit light boat use to specific distances from aids to navigation, bar entrances and jetties starting at dusk for navigational safety
- Develop a market squid fishery management plan
- Implement a limited entry program for the market squid fishery
- Prohibit the market squid fishery

For Commission Consideration

Staff have prepared revisions to existing Oregon Administrative Rules (OARs) that would define seine skiffs and prohibit the use of light boats. The revisions specific to prohibiting light boats would add, "(4) It is unlawful to attract market squid by light displayed from a vessel, except from the same vessel that is deploying fishing gear for the take, possession, and landing of market squid so attracted or from the seine skiff of the same vessel" to OAR 635-005-0931 regulating gear in the market squid fishery. The revised rules also remove the logbook requirement for light boats from OAR 635-005-0930, because light boats would no longer be allowed.

Existing OARs do not currently include a definition of a seine skiff. Seine skiffs have traditionally been treated as part of a seine vessel's equipment and not a boat by the department and by Oregon State Police. That interpretation is not consistent with the definition of a boat in statute. In order to ensure compliance with statute, seine skiffs need to be state registered or federally documented and have a commercial fishing boat license. Seine skiffs are used by purse seine vessels in all coastal pelagic species fisheries, not just the market squid fishery. Seine skiffs are sometimes equipped with lights to help attract squid in the market squid fishery, but because they are not independent of the purse seine vessel, they are not considered light boats in the current context. Adding a definition of seine skiff to the OARs is needed to aid in differentiating seine skiffs from light boats.

OPTIONS

1. Adopt amendments to OAR 635 Division 004 and 005 as prepared by staff.
2. Adopt definition of seine skiffs but not the prohibition on use of light boats in the market squid fishery.
3. Status quo.

STAFF RECOMMENDATION

If the Commission chooses to prohibit the use of light boats, staff recommend Option 1. If the Commission chooses not to prohibit the use of light boats, staff recommend Option 2.

DRAFT MOTION (CONSISTENT WITH OPTION 1)

I move to amend OAR 635 Division 004 and 005 to adopt the fishery management measures as proposed in Attachment 3.

EFFECTIVE DATE: Upon Filing