

Appendix S Public Comments Received, Responses, and Changes to the Draft California Pacific Herring Fishery Management Plan

The Draft California Pacific Herring Fishery Management Plan (Draft Herring FMP) was received by the California Fish and Game Commission (Commission) at their June 2019 meeting. This appendix presents summaries of public comments received by the Commission on the Draft Herring FMP during the public comment period, and California Department of Fish and Wildlife (Department) responses indicating how public comments were addressed (Table S-1). This appendix also summarizes all changes to the Draft Herring FMP (Table S-2), which includes corrections to minor errors, as well as changes made in response to public comments received.

The Final Draft Herring FMP was received by the Commission for adoption at its October 2019 meeting; additional changes as adopted by the Commission in response to public comments, and corrections to minor errors, are included in this appendix and summarized in Table S-3.

Table S-1. Summary of public comments received on the Draft Herring FMP and Implementing Regulations, and Department responses.

Committer Number	Committer Name, Organization If Applicable, Comment Format, and Date	Herring FMP Section or New Title 14, CCR (Implementing Regulations) Section Referenced	Comment Summary	Response
1	<p>Edward Zeng Recreational Participant Email dated 6/18/2019</p>	<p>FMP Section 7.8.7; Title 14, CCR §28.62</p>	<p>1-a. The Herring FMP proposes a daily limit of 100 lb. For reasons stated in email (missing spawn windows, health of Herring consumption, low gear requirement for recreational Herring take, low overall recreational catches), Mr. Zeng requests that the daily bag limit be raised to a minimum of 300 lbs.</p>	<p>There are not adequate data available to assess the magnitude of recreational Herring catches, so it is unknown if overall recreational Herring catches are low. The daily limit of 10 gallons was chosen to allow for a satisfying recreational experience for individuals while ensuring that total Herring harvest remains sustainable.</p>
2	<p>Hua Bai Recreational Participant Email dated 6/18/2019</p>	<p>FMP Section 7.8.7; Title 14, CCR §28.62</p>	<p>2-a. Although a recreational limit is useful to prevent excess take, it is not practical to require recreational participants to have a scale that can weigh 100 lbs., as this requires purchase of extra equipment. An easier rule could be a big cooler full of Herring. Cooler can be sized so it is around 100lb to 200lb. This limit is easy to implement by all parties.</p>	<p>The daily bag limit of ten gallons is equivalent to two 5-gallon buckets, which are commonly owned pieces of equipment that allow participants and enforcement to assess compliance without having to weigh the Herring.</p>
3	<p>Charlie Zhao Recreational Participant Email dated 6/22/2019</p>	<p>FMP Section 7.8.7; Title 14, CCR §28.62</p>	<p>3-a. Because recreational take depends on targeting an ongoing spawning event, this type of fishing is typically a once-per-year opportunity. Mr. Zhao typically tries to take an entire year's worth of fish in a single trip (roughly equal to two 27-gal containers from Costco, for one-gallon zip lock bag consumption weekly for family all year). Even if people are commercializing recreational catch illegally, it does not affect ability of other recreational fishers to catch what they need. Mr. Zhao believes Herring are abundant, and that the commercial fishery takes much more, and has greater impact on population, than</p>	<p>The ten-gallon bag limit presented in implementing regulations is in line with the Department's goal of maintaining a satisfying recreational experience for participants. Recreational fishing limits are not intended to supply participants with a weekly food source throughout the year.</p>

