State of California
Fish and Game Commission
Initial Statement of Reasons for Regulatory Action

Add Article 7, Section 56.00 & 56.01;
Amend Sections 120 & 120.1,
Amend Section 705
Title 14, California Code of Regulations

RE: California Pink (Ocean) Shrimp, *Pandalus jordani*,
Fishery Management Plan Implementing Regulations and Form DFW 1419

I. Date of Initial Statement of Reasons: December 23, 2021

II. Dates and Locations of Scheduled Hearings

(a) Notice Hearing

Date: February 16, 2022 Location: Webinar/Teleconference

(b) Adoption Hearing

Date: June 15, 2022 Location: Los Angeles/Orange

III. Description of Regulatory Action

(a) Statement of Specific Purpose of Regulatory Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary

Unless otherwise specified, all section and subsection references in this document are to Title 14 of the California Code of Regulations (CCR), and all references to the pink shrimp fishery refer to the commercial pink shrimp fishery.

This regulatory proposal will add Article 7, sections 56.00 and 56.01 to implement the California Pink (Ocean) Shrimp, *Pandalus jordani* Fishery Management Plan (herein referred to as the FMP). The proposal will also amend sections 120 and 120.1 to implement the new substantive requirements of the FMP. Furthermore, this proposal would amend Section 705 by updating the existing form FG 1419 (Rev. 5/13) with DFW 1419 (New 01/01/22). This FMP has been produced pursuant to the Marine Life Management Act (MLMA; Fish and Game Code (FGC) sections 7070-7088) to improve management of the pink shrimp fishery and to support the orderly use of this natural resource. The FMP is scheduled for adoption (prior to these proposed regulations) at the April 2022 California Fish and Game Commission (Commission) meeting.

BACKGROUND

The MLMA sets forth the State's policy of ensuring "the conservation, sustainable use, and, where feasible, restoration of California's marine living resources for the benefit of all the citizens of the State" (FGC section 7050(b)). Pink shrimp (also known as ocean shrimp, *Pandalus jordani*) is a major fishery on the U.S. west coast with landings routinely exceeding 30 million pounds per year between California, Oregon, and Washington (California

Department of Fish and Wildlife (Department's) Marine Landings Data System (MLDS) 2021, Oregon Department of Fish and Wildlife (ODFW) 2021; Washington Department of Fish and Wildlife (WDFW). 2021). The fishery is concurrently managed by individual state governments and, as of 2021, both Washington and Oregon have Fishery Management Plans in place for pink shrimp (WDFW 2017; ODFW 2018).

A crucial component in both the Oregon and Washington Fishery Management Plans is the harvest control rule (HCR) originally developed for the Oregon fishery. The HCR requires precautionary restrictions whenever data suggest low pink shrimp stock abundance and recruitment (Hannah & Jones 2014). Such conditions are in turn signaled by low per-trip landings during the month of June and persistently high sea level height between April and January. When these thresholds are crossed, the fishery is subject to early closure as well as delayed opening in the following season.

Additionally, both Oregon and Washington require installation of footrope lighting devices (FLDs) on trawl nets to reduce eulachon (*Thaleichthys pacificus*) bycatch (OAR 635-005-0630; WAC 220-340-500). Eulachon is a forage fish found in northeast Pacific, with a population center off the coast of British Columbia (NOAA 2017). In 2011, the southern distinct population segment of eulachon was listed as threatened under the federal Endangered Species Act (ESA). Affixing light-emitting diodes (LED lights) to the footrope has been shown to greatly reduce eulachon bycatch in pink shrimp trawl gear (Hannah et al. 2015).

Both Oregon and Washington pink shrimp fisheries have been certified as meeting the Marine Stewardship Council (MSC) Fisheries Standard for sustainable, wild-caught seafood (Tavel Certification Inc. 2007; MRAG Americas 2015). MSC is a global non-profit organization that provides ecolabels to fisheries that it deems to be sustainable. The organization was founded in 1996 and is now one of the most widely recognized ecolabels for seafood. European markets (where most pink shrimp catch is exported) place a particularly high value on MSC certification, driving the Oregon and Washington fisheries to obtain MSC certification in 2007 and 2015, respectively. California fisheries applied for pink shrimp MSC certification as well in 2015 and was not approved due in part to the lack of an FMP.

The economic benefits from MSC certification became a major driver for vessels to shift their pink shrimp landings from California ports to Oregon ports. Figure 1 illustrates this phenomenon; although landings of pink shrimp into northern California ports has declined since 2013, the amount of shrimp caught off northern California waters has not. Instead, more and more landings occurred in Oregon ports. In 2020, pink shrimp landings in California practically ceased, despite ongoing fishing activities off the northern California coast.