			recreational take. There should not be a limit on rec take, and if there must be one, it should be set in volume for ease of measurement in field. Proposes 50 gallons as a reasonable limit if we must have one.	
3	Charlie Zhao (Continued)	FMP Section 7.8.7; Title 14, CCR §28.62	3-b. Setting a recreational limit on Herring disproportionately affects minorities because of much higher consumption of Herring among certain minority groups. As health care becomes more and more expensive and drags on the economy, Herring consumption should be encouraged instead of limited.	The Department is responsible for protecting the long-term sustainability of the Herring resource, to the extent possible, and to ensure that all of California's recreational participants can benefit from this resource for many years to come.
4	Alastair Bland Recreational Participant Email dated 7/4/2019	FMP Section 7.8.7; Title 14, CCR §28.62	4-a. Concerned about proposal to limit recreational participants to two 5-gallon buckets or less per day. Four 5-gallon bucket (~150 lb) would be more reasonable than two buckets. A four-bucket limit would eliminate gross overtake, would remove incentive to illegally sell recreationally caught fish, would allow recreational participants to catch all that's needed for a year (share w/ family and friends) during a single spawn event. The Herring FMP's claim that recreational stakeholders expressed interest in 2-bucket limit misconstrues context of statement at 2018 Public Outreach meeting w/ stakeholders in Sausalito. Mr. Bland finds it personally offensive that commercial participants have called for tight limits on recreational catch, given that commercial fishery takes a far greater amount of Herring and sells for non-consumptive use, than recreational participants, who mostly eat their catch.	This limit allows recreational participants to take up to ten gallons (approximately 100 pounds or 520 fish) per person. Families that would like to retain a greater number of fish are able to have more people participate in fishing. All comments at the 2018 Sausalito meeting were recorded in order to accurately capture stakeholder feedback.
4	Alastair Bland Second email dated 7/5/2019	FMP Section 7.8.7; Title 14, CCR §28.62	4-b. Second comment letter further stressing that the Herring FMP's assertion that feedback from recreational sector informed proposed limit is essentially an overstatement.	Stakeholder feedback is an important part of the Herring FMP development process. All comments at the 2018 Sausalito meeting were recorded in order to accurately capture stakeholder feedback. Stakeholder support for the Department's proposed limit was expressed at this meeting and in follow up correspondence, in addition to some feedback that the limit should be higher.

5	<p>John Vogel Recreational Participant Email dated 7/23/2019</p>	<p>FMP Section 7.8.7; Title 14, CCR §28.62</p>	<p>5-a. The proposed limit for recreational Herring harvest is too low. Recreational Herring is a unique fishery with opportunity to catch only once or twice a year. He understands the need to prevent over harvest, but is not aware of a significant number of recreational participants harvesting huge quantities for illicit commercialization or waste. Wants a five 5-gallon bucket as a limit.</p>	<p>The limit for recreational take allows participants to take up to ten gallons (approximately 100 pounds, or 520 fish) per person. Families that would like to maximize the amount of fish they take legally may choose to have more family members participate in fishing. While the Department understands that, due to the pulse nature of spawning events, there may be limited fishing opportunities in a season, this limit is designed to balance providing a satisfying recreational experience with the needs of the resource.</p>
6	<p>Bradley S. Cain Recreational Participant Email dated 7/24/2019</p>	<p>FMP Section 7.8.7; Title 14, CCR §28.62</p>	<p>6-a. Displeased with 1 bucket limit for recreational take of Herring. 4 or 5-bucket limit is more reasonable. Spawning is unpredictable in nature and it is difficult for rec fishers to get to an active spawning event. Sometimes miss spawns entirely. When a decent spawn event can be effectively targeted, currently take enough to stock freezer for entire year's use (consumption and bait). One bucket would not allow this as it wouldn't last a year. Additionally, 1 bucket limit is overly restrictive given volume of commercial catch annually. Rec fishers do not impact fishery, unlike commercial. Please reconsider and adopt a limit of no less than 4 buckets per day.</p>	<p>The limit for the recreational Herring fishery is not designed to supply participants with a year-long supply of either bait or daily food. The goal of this limit is to sustainably manage the resource, which can experience intense recreational fishing pressure during nearshore spawning events, while allowing fishers a satisfying recreational experience. The proposed limit takes into consideration the needs of the Pacific Herring resource as well as that of both the commercial and recreational sectors.</p>
7	<p>Kirk Lombard Recreational Participant, Blogger and Author, Fishmonger Email dated 7/24/2019</p>	<p>FMP Section 7.8.7; Title 14, CCR §28.62</p>	<p>7-a. The proposed recreational limit range goes too far. Supports limits in general. A zero-bucket limit is an overreaction. Makes six points about recreational take of Herring, including limited number of days they are accessible from shore, and that most people only take a few buckets during spawns (problem of over harvest stems from a few bad apples). Mr. Lombard contrasts recreational take with commercial gillnet take (recreationally-caught fish are eaten locally, gillnet catch is exported) emphasizing local benefit of recreational take and poor quality of gillnet-acquired fish for eating. He points out high utilization by Asian Americans and high level of complaint from non-Asian Americans</p>	<p>While the Department understands that Herring are only available during a few nearshore spawning events, those events can experience intensive recreational pressure, with hundreds of participants targeting Herring. The limit is designed to allow participants a satisfying recreational experience while limiting the impacts of harvest on the schools that spawn in these nearshore areas.</p>

			and commercial fishermen. Mr. Lombard suggests that one bucket only seems like a large quantity to individuals who do not fish for Herring, since a single bucket only lasts 3 months, and emphasizes the healthy aspects of eating low-on-the-food chain species caught locally.	
7	Kirk Lombard (Continued)	FMP Section 7.8.7; Title 14, CCR §28.62	7-b. Prefers for the lower end of recreational Herring limit range be two 5-gallon buckets, if not 3-4.	At the FMP adoption meeting on October 10, 2019, the Fish and Game Commission selected a ten-gallon recreational bag limit from the 0-10 gallon range provided by the Department. Additionally, language in the FMP referring to a specific bag limit range has been removed.
8	Russell Johnston Marine Science Institute, UC Santa Barbara Email dated 7/25/2019	FMP General	8-a. General support for adoption pending specific listed changes.	The Department appreciates support for the Herring FMP and has responded to comments received as appropriate.
8	Russell Johnston (Continued)	FMP Appendices	8-b. Provide all appendices as part of FMP and organize so as to be readily navigated by the public.	Appropriate page numbering has been applied and all appendices are included in in the Final Herring FMP. Pending adoption, for ease of download, the FMP body and appendices will be made available separately.
8	Russell Johnston (Continued)	FMP Section 2.13.2.3, Appendix D	8-c. Include Humboldt Bay spawn areas in maps of spawn areas depicted in Chapter 2 and Appendix D.	Habitat maps for management areas where no commercial activity occurs at the time of Herring FMP development are presented in Appendix D. However, the Humboldt Bay map in the Draft Herring FMP Appendix D did not include spawn areas. Detailed maps of recent observed spawning locations are available for Humboldt Bay and have been be included in the Final Herring FMP. Section 2.13.2.3 has been edited to refer the reader to Appendix D for Humboldt Bay spawn areas.
8	Russell Johnston	FMP	8-d. Present all FMP goals equally, including compliance with forage species policy and incorporation of ecosystem indicators.	The primary management goals outlined in the Herring FMP are those described in the MLMA, which provides the legal framework for fisheries

	(Continued)	Executive Summary, General		management in California. For this reason, these goals are given primacy in the Herring FMP. However, the Commission's forage species policy also played an important role in the development of the FMP objectives, as described in the Herring FMP.
9	Nick Sohrakoff Commercial Participant, Director's Herring Advisory Committee President, FMP Steering Committee Member Email dated 7/29/2019	FMP Section 4.7.2	9-a. The SFBHRA (San Francisco Bay Herring Research Association) did not file a lawsuit. The lawsuit in referenced was filed by the SFHA (San Francisco Herring Association). Please correct the draft changing SFBHRA to SFHA to reflect the proper entity that filed the lawsuit.	This error has been corrected in the Final Herring FMP.
9	Nick Sohrakoff Oral Comment w/ Anna W. (Commenter 10) at FGC Meeting 8/8/2019	FMP General	9-b. General expression of support – DHAC supported FMP 12 years ago, SC was a successful collaborative effort, would like to fund a genetic study with Audubon for stocks in CA and southern Oregon.	The Herring FMP was the result of a great deal of work by many different stakeholders, and the Department hopes to continue future collaborations to benefit the resource.
10	Geoff Shester , Oceana and FMP Steering Committee; Anna Weinstein , Audubon California and FMP Steering	FMP Appendices	10-a. Appendix R is currently missing from the FMP due to an error. Based on an agreement by the Steering Committee, this Appendix was intended to describe an increased range of catch limit adjustments resulting from ecosystem considerations that the Department may use as scientific information improves, without an FMP amendment. We request that Appendix R be included in the FMP and that the public be afforded the opportunity to review and provide	Appendix R was drafted, but omitted from the Draft Herring FMP in error. Appendix R was included in an updated Draft FMP that was made available for public viewing and comment, and is included in the Final Herring FMP. Appendix R contains information on the development of the Harvest Control Rule framework, as well as guidance for amending the decision tree as the field of ecosystem-based fishery management develops. Any increase in the bounds on ecosystem-based