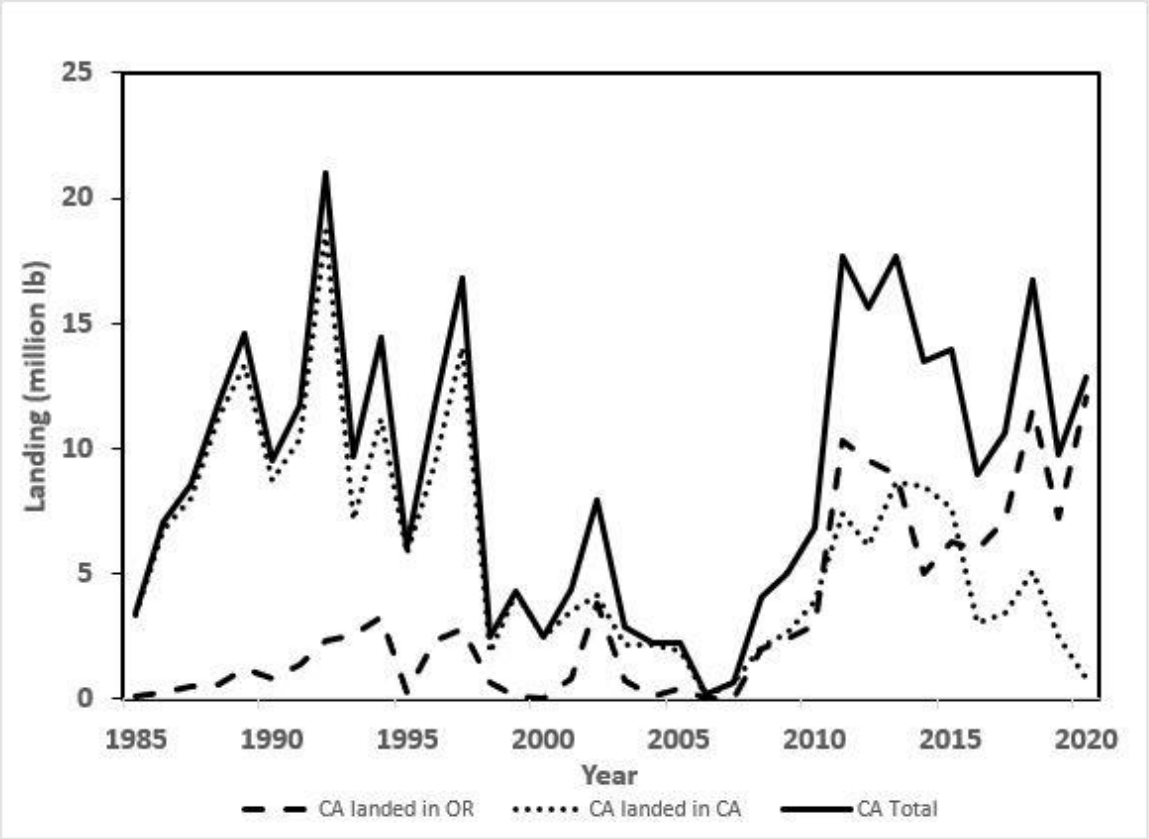

Figure 1. Landing state and weight of landings (million lb) of pink shrimp harvested in California waters, 1985-2020 (Source: CDFW MLDS).

California's effort to align its pink shrimp fishery management with other west coast states began in 2017 with a recommendation from the Commission's Marine Resources Committee (MRC). At its November 2017 meeting, the MRC recommended to the Department to develop a rulemaking to implement an HCR, reduce eulachon (candlefish) bycatch, and revisit the fishery's capacity goal. Department staff subsequently analyzed the feasibility of implementing an HCR and FLD requirement over the course of 2020. However, Department staff did not review the fishery's capacity goal due to the Commission's ongoing review of its restricted access policy.

Soon after, Department staff provided an update stating that there was enough information to support the development of an FMP at the November 10, 2020 MRC meeting. In response, the MRC recommended that an FMP be developed. Throughout FMP development, Department staff held multiple meetings to solicit public feedback on various elements of the FMP, including an annual fleet meeting involving both the members of the fishing fleet and seafood processors on May 7, 2021 (see section (f) below). A draft of the FMP was released to the public on November 15, 2021, with a final adoption of the document expected in April, 2022.

CURRENT REGULATIONS

A limited entry or open access permit is required to participate in the pink shrimp fishery. The Northern Pink Shrimp Trawl Permit, a limited entry permit, is required for any fishing north of Point Conception, Santa Barbara County, and the Southern Pink Shrimp Trawl Permit, an

open-access permit, is required for fishing south of Point Conception (Section 120.2). The fishery is further subject to the following restrictions:

- An open season from April 1 through October 31 (subsection 120.1(b)).
- An approved Bycatch Reduction Devices (BRD) must be attached to all trawl gear to reduce bycatch (subsection 120.1(c)).
- Nets are not allowed to be removed from vessels prior to offloading the shrimp (subsection 120.1(d)).
- Prohibition against landing shrimp that exceed the maximum count-per-lb of 160. (subsection 120.1(e)).

PROPOSED REGULATORY CHANGES

The FMP and the implementing regulations would allow the state to take a more active management approach and align management of the California pink shrimp fishery with Oregon and Washington. The heart of this effort is the implementation of an HCR utilized by both Oregon and Washington. The proposal would also require the use of FLDs to reduce eulachon bycatch. The proposed regulation would further clarify that pink shrimp landings could be estimated when mixed with ice, an established norm necessary for this fishery.

FGC subdivision 7071(b) provides authority for the Commission to adopt regulations that implement a fishery management plan or plan amendment and make inoperative any fishery management statute that applies to that fishery. As part of implementing the FMP, this proposal would render FGC section 8842(b) inoperative as it applies to the pink shrimp fishery. FGC subdivision 8842(b) states that shrimp and prawn trawling is only authorized in those waters of Districts 6, 7, 10, 17, 18, and 19 that lie not less than three nautical miles from the nearest point of land on the mainland shore, and all offshore islands and the boundary line of District 19A.

Finally, the proposal would update, in subsection 705(b)(7), the current form FG 1419 (Rev. 5/13),Northern Pink Shrimp Trawl Vessel Permit Transfer Application, to DFW 1419 (New 01/01/22). The updated form would include an updated format, as well as language to improve processing.

Add Article 7: California Pink (Ocean) Shrimp Fishery Management Plan

This regulatory proposal would add a new Article 7, California Pink (Ocean) Shrimp Fishery Management Plan, under Division 1, Subdivision 1, Chapter 5.5 of Title 14. This new Article would include the new sections 56.00 and 56.01. Chapter 5.5 contains the management strategies of each of the state's adopted Fishery Management Plans. This Article would describe the purpose and scope of the FMP, as well as the management strategy it prescribes.

Add Section 56.00. Purpose and Scope

The proposal would add a new Section 56.00 to Title 14, which declares the adoption and implementation of the FMP as consistent with MLMA, and that the FMP, along with other applicable laws and regulations, govern the management of the pink shrimp resources. The section also references the sections that prescribe the substantive requirements for the fishery.

Lastly, the section also states that FGC subdivision 8842(b) is made inoperative by the FMP pursuant to FGC subdivision 7071(b), which authorizes the Commission to make inoperative any fishery management statute through an FMP.

This section is necessary because it, along with the proposed Section 56.01, serve as the focal point connecting the various legal and policy instruments that together establish the management framework of the pink shrimp fishery. While the regulatory language does not provide any additional legal effect beyond those already put in place by other statutes and regulations, it serves an important policy function by priming the public with a high-level view of the management framework.

Rendering subdivision 8842(b) of the FGC inoperative is necessary to remove any ambiguity concerning the legality of pink shrimp trawling in state waters that extend further than 3 nautical miles from the mainland. The section stipulates that "[t]rawling for shrimps or prawns shall be authorized only in those waters of Districts 6, 7, 10, 17, 18, and 19 that lie not less than three nautical miles from the nearest point of land on the mainland shore, and all offshore islands and the boundary line of District 19A." Also, it is unclear from a grammatical standpoint whether the language refers to all islands off California or only islands within District 19A. However, it has always been the state's position that the statute prohibits pink shrimp trawling within all state waters. This proposal renders FGC subdivision 8842(b) inoperative as it applies to pink shrimp and provides a clearer provision in regulation stated in subsection 120(b).

Add Section 56.01. Management Strategy

The proposal would add new Section 56.01 to Title 14, which states that the management of the pink shrimp fishery will conform to the goals, objectives, criteria, procedures, and guidelines set forth in the FMP. The FMP is incorporated by reference and has the effect of regulation in Title 14. This is necessary because while the document provides the comprehensive management direction for the commercial pink shrimp fishery; it is a substantial document that would be unduly cumbersome and impractical to print in its entirety in Title 14.

Furthermore, like Section 56.00, this section forms a nexus between different management components by characterizing the FMP, sections 120 and 120.1 (along with other applicable statutes and regulations) as the basis for the state's pink shrimp fishery's management. Section 120.1 incorporates the HCR as part of the pink shrimp fishing season. The FMP explains the HCR in-depth, and this section connects the FMP to Section 120.1, which implements the HCR.

Amend Subsection 120(b). Fishing Areas

The proposal would amend subsection 120(b) to explicitly prohibit pink shrimp trawling within state ocean waters. The new language would prohibit pink shrimp trawling within all ocean waters and tidelands of the state unless the Commission specifically opens certain areas pursuant to its authority under FGC subdivision 8842(d). The section would then retain some of the current language clarifying that trawling for other shrimps or prawns will continue to be restricted by the terms of FGC section 8842, including subdivision 8842(b).

FGC subdivision 8842(b) is being rendered inoperative for the pink shrimp fishery by the FMP due to its ambiguous wording. This amendment is necessary to replace the authorizations and

implied prohibitions of FGC subdivision 8842(b) as applied to pink shrimp, but in clearer language. The term “ocean waters and tidelands of the state” is used because it is already an established concept in the FGC (FGC section 11014 *et seq.*). A reference to FGC subdivision 8842(d) is necessary to avoid confusion. The FMP only renders FGC subdivision 8842(b) inoperative for the pink shrimp fishery, since it is the only part of the statute with the ambiguous language in question. As such, the prohibition against trawling in state waters cannot be a blanket prohibition and must account for the Commission’s authority under FGC subdivision 8842(d) to open some parts of the state’s ocean waters to shrimp trawling under specific circumstances.

Retaining parts of the original language under subsection 120(b) is necessary to avoid confusion. FGC subdivision 7071(b) only authorizes the Commission to render parts of the FGC inoperative for a specific fishery through that fishery’s FMP. Since the FMP only applies to the pink shrimp fishery, it cannot render FGC subdivision 8842(b) inoperative for other shrimp and prawn trawl fisheries. It is thus necessary to state that the original language of the statute still applies to these other fisheries to help avoid confusion.

The original language of subsection 120(b) does not carry any effect beyond what’s already stipulated by FGC section 8842, since it only restates the statute’s language. For the purpose of clarity and concision, it is necessary to reduce the original language as much as possible. For this reason, only the first half of the original language of subsection 120(b) is kept to signal the difference between the pink shrimp fishery and the other fisheries.

Amend Subsection 120.1(b). Season and Harvest Control Rule

Subsection 120.1(b) currently prescribes the fishing season for the pink shrimp fishery. The HCR method, as described in Chapter 5 of the FMP, is prescribed in this subsection. The HCR operates on a set of reference points (target reference point and limit reference point) that would trigger potential management actions. The reference points are designed to gauge stock conditions, with the target reference point signaling weakening stock conditions, and the limit reference point signaling poor stock conditions coupled with adverse environmental conditions. Management action would be taken whenever a reference point is crossed, with actions associated with the limit reference point being more drastic than the ones taken in association with the target reference point. Modifying subsection 120.1(b) is necessary because the proposed HCR operates by modifying the pink shrimp fishing season; when the triggers are activated, the ongoing fishing season would close early, and the start of the subsequent season opening would be delayed.

Add Subsection 120.1(b)(1). Target Reference Point

The first half of the HCR would prescribe the management measures based on the target reference point. This reference point signals potential vulnerability in the pink shrimp stock, and is triggered when the average pink shrimp landings in June of that year drop below 12,500 lb per trip. This reference point is the more precautionary of the two, and its associated management action is less restrictive. Whenever the target reference point is crossed, the pink shrimp fishery in California will close on October 15. Furthermore, the subsequent fishing season will be delayed until April 15.

The target reference point was developed by ODFW as a precautionary measure using data gathered from 1982 to 2009 (Hannah & Jones 2014). ODFW recommended closing the pink shrimp season early and delaying the subsequent season to lower the risk of recruitment failure and provide added protection for egg bearing females near the start and end of the season, while at the same time incurring less impact to the fishery than an immediate closure of the fishing season.

A precautionary threshold is necessary for a sustainable management framework. The 12,500 lb threshold is necessary to ensure that California's management is in line with Oregon and Washington. The early season closure and subsequent season delay are a necessary cost that marginally reduces two fishing seasons in exchange for a more sustainable fishery, and brings California's pink shrimp fishery management in line with other West Coast states.

Add Subsection 120.1(b)(2). Limit Reference Point

The second half of the HCR would restrict fishing activities based on a limit reference point. This threshold signals poor stock and environmental conditions, and continued fishing could impair reproduction and delay population rebound. When triggered, the pink shrimp fishery in California would close ten calendar days following public notice, and the start of the following season would be delayed until April 15. The limit reference point is triggered when the average pink shrimp landings in June drop below 10,000 lb per trip and the average sea level height (SLH) recorded by the Crescent City tide gauge operated by the National Oceanic and Atmospheric Administration's (NOAA) between April of the prior year through January of the current year exceeds 7.5 ft (Data available at: https://tidesandcurrents.noaa.gov/waterlevels.html?id=9419750; last visited 11/17/2021).

The limit reference point and the associated management response were also developed by ODFW (Hannah & Jones 2014). Analysis shows that an average SLH of exceeding 7.5 ft off the coast of Crescent City between the immediately preceding April to January and an average per-trip landing lower than 7,500 lb in following June are indicative of poor pink shrimp spawning biomass. To prevent further harm to the stock in such condition, the pink shrimp fishery closes immediately upon exceedance of the threshold, and the subsequent fishing season is delayed for 15 days. A ten-day delay is necessary to allow vessels that are in the process of beginning a fishing trip and vessels that are in the middle of a fishing trip to complete their fishing trips and minimize impact to the fishery. Retrospective analysis of past pink shrimp trawl log shows that most fishing trips taken in California from 2015 to 2019 lasted for 5 days or less, and no trip lasted longer than 7 days. Furthermore, the 10-day delay is in line with other existing rules regarding closure of commercial fisheries (e.g., 14 CCR section 127).