	<p>Committee; Irene Gutierrez, NRDC; Greg Helms, Ocean Conservancy; Andrea Treece, Earthjustice; Paul Shively, Pew Charitable Trusts</p> <p>Letter dated 7/25/2019 (NGO Letter)</p>		<p>comments on its contents prior to final adoption of the FMP.</p>	<p>quota adjustment beyond those indicated in Chapter 7 (Figure 7-3) and Appendix R (Figure R-3) will require an amendment.</p>
10	<p>NGO Letter (Continued)</p>	<p>FMP Section 7.5.3</p>	<p>10-b. We request the FMP include clear, objective criteria for determining whether a Tier 2 stock is overfished and clarify what the rebuilding provisions are for overfished Tier 2 stocks. The MLMA requires that FMPs must specify criteria for identifying when a stock is overfished, include measures to end or prevent overfishing, and provide a mechanism for rebuilding in the shortest time period possible (FGC §7086). While the draft FMP identifies criteria for determining whether the San Francisco Bay stock is overfished as well as rebuilding provisions (Section 7.8.1), it does not contain criteria for determining whether any of the stocks outside San Francisco Bay stocks would be considered overfished when they are in Tier 2. It also does not specify how the San Francisco Bay stock would be considered overfished if it is moved to Tier 2 status in the future. The FMP does not provide objective criteria for what constitutes “very poor spawning behavior” or “an SSB too small to support fishing.” For example, this could be remedied by clarifying how “low” or “very poor spawning behavior” is determined in the Rapid Spawn</p>	<p>Section 7.5.3 has been amended in the Final Herring FMP to include specific criteria for determining when a given management area's spawning stock biomass is considered overfished or otherwise depressed under Tier 2. If the stocks drop below these respective limits, the quotas will be set to zero to promote stock rebuilding. This brings the management plan into compliance with the MLMA, which states that FMPs must specify overfishing limits and rebuilding plans.</p>

			Assessments for Tier 2 stocks and stating in the FMP that this is the criteria for overfished.	
10	NGO Letter (Continued)	FMP Appendices	10-c. The number and size of the Appendices substantially increase the size of the overall FMP document, which as presented, will complicate navigation of the FMP by the public. While each Appendix provides important information and is referenced in the body of the FMP, we suggest the Appendices be available as separate documents from the main body of the FMP, and that each Appendix contain consistent page numbering and formatting to improve navigation of the FMP.	Appropriate page numbering has been applied to all appendices in the Final Herring FMP. Pending adoption, for ease of download, the FMP body and appendices will be made available separately.
10	NGO Letter (Continued)	FMP General	10-d. Throughout the document, the term "quota" is used when referring to the annual catch limit. The term quota is problematic because in other contexts "quota" may refer to a minimum quantity or goal, rather than a maximum limit. To maintain consistency and clarity for the public, we request the FMP not use the term "quota" and instead use the term "catch limit."	The term "quota" is frequently used interchangeably with "catch limit" in fisheries management. In addition, the Marine Life Management Act uses the term "quota" rather than "catch limit" in specifying the types of conservation and management measures that should be described in an FMP (Section 7802(c)). Furthermore, the term quota has been used historically in documents related to management of California's Pacific Herring fishery. For consistency with these documents, the Final FMP retains use of the word "quota".
10	NGO Letter (Continued)	FMP Section 2.13.2.2, Appendix D	10-e. In Section 2.13.2.3 (p. 2-26), the Department's maps of Herring spawning areal extent and most-used spawning areas for Humboldt Bay should be included, in the manner San Francisco Bay's maps appear in that section. Also, these updated maps should be put into the Habitat section (pg. 319).	Habitat maps for management areas where no commercial activity occurs at the time of FMP development are presented in Appendix D. However, the Humboldt Bay map in the Draft FMP Appendix D did not include spawn areas. Detailed maps of recent observed spawning locations are available for Humboldt Bay and have been included in the Final FMP. Section 2.13.2.3 has been edited to refer the reader to Appendix D for Humboldt Bay spawn areas.
10	NGO Letter (Continued)	FMP Section 7.7.2	10-f. The Executive Summary (p. ii) and Section 7.7.2 state that complying with the Commission's Forage Species policy is a secondary goal. This prioritization undercuts the	The primary management goals as outlined in the Herring FMP are those described in the MLMA, which is the overarching legal framework for fisheries management in