The 10,000 lb threshold is necessary for signaling poor stock conditions, likely in the form of a weak incoming class of year 1 shrimp, by building in a 2,500 lb buffer to the 7,500 lb threshold to account for catch efficiency improvements over time. The SLH threshold is necessary for signaling poor conditions affecting larval recruitment based on ODFW's scientific findings, as well as ensuring management consistency with Oregon and Washington. The early season closure and subsequent season delay are necessary to protect the pink shrimp stock when it is vulnerable. These components are also necessary to ensure that California's management is consistent with existing Oregon and Washington rules.

SLH would be calculated using water level data from NOAA's Crescent City tide gauge from April 1 of the previous year to January 31 of the current year. The data extracted would use the station datum as a reference, as opposed to other references such as mean lower low tide or average sea level. Detailing the specific NOAA oceanographic station, the reference point for the data, the timeframe for the data, and the level of SLH are necessary to ensure consistent calculation of SLH within California and between the states. The steps have also been vetted by ODFW scientists as the correct methodology used in the original study that developed the HCR (Groth, S.D., Per. Comm. June 30, 2021).

Add Subsection 120.1(b)(3). Calculating Average Landing

Subsection 120.1(b)(3) would describe how average landing would be calculated for the target and limit reference point. Average pink shrimp landing in June would be calculated using landing data gathered pursuant to Section 197. Under Section 197, the accurate weight of each landing must be reported through electronic fish tickets and dock tickets. The rule further stipulates that for the purposes of calculating average pink shrimp landing weight in the month of June, which is a trigger for the HCR, all landings made by trawl vessels using a single trawl net ("single rigged") would be multiplied by a factor of 1.6. This is because the HCR thresholds were originally developed based on data compiled from vessels that utilize two trawl nets ("double rigged"). The two types of vessels are illustrated in Figure 2. The subsection would also describe in-detail how average landing is calculated.

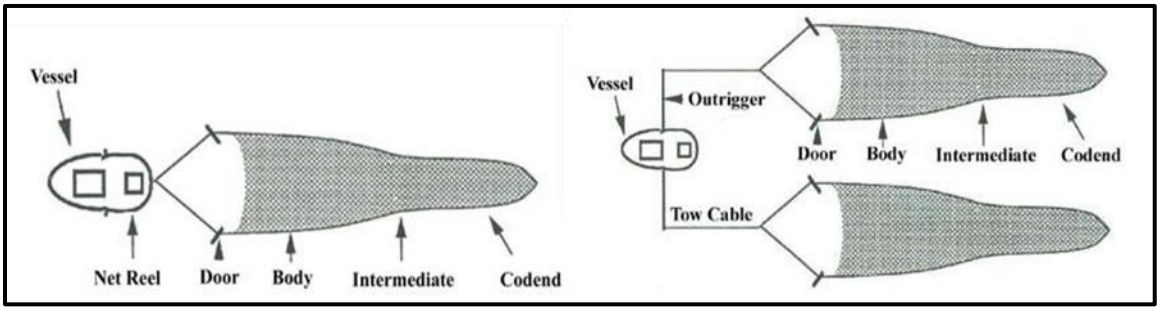

Figure 2. Diagram of a single-rigged (left) and double-rigged (right) shrimp vessel (Credit: Jones, S.A.).

Using data collected pursuant to Section 197 is necessary since it is the official and most accurate accounting of fish landings in California. While most vessels in California are double-rigged, some vessels in the state's fleet remain single-rigged. Double-rigged vessels capture about 1.6 times the catch of a single-rigged fishing vessel under the same conditions using the same amount of effort (CDFW 2021). Retrospective analyses performed by the Department also confirmed that applying a correction factor of 1.6 to the June catch per trip for single-rigged vessels would made it comparable to double-rigged vessels (CDFW 2021).

Accounting for this disparity is necessary for the implementation of the HCR. The per-trip landing thresholds of the reference points were originally developed using landings data from the Oregon trawl fleet, which is composed entirely of double-rigged vessels. The California trawl fleet, on the other hand, is composed of a mixture of single-rigged and double-rigged vessels. This means that for the same amount of fishing effort, the California fleet would land on average a smaller catch per fishing trip. Thus, when the thresholds are crossed, it may not be due to a weak pink shrimp stock, but rather the inherently lower landings from the single-

rigged vessels. Multiplying these vessels' landings by 1.6 would allow Department staff to calculate the state's average per-trip landing as if the entire fleet is double-rigged, which in turn makes the figure relatable to the thresholds developed in Oregon. Prescribing exactly how average landing is calculated is necessary to avoid possible confusion in the future.

Add Subsection 120.1(b)(4). Written Notifications

Subsection 120.1(b)(4) would require the Department to post a notice on its website, by July 15 of each year, when the target reference point or the limit reference point has been crossed. The notice would describe the anticipated early closure and subsequent season delay, as well as the underlying data supporting such actions. The July 15 deadline is anticipated to provide necessary time for staff to perform analyses and provide a buffer to account for unanticipated events. By July 15, two weeks would have passed since the last day of the month of June, and Department database would have registered the last landing in June. Likewise, SLH data would have been available for up to five months. By providing a fixed deadline, the fishery, the public, and fishery managers from other states would be in a better position to prepare for, and accommodate an early closure. Utilizing the newly created "Shrimp and Prawn" webpage on the Department's website is necessary because it would remain a stable web address in the foreseeable future.

Add Subsection 120.1(c)(2). Footrope Lighting Devices

New subsection 120.1(c)(2) prescribing FLD requirement would be added. The proposal would require all pink shrimp trawl nets used north of Point Conception, Santa Barbara County, to be outfitted with functional FLDs. The FLDs must be blue or green LED lights (Figure 3). The devices must be pressure-rated to a depth of at least 300 meters. Furthermore, these devices must be attached within 6 inches of the forward leading edge of a trawl net's bottom panel, with each net having at least five FLDs attached to it, and each FLDs spaced four feet apart.

Figure 3. Picture of an FLD attached to the footrope of a trawl net (Credit: J. Grebel).

The addition of this subsection is necessary to implement the FLD requirement. The requirement, including the prescribed configuration, was shown to be necessary for effective eulachon bycatch reduction (Hannah et al. 2015; NOAA 2017; Figure 4). In addition to the eulachon's threatened status, limiting the amount and type of bycatch to acceptable levels is an explicit goal of the MLMA (FGC section 7056(d)).

Figure 4. Eulachon bycatch in pink shrimp trawls not equipped with LED Lights (left) and equipped with LED Lights (Right) (Credit: NOAA).