			Commission's forage policy and implies that other goals are more important. We request that the FMP present all goals equally, including compliance with the Forage Species policy and incorporating ecosystem considerations into Herring management.	California. For this reason, these goals are given primacy in the Herring FMP. However, the Commission's forage species policy played an important role in the development of FMP objectives, as described in the Herring FMP.
10	NGO Letter (Continued)	FMP Executive Summary, Section 7.6.3	10-g. The Executive Summary (p. iv) indicates that the multi-indicator predictive model is adopted by the FMP. However, Section 7.6.3 makes clear that the spawn deposition surveys are the default for estimating San Francisco Bay SSB until the predictive model has 3 or more years of successful predictive power. The Executive Summary should be clarified consistent with this description in Section 7.6.3.	The Herring FMP adopts the multi-indicator predictive model as an option for estimating Spawning Stock Biomass in the San Francisco Bay management area. The Final Herring FMP Section 7.6.3 has been edited to clarify the requirements for use of the multi-indicator predictive model. Spawn deposition surveys remain the default method for determining Spawning Stock Biomass, and the Executive Summary has been edited to clarify this.
10	NGO Letter (Continued)	FMP Section 7.7.1, Figure 7-2; Appendix F	10-h. The FMP should clarify that Figure 7-2 represents the default harvest control rule, which is subject to ecosystem adjustments as indicated by the decision tree. Currently, Appendix F and Figure 7-2 are misleading because they do not reference potential adjustments to catch limits based on ecosystem considerations, therefore implying that these represent the final catch limit.	Chapter 7 has been modified so that the caption for Figure 7-2 clarifies that the black line indicates the unadjusted quota for the season. Section 7.7 describes how the quota may be adjusted for ecosystem considerations.
10	NGO Letter (Continued)	FMP Executive Summary	10-i. Given California's leading role in addressing the climate crisis, the Executive Summary should emphasize and highlight the several areas where climate change is addressed in the FMP, specifically the use of climate indicators in the predictive model, the use of management strategy evaluation to ensure the harvest control rule is robust to future climate change scenarios, and the use of climate indicators as ecosystem considerations.	Adaptive management frameworks based on the best available science and including multiple indicators, such as the framework presented in the Herring FMP, are key tools for promoting climate change resilience in fisheries management, and this is emphasized throughout the document. The Executive Summary has been updated in the Final Herring FMP to better reflect this.
10	NGO Letter (Continued)	FMP Acknowledgements	10-j. Finally, we request that the Acknowledgments section recognize all cash funding sources for the FMP, specifically the	The Gordon and Betty Moore Foundation has been added to the Acknowledgements in the Final Herring FMP.

			Gordon and Betty Moore Foundation and the National Fish and Wildlife Foundation.	
10	NGO Letter (Continued)	FMP General	10-k. For the [several stated] reasons, we support the adoption of the FMP. We request the Commission incorporate the above recommendations on the Draft Herring FMP into the final version and urge the Commission to adopt the Final Herring FMP at its October meeting, as scheduled.	Support for the Herring FMP is appreciated. Comments received have been responded to here and in the Final FMP as appropriate.
11	Anna Weinstein Audubon California Herring FMP Steering Committee +3,258 Individual Signatories Letter dated 7/31/2019	FMP General	11-a. [Signatories and Audubon] support the adoption of the Fishery Management Plan (FMP) for Pacific Herring at your meeting in October 2019, pending specific changes listed.	Support for the Herring FMP is appreciated. Comments received have been responded to here and in the Final FMP as appropriate.
11	Anna Weinstein +3,258 Individual Signatories (Continued)	FMP Appendices	11-b. All the Appendices should be provided as part of the FMP and organized so they can be readily navigated by the public.	All appendices, including Appendix R (see response to Comment 9-a), are now available for the public to review, and include appropriate page numbering. Pending adoption, for ease of download, the FMP body and appendices will be made available separately.
11	Anna Weinstein +3,258 Individual Signatories (Continued)	FMP Section 2.13.2.3, Appendix D	11-c. The Department's maps of Herring spawning area extent and most-used spawning areas for Humboldt Bay should be included in the FMP.	Habitat maps for management areas where no commercial activity occurs at the time of Herring FMP development are presented in Appendix D. However, the Humboldt Bay map in the Draft Herring FMP Appendix D did not include spawn areas. Detailed maps of recent observed spawning locations are available for Humboldt Bay and have been included in the Final FMP. Section 2.13.2.3 has been edited

				to refer the reader to Appendix D for Humboldt Bay spawn areas.
11	Anna Weinstein +3,258 Individual Signatories (Continued)	FMP Executive Summary	11-d. In the Executive Summary and throughout the FMP, present all FMP goals equally, including compliance with the forage species policy and incorporating ecosystem considerations into Herring management.	The primary management goals as outlined in the FMP are those described in the MLMA, which is the overarching legal framework for fisheries management in California. For this reason, these goals are given primacy in the Herring FMP. However, the Commission's forage species policy played an important role in the development of the FMP objectives, as described in the FMP.
11	Anna Weinstein Oral comment w/ Nick S. (Commenter 8) at FGC meeting 8/8/2019	FMP General	11-e. General support. Commend and thank involved parties, including FGC. FMP is groundbreaking.	Support for the Herring FMP is appreciated.
11	Anna Weinstein Oral comment w/ Nick S. (Continued)	FMP General	11-f. Audubon has provided comment and non-substantive requests to ensure transparency and MLMA compliance (formatting fixes, better assembled appendices on website, tier 2 fishery criteria).	Comments received have been responded to here and in the Final FMP as appropriate.
11	Anna Weinstein Oral comment at FGC meeting 10/10/2019	FMP	11-g. Supports action to adopt Herring FMP and regs. Climate-ready framework that protects a very important food source for a variety of predators. Also supports properly sized commercial fleet and allows a generous yet sustainable catch. Really proud of this plan, learned a lot from this process. Grateful for our environmental colleagues. Barnes wisdom helped move us forward early on. Thanked a number of individuals. Also support pursuing a lessons learned that we think could help inform other FMPs.	Support for the Herring FMP is appreciated. The Herring FMP was the result of a great deal of work by many different stakeholders, and the Department hopes to continue future collaborations to benefit the resource.

12	Nils Warnock Audubon Canyon Ranch (ACR) Letter dated 7/31/2019	FMP Section 7.8.2.2	12-a. ACR agrees with the Commission's recommendation to reduce the maximum number of permits allowed for Tomales Bay (from 35 to 15 via attrition), but further recommends that no new permits be issued for Tomales Bay (instead of beginning to issue once number of Tomales permits drops below 15). Rather, Tomales Bay would be best left as a protected area for Herring. Cites linked importance of Herring to seabirds, lack of commercial interest in Tomales Bay Fishery, and proximity to SF bay fishery as reasons.	The FMP specifies a management approach for Pacific Herring in Tomales Bay that is compatible with both conservation and fishing goals. Should there be renewed commercial interest in Herring fishing in Tomales Bay, the quota will be set at a small fraction of historical quotas to ensure that the Tomales Bay Herring stock can serve as food for predators as well as support a small commercial fishery, as described in Chapter 7.
12	Nils Warnock (Continued)	FMP Section 7.8.7; Title 14, CCR §28.62	12-b. ACR endorses FMP's recommendation of a recreational bag limit range of 0-100 lbs, equivalent to up to ten gallons, or two 5-gallon buckets of Herring, each containing 260 fish.	Support for the recreational bag limit in the Herring regulations is appreciated.
12	Nils Warnock (Continued)	FMP Chapter 7 - Tomales Bay Spawning Biomass Surveys	12-c. As current monitoring data are critical for helping managers steward resources, especially during these times of rapid climate change, ACR encourages the Commission to recommend renewed Herring monitoring in Tomales Bay.	The Herring FMP identifies management areas with active commercial fisheries as the highest priority for monitoring. As described in Chapter 7, an appropriate level of monitoring will resume in Tomales Bay should commercial fishing activity resume there.
12	Nils Warnock (Continued)	FMP General	12-d. With some suggested modifications, Herring FMP will provide strong guidance for the long-term sustainable mgmt. of Pacific Herring in California, including Tomales Bay.	Support for the Herring FMP is appreciated. Comments received have been responded to here and in the Final FMP as appropriate.
13	Pam Young Golden Gate Audubon Society Letter dated 7/31/2019	FMP General	13-a. General support for the Herring FMP, including use of the best available science to support sustainable management.	Support for the Herring FMP is appreciated.
14	Morgan Patton, West Marin Environmental Action	FMP Section 7.8.7; Title 14, CCR §28.62	14-a. Consistent with past comments and Audubon Canyon Ranch's comments, EAC supports the Herring FMP's daily bag limit two 5-gallon buckets of Pacific Herring	Support for the recreational bag limit in the Herring regulations is appreciated.