Requiring the use of blue or green light is necessary because lights in the blue and green spectrum have the greatest visibility in ocean waters and were the ones used in past FLD trials (Hannah et al. 2015). Requiring the devices to be pressure-rated to 300 meters depth is necessary because that is the maximum depth range where pink shrimp are found. The positioning and spacing of FLDs on a trawl net foot rope, which was developed by prior research effort in Oregon, was shown to be necessary to reduce eulachon bycatch (Hannah et al. 2015). The footrope of a pink shrimp trawl net tends to be much longer than 16 feet and can easily accommodate the required number of FLDs (Figure 5). This specific configuration has also been codified in regulation in both Oregon and Washington, and as such is necessary to ensure consistency between states (OAR 635-005-0630(3); WAC 220-340-500(7)).

Figure 5. A pink shrimp trawl net with its width arranged in a “U” shape. An individual can be seen seated near the top left corner of the photo for size comparison (Credit: J. Grebel).

Amend Subsection 120.1(e). Maximum Counter per Pound

The phrase “permitted in the pink shrimp trawl fishery” would be removed from subsection 120.1(e), and the possession of undercount loads would be prohibited within state waters. The subsection prescribes the minimum count of pink shrimp per pound in a landing. Since only permitted pink shrimp vessels may land pink shrimp, specifying that the rule applies to permitted pink shrimp trawl vessels is extraneous. Removing the phrase is necessary to improve clarity. Officers from the Department’s Law Enforcement Division (LED) currently cannot issue citations for undersized shrimp until the act of landing the shrimp occurs. Prohibiting possession within state waters is necessary to facilitate enforcement of take of undersized pink shrimp to allow LED officers to intercept and issue citations for undersize shrimp while vessels are in the process of transiting back to shore. Since pink shrimp fishing only occurs outside of state boundary, possession of undersized load within the boundary is indicative of an attempt to land undersized shrimp.

Add Subsection 120.1(f). Accurate Weight

New subsection 120.1(f) would be added to prescribe a protocol for any fish business landing pink shrimp to estimate the net weight of pink shrimp landed when the shrimp are mixed with ice. Under this protocol, the net weight of the shrimp in a landing would be estimated by applying the proportion of shrimp in the landing to the total weight of shrimp and ice mixture landed. This proportion of shrimp is in turn derived from samples taken during the landing process. A sample must weigh at least 3 pounds, and at least one sample must be taken from each receptacle weighed during the landing process. For a receptacle containing more than 800 lb of shrimp and ice mixture, at least one sample must be taken for every 400 lb of mixture. The proportion of shrimp in the samples would then be used as the proportion of shrimp for the landing.

For the accurate weight of fish landed as required by Section 197, the proposed regulations require the estimated net weight of shrimp to be recorded as the accurate species weight on electronic fish tickets and dock tickets. A fish business that lands pink shrimp and estimates the net weight of pink shrimp using the prescribed protocol must also record the total weight of

ice and shrimp mixture from each landing in the note pad section on the associated electronic fish ticket as well as dock ticket, if one is applicable.

The addition is necessary to explicitly allow landings to be estimated. Section 197 requires the accurate weight of any fish landings to be recorded on electronic fish tickets and dock tickets. FGC section 8042 further requires all seafood processors to pay landing fees based on the weight of each landing. However, it has been a long-standing practice within the pink shrimp fishery to mix shrimp with ice the moment they are caught (Figure 6). Separating all the shrimp from ice and weighing them in isolation, as in the case in some other commercial fisheries, is not feasible because the product quickly degrades once it is out of ice. Prescribing a consistently reproducible protocol is necessary for Department LED officers to enforce Section 197 and FGC section 8042. Furthermore, because the HCR relies on average June landings for both limit and target reference points, it is necessary that only the weight of shrimp landed be reported and the proposed protocol will align the weight estimation methodology among California, Oregon, and Washington to produce consistent results.

Figure 6. Photo taken from a pink shrimp landing showing pink shrimp mixed with crushed ice (Credit: J. Grebel).

The prescribed protocol is derived from the sampling protocol currently used by Pacific Seafood, a large pink shrimp processor in Oregon. Adhering to this protocol as closely as possible while ensuring appropriate transparency and accountability is necessary to accurately account for pink shrimp landings and allow for effective enforcement while minimizing impact to existing processors. The protocol infers the net weight of pink shrimp within a landing by taking samples that represent the proportion of shrimp to ice, then applies that proportion to the total weight of the shrimp and ice mixture landed to estimate the net shrimp weight. The minimum sample size of 3 lb is currently stipulated in the protocol.

Pink shrimp processors currently move their catch out of fishing vessels to land using bucket hoists (Figure 7). Industry representatives informed Department staff that landings in Oregon

utilize bucket hoists that carry between 300 to 400 lb of mixture each hoist, and a sample is taken from each hoist. Up to two hoists are then emptied into a large bin for weighing. The proposal adopts the term “receptacle” instead of “bin” since not all landings or processors may use plastic bins or totes, and the term “receptacle” encompasses a broader range of containers. The proposed subsection (f)(1)(B) would set a minimum number of samples by requiring each receptacle that is weighed during the landing process to be sampled at least once; this is necessary to ensure consistent sampling throughout the landing to account for variation in ice weight or content of the mixture. For receptacles that contain more than 800 lb of mixture, at least one sample must be taken for every 400 lb of mixture landed. This is necessary to help ensure that sampling frequency is maintained and does not decrease as receptacle size increases. Under this rule, a second sample would be required for a receptacle that contains 800 lb of mixture, and three samples for a receptacle that contains 1,200 lb of mixture, so on and so forth.

Figure 7. Photo of a bucket hoist transferring shrimp from a vessel (Credit: J. Grebel).

To help track compliance and allow effective enforcement oversight, it is necessary for the total weight of ice and shrimp mixture from a landing to be recorded in the notepad section of electronic fish tickets as well as dock tickets, if applicable.

Amend Subsection 705(c)(7). Northern Pink Shrimp Trawl Vessel Permit Transfer Application

The proposal would strike the Northern Pink Shrimp Trawl Vessel Permit Transfer Application, formerly FG 1419 (Rev. 5/13), and replace it with a new version DFW 1419 (New 01/01/22). Amending the regulatory text in Section 705 is necessary to update the form, maintaining that it would be incorporated by reference.

Add New Form DFW 1419 (New 01/01/21). Northern Pink Shrimp Trawl Vessel Permit Transfer Application

The proposal would add the new form DFW 1419 (New 01/01/22) to replace FG 1419 (Rev. 5/13). The application allows a current holder of northern pink shrimp permits to transfer their permit, which are attached to their fishing vessel, to another vessel that they own (either temporarily or permanently), or to a new permit holder altogether. Updating the form is necessary to allow the form to be filled out electronically. The form can then be printed for notarization and submission.

Furthermore, various potential improvements to the form that would improve clarity and processing have been identified and should thus be implemented. Lastly, minor format changes, such as updating the old form identification format ("FG 1419") to the new format ("DFW 1419") is necessary to ensure consistency with ongoing Department practice.

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At the top of the first page, the new DFW 1419 would ask the applicant to select which type of permit transfer (e.g., to a new vessel or a new owner) the applicant wishes to effectuate. This is necessary to allow the Department License and Revenue Branch (LRB) to undertake the required process.

Various information pertaining to the parties and vessels involved in a transfer would be required. The applicant would be required to provide the number of the permit that is to be transferred. Their GO ID number, which every commercial and recreational license holder has and is generated by the by Automated Data License System (ALDS), is requested so that LRB staff can locate and transfer the permit in question quickly and accurately. In addition, the current permit holder must provide their name, mailing address, physical address, phone number, and their email address. The same information would also be required of the new owner if the permit is being transferred to a new owner. The information is necessary to help LRB staff determine the identity of the parties involved in a transfer, as well as allowing staff to contact the parties as necessary. The F&G Boat #, name, and USCG (or DMV) # of the vessel that the permit is attached to must be provided. If the permit is being transferred to a new vessel, whether temporarily or to a new owner or not, the same information on that vessel must also be provided. This is necessary because the northern pink shrimp permit is attached to a specific vessel, and thus the identity of any vessel(s) involved must be provided.

Towards the bottom, the form contains a certification language stating that the current permit holder and the new owner understand the requirements of the permit, and that the person holding the permit at the end of the transfer process is eligible for the permit. This includes certifying that the said individual does not have any pending actions against them that would threaten their eligibility, and that the permit is not currently subject to any transfer restrictions.

Furthermore, the party certifies under penalty of perjury and potential loss of the permit that the information provided in the application is true, and that violations of fishing rules may lead to suspension or revocation. This language is necessary to help facilitate enforcement actions related to the transfer process. The current permit owner and the new owner, if the permit is being transferred to a new holder, must then sign and date the form. This is necessary to memorialize the application and concretely bind any signatory to the potential consequences.

At the bottom of the first page is a certification allowing for the transfer of a permit from a deceased permit holder to their heir, pursuant to subsection 120.2(e)(3). A signature line for their duly authorized representative/executor is provided. Additional certification language specific to a representative would be necessary since such an individual would be completing this form on behalf of a deceased.

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The second page of the revised form would describe the required process and documentation of a transfer. To transfer the permit to another vessel owned by the current permit holder, the permit holder must, in addition to a completed and notarized application, submit the original current permit, a copy of the current Commercial Boat Registration of the replacement vessel, copy of proof of ownership for the permitted and replacement vessels, copy of Coast Guard Certificate of Documentation, or a survey documented by a licensed marine surveyor that shows the overall length of the replacement vessel. Notarization is necessary to establish secure record-keeping due to the value of the permits. The original permit must be surrendered because the content of the permit would change to reflect the new vessel. Copies of the new vessel's registration and proof of ownership for both vessels are required to establish the legitimacy of the vessels involved in the transfer. The vessel length documentation is required since transfer of northern pink shrimp trawl permit between vessels is subject to vessel length restriction as detailed in subsection 120.2(e)(1). Once an application is received by the Department, it generally takes 20 working days to process the application.

Permanent transfer to another vessel must be accompanied by a nonrefundable fee of $200 as required under Section 705. Payment may be made through check or money order made payable to the Department. Alternatively, payment through debit/credit card bearing Visa or Mastercard logos can be made provided that the information on Page 3 is filled out. This instruction is necessary since an applicant must be informed of how fees prescribed in Section 705 can be paid. The payment methods described are standard to all licenses and permits issued by the Department.

If the permit is transferred to another vessel owned by the current holder temporarily (up to a year), the permit holder must, in addition to documentations required for a permanent transfer, submit proof of loss, destruction, or major damage to the currently permitted vessel. The permit holder must also provide a payment of $100 pursuant to subsection 120.2(e)(1). The extra documentation requirement is necessary since a temporary transfer is meant to help a permit holder to continue fishing when their regular vessel is out of commission. As such documentation is needed to ensure transparency and accountability.

If the permit is transferred to a new owner, the current permit holder must submit, in addition to a completed application, the original current permit, the original current commercial boat registration for the permitted vessel, a copy of the proposed permit holder's commercial fishing

license, a copy of the proposed permitholder's proof of ownership for the permitted vessel, and a copy of the replacement vessel's commercial boat registration. A transfer fee of $1,000 pursuant to Section 705 would also be required. An original current permit is required since the information on that permit would be outdated after the transfer. The new holder's commercial fishing license and a copy of proof of ownership of the permitted vessel are necessary to establish the qualification of the new owner and their vessel, as well as amending the ownership as necessary. The original current commercial boat registration of the permitted vessel is required since the ownership of the vessel would have changed, and the registration must be amended accordingly. Lastly a copy of a registration for the new owner's replacement vessel, if there is one, must be provided to show that the replacement vessel is owned by the new permit holder.

In the case of the death of current permit holder, information required for regular transfer to a new owner is required, since it is functionally a transfer to a new owner. Furthermore, pursuant to subsection 120.2(e)(3), such a transfer must occur within two years of the permit holder's death. A copy of the death certification is necessary to ensure accountability and proper record-keeping. Furthermore, because such an application must be made by a representative/executor, proof of a person to operate in that capacity is necessary.

At the bottom of page 2 is a standardized list of accepted forms of identification for any applicant applying for a new license, in accordance with subsection 700.4(c).

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The top of page 3 provides a list of documents required when any vessel involved in a transfer is owned by a business entity. These include an article of incorporation, article of organization, certificate of limit partnership, or a statement of partnership authority. This is necessary since some vessels may be owned by businesses rather than individuals.

Page 3 also provides a list of valid documents to show vessel ownership, which is necessary for accountability and recordkeeping. These include a USCG certificate of documentation, California DMV registration, or an out of state vessel registration.

Payment may be made through check or money order made payable to the Department. Alternatively, payment through debit/credit card bearing Visa or Mastercard logos can be made by including form DFW 1443b. This instruction is necessary since an applicant must be informed of how fees prescribed in Section 705 can be paid. The payment methods described are standard to all licenses and permits issued by the Department.

(b) Goals and Benefits of the Regulation

The FMP has been produced pursuant to the MLMA to improve management of the pink shrimp fishery and to support the orderly use of this natural resource.

The proposal would ensure the long-term sustainability and viability of the pink shrimp fishery in accordance with the objectives of the MLMA through the precautionary measures implemented by the HCR. The proposed FLD requirement is expected to greatly reduce eulachon bycatch.

Adoption of these regulations will facilitate the fishery's effort to obtain MSC Fisheries certification for sustainable, wild-caught seafood. Another added benefit if California's pink

shrimp fishery obtains MSC certification is a reduced need for shrimp caught off northern California waters to be landed in southern Oregon ports, thus supporting the return of landings to California ports, and reducing fuel consumption for many vessels, and a corresponding reduction in greenhouse gas emissions.

(c) Authority and Reference Sections from Fish and Game Code for Regulation

Section 56.00:
Authority cited: Sections 7071, 7075, and 7078, Fish and Game Code.
Reference: Sections 7050, 7055, 7056, 7070, 7071, 7075 and 7078, Fish and Game Code.

Section 56.01:
Authority cited: Sections 7071, 7075, and 7078, Fish and Game Code.
Reference: Sections 7050, 7055, 7056, 7070, 7071, 7075 and 7078, Fish and Game Code.

Section 120
Authority: Sections 7071, 7078, 8591, 8841, and 8842, Fish and Game Code.
Reference: Sections 1700, 7071, 7078, 8590, 8591, 8593, 8595, 8841, and 8842, Fish and Game Code.

Section 120.1:
Authority: Sections 7078, 8591, 8841, and 8842, Fish and Game Code.
Reference: Sections 7078, 8591, 8841, and 8842, Fish and Game Code.

Section 705:
Authority cited: Sections 713 and 1050, Fish and Game Code.
Reference: Sections 713 and 1050, Fish and Game Code.

(d) Specific Technology or Equipment Required by Regulatory Change

FLD, which consist of LED Lights designed for use by commercial fisheries that are widely available.

(e) Identification of Reports or Documents Supporting Regulation Change

- CDFW. (2021). California Pink (Ocean) Shrimp Fishery Management Plan Appendix A: Pink (Ocean) Shrimp, *Pandalus jordani*: Harvest Control Rule Analysis (May 2020). Pages A1-A12. Available from: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=195841&inline

- Hannah, R. W., Lomeli, M. J., & Jones, S. A. (2015). Tests of artificial light for bycatch reduction in an ocean shrimp (*Pandalus jordani*) trawl: strong but opposite effects at the footrope and near the bycatch reduction device. Fisheries Research, 170, 60-67. https://www.dfw.state.or.us/agency/commission/minutes/18/01_Jan/Exhibit%20F_Attachment%206_2015%20Fisheries%20Research%20Shrimp%20LED%20Efficacy.pdf.

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- MRAG Americas. (2015). Washington and California Pink Shrimp Fishery- Scope Extension to the Oregon Pink Shrimp Fishery- Pacific Seafood Group- Issuance of Public Certification Report- Marine Stewardship Council Certification. Accessed 20 August 2021. https://cert.msc.org/FileLoader/FileLinkDownload.asmx/GetFile?encryptedKey=DdoB9h3WUXzdZEWMp8FIyQdxYZeIG4TNrib2HKQ1KN5CXyina5/IzUt2aCs611Je.
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- Tavel Certification Inc. (2007). Fishery Certification Announcement- Oregon Pink (Ocean) Shrimp Trawl Fishery. Accessed 20 August 2021. https://cert.msc.org/FileLoader/FileLinkDownload.asmx/GetFile?encryptedKey=vQQpPJZ5diut8rLeVozxp/u371q8l7BMN0cs04sWQwjP69BZ7VkBjsibKnkPP2Hj.
- WDFW. (2021). 2021 Washington Pink Shrimp Fishery Newsletter. Accessed 14 July 2021. https://wdfw.wa.gov/sites/default/files/2021-03/pink_shrimp_newsletter_2021.pdf.
- WDFW. (2017). Washington Coastal Pink Shrimp Fishery Management Plan. Accessed 14 July 2021. https://wdfw.wa.gov/sites/default/files/publications/02048/wdfw02048.pdf.

(f) Public Discussions of Proposed Regulations Prior to Notice Publication

- November 9, 2017: Fish and Game Commission, Marine Resource Committee meeting in Sacramento
- October 24, 2019: Annual Fishermen/Processor Meeting
- May 13, 2020: Annual Fishermen/Processor Meeting
- November 10, 2020: Fish and Game Commission, Marine Resource Committee teleconference meeting
- March 16, 2021: Fish and Game Commission, Marine Resource Committee teleconference meeting
- May 7, 2021: Annual Fishermen/Processor Meeting via teleconference
- July 21, 2021: Fish and Game Commission, Marine Resource Committee teleconference meeting

IV. Description of Reasonable Alternatives to Regulatory Action

(a) Alternatives to Regulation Change

A more restrictive HCR was considered by Department; however, it is inconsistent with the goal of establishing a more cohesive coastwide management structure for pink shrimp. This alternative would increase the landing thresholds for both target and limit reference points by 2,500 lb, to 12,500 lb and 15,000 lb, respectively. The decision to adopt the HCR and the FLD requirement are in large part driven by a need for uniformity across the states on the U.S. west coast. A more restrictive HCR would deviate from this goal and may drive fishery participants to make the longer trip to southern Oregon ports and avoid landing pink shrimp in California ports.

An alternative to the prescribed net landing weight estimation protocol was considered where processors would submit their sampling plans for Department approval on a case-by-case basis. However, the enforceability of such a framework is found to be impractical, and the concept was not adopted.

No other alternatives to a regulatory change have been identified by or brought to the attention of Commission staff that would have the same desired regulatory effect.

(b) No Change Alternative

The no change alternative would leave existing regulations in place. The Department would continue to manage pink shrimp without a management plan under the current regulations and forgo the opportunity for more sustainable management under an FMP (e.g., HCR and FLD requirement) in contrast with the vision laid out in MLMA. This alternative would also hinder potential economic benefits and opportunities that could be attained through MSC certification.

(c) Description of Reasonable Alternatives that Would Lessen Adverse Impact on Small Business

No other alternatives were identified that would lesson adverse impacts on small business. The proposed rulemaking is anticipated to have positive impacts on small businesses by increasing the competitiveness of the California commercial pink shrimp fishery with neighboring states as the conditions that enable MSC certification are in place.

V. Mitigation Measures Required by Regulatory Action

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in

other states. The proposed action is expected to augment California competitiveness by bringing landings to ports in California in conjunction with MSC certification.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The Commission anticipates positive impacts on the creation of jobs, the creation of new business, and the expansion of businesses related to California pink shrimp commercial fishing activity in California. The Commission does not anticipate any impacts on the elimination of jobs or the elimination of existing businesses. The Commission does not anticipate any benefits to the health and welfare of California residents or worker safety. Benefits to the state's environment are anticipated through a more sustainable pink shrimp fishery and through the reduction of bycatch, particularly of federally threatened eulachon.

(c) Cost Impacts on a Representative Private Person or Business:

The proposed FLR lighting requirement on trawl lines is estimated to cost pink shrimp trawlers an estimated $275 initially and $175 in ongoing annual maintenance costs.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

The Commission anticipates that there will be costs to the state, specifically the Department. Program implementation costs are estimated to be $24,119 per fiscal year. These additional costs will be absorbed within existing Department budgets. No effects on federal funding to the state are anticipated.

(e) Nondiscretionary Costs/Savings to Local Agencies: None.

(f) Programs Mandated on Local Agencies or School Districts: None.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code: None.

(h) Effect on Housing Costs: None.

VII. Economic Impact Assessment

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State

The Commission anticipates the potential for positive effects on the creation of jobs with no effects on the elimination of jobs within the state. Growth is anticipated for jobs associated with the pink shrimp fishery such as: fishing boat operators, deckhands, fish receivers, and fish processors.

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses Within the State

The Commission anticipates the potential for positive effects on the creation of new businesses with no effects on the elimination of existing businesses within the state. Either new or latent pink shrimp trawl permittees are anticipated to become active in the fishery again after latency; additionally, new or latent fish receivers/processor business activity may also become active again.

(c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State

The Commission anticipates the potential for positive effects on the expansion of businesses currently doing business within the state. New or latent pink shrimp trawl permittees and fish receivers/processor businesses are anticipated to become active again and/or expand activities.

(d) Benefits of the Regulation to the Health and Welfare of California Residents

The Commission does not anticipate any benefits to the health and welfare of California residents.

(e) Benefits of the Regulation to Worker Safety

The Commission does not anticipate any benefits to worker safety.

(f) Benefits of the Regulation to the State's Environment

The proposal would benefit the state's environment by ensuring a more sustainable pink shrimp fishery and reduce bycatch of federally threatened eulachon.

Informative Digest/Policy Statement Overview

Unless otherwise specified, all section references in this document are to Title 14 of the California Code of Regulations (CCR), and all references to the pink shrimp (*Pandalus jordani*) fishery refer to the commercial pink shrimp fishery.

This proposal would implement the California Pink (Ocean) Shrimp, *Pandalus jordani,* Fishery Management Plan (FMP). The effort to develop and implement this FMP began in 2017, and the adoption of the FMP by the California Fish and Game Commission (Commission) is expected in April 2022. The purpose of the FMP and its implementing regulation is to update the management of California's pink shrimp fishery to be in line with Oregon and Washington. Updating the fishery's management would also assist the fishery in obtaining the Marine Stewardship Council (MSC) certification. This effort is expected to result in a more sustainable and less environmentally impactful fishery.

This regulatory proposal will add Article 7, sections 56.00 and 56.01, amend sections 120 and 120.1 to implement the FMP and amend Section 705. The proposal will add a set of reference points that is part of a Harvest Control Rule (HCR) originally developed by scientists from the Oregon Department of Fish and Wildlife (ODFW) and adapted for use in California. In addition, the proposal will also add a Footrope Light Device (FLD) requirement to reduce bycatch of the threatened southern distinct population segment of eulachon (*Thaleichthys pacificus*). This proposal will make the following amendments:

- Adding Section 56.00 to describe the adoption of the FMP, its consistency with the Marine Life Management Act, and the Fish and Game Code subsection, subsection 8842(b), would be made inoperative as it applies to the pink shrimp fishery.
- Adding Section 56.01 to clarify the role of the FMP and to incorporate it into regulation by reference.
- Amend subsection 120(b) to clarify that pink shrimp trawling is prohibited within state waters except as permitted by the Commission.
- Adding subsections 120.1(b)(1)-(4), pink shrimp may be taken April 1 through October 31, except when the stock is deemed vulnerable under the HCR.
- Add a new subsection 120.1(c)(2), which will require pink shrimp trawl vessels operating north of Point Conception, Santa Barbara County to use FLDs.
- Amend subsection 120.1(e) to improve the clarity and enforceability of the rule requiring minimum count of 160 shrimp per pound.
- Add new subsections 120.1(f)(1)-(4) which stipulates how businesses must estimate the weight of pink shrimp landings when landed mixed with ice; this is necessary to ensure consistent estimation and reporting of the accurate weight of pink shrimp landed as required by section 197.
- Updating form FG 1419 (Rev. 5/13), the Northern Pink Shrimp Trawl Vessel Permit Transfer Application, to DFW 1419 (New 01/01/22) as incorporated by reference in Section 705.

Benefit of the Regulations:

The proposal would ensure the long-term sustainability and viability of the pink shrimp fishery in accordance with the objectives of the Marine Life Management Act through the precautionary measures implemented by the HCR. The proposed FLD requirement is expected to greatly reduce eulachon bycatch. These requirements are already required in Oregon and Washington; implementing the requirements in California will bring the state's pink shrimp management in line with that or Oregon and Washington. Bringing California's pink shrimp management in line with other states will also facilitate the fishery's effort to obtain MSC certification. Another added benefit if California's pink shrimp fishery obtains MSC certification is a reduced need for shrimp caught off northern California waters to be landed in southern Oregon ports, thus supporting the return of landings to California ports and reduce fuel consumption for many vessels and greenhouse gas emissions. Updating FG 1419 to DFW 1419 would modernize the form and improve processing.

Consistency and Compatibility with Existing Regulations:

The proposed regulations are neither inconsistent nor incompatible with existing state regulations. Section 20, Article IV, of the state Constitution specifies that the Legislature may delegate to the Commission such powers relating to the protection and propagation of fish and game as the Legislature sees fit. The Legislature has delegated to the Commission the power to adopt the implementing regulation of an FMP (FGC section 7078). No other state agency has the authority to adopt FMP implementing regulations. The Commission has reviewed its own regulations and finds that the proposed regulations are neither inconsistent nor incompatible with existing state regulations. The Commission has searched the CCR for any regulations regarding the adoption of FMP implementing regulations; therefore, the Commission has concluded that the proposed regulations are neither inconsistent nor incompatible with existing state regulations.