	<p>Committee (EAC); Ashley Eagle-Gibbs, EAC</p> <p>Letter dated 8/1/2019</p>			
14	<p>Morgan Patton, Ashley Eagle Gibbs (Continued)</p>	<p>FMP Chapter 7, General</p>	<p>14-b. While supportive of the overall management strategy in Chapter 7 of the Herring FMP, recommend full closure of commercial fishery in Tomales Bay, due to a number of factors. These include low Herring numbers, environmental considerations, lack of interest, high operating costs, and poor market conditions. No recent research (other than observations) has been conducted to indicate adequate biomass for the Tomales Bay fishery operation. Recommend CDFW (or other qualified and independent researchers) conduct renewed monitoring of Herring populations in Tomales Bay in order to compare against outdated information that is now 13 years old [limited monitoring conducted during 2006-07 season] to better understand the population dynamics</p>	<p>Support for the Herring FMP's management strategy is appreciated. The Herring FMP specifies a management approach for Pacific Herring in Tomales Bay that is compatible with both conservation and fishing goals. As described in Chapter 7, a precautionary quota is available, and an appropriate level of monitoring shall occur should commercial interest in the Tomales Bay stock resume.</p>
14	<p>Morgan Patton, Ashley Eagle Gibbs (Continued)</p>	<p>FMP Chapter 7, General</p>	<p>14-c. The Tomales Bay Herring fishery should only be open after a comprehensive and scientifically based assessment and analysis is made of the Herring stocks, current and future spawning estimates, biomass, etc. led by Department of Fish and Wildlife staff and/or other trained and independent researchers, with the involvement of multiple stakeholders. EAC requests that these opportunities are truly collaborative and include stakeholders representative of multiple interests including local West Marin fisherman, individuals from non-extractive industries, and environmental organizations.</p>	<p>Should there be renewed commercial interest in Herring fishing in Tomales Bay, the Herring FMP specifies that the quota will be set at precautionary harvest rate to ensure that the Tomales Bay Herring stock can fulfill its ecological role as forage for predators as well as support a small fishery. This harvest rate can only be increased with additional monitoring demonstrating the population can support additional harvest, including determination of the Spawning Stock Biomass. The Department welcomes the opportunity to collaborate with stakeholders to increase our collective</p>

				understanding of California's Pacific Herring stocks.
14	Morgan Patton, Ashley Eagle Gibbs EAC Second letter Dated 9/26/2019	FMP Chapter 7,	14-d. Reiterates comments from 8/1/2019 letter, specifically 1) support for the recreational limit, 2) support of overall management goals, which the recommendation that Tomales Bay be closed to commercial take, and 3) commercial take in Tomales Bay should not be allowed until certain research and monitoring is conducted.	See responses above to comments 14-a , 14-b , and 14-c .
14	Morgan Patton, Ashley Eagle Gibbs (Second letter Continued)	Title 14 CCR §28.60	14-e. Recommends that the recreational take of Herring roe be prohibited in Tomales Bay due to sensitive nature of the ecosystem there. Specifically, waterbird populations in Tomales Bay are in decline, Tomales Bay serves as important marine mammal habitat, and eelgrass in Tomales Bay is important to herring. Furthermore, eelgrass is likely to be mistaken for kelp and taken along with the recreational take of roe, even though this is prohibited.	The daily limit of 25 lb wet weight, including roe and vegetation, is meant to allow for a satisfying recreational experience for individuals while ensuring that total Herring harvest remains sustainable. The Department recognizes the importance of eelgrass and other sensitive habitat types in Tomales Bay, and the prohibition on take of eelgrass is meant to prevent impacts to this important species during recreational fishing activity.
15	Julie Thayer, Ph.D. Farallon Institute Letter dated 7/31/2019 in attachment to Email dated 8/1/2019	FMP Chapters 3, 7; Appendices E, F	15-a. Work conducted by the Farallon institute as a contractor on FMP development was not accurately represented in the draft FMP. Includes specific description of issues with information presented in Ch 3, Ch 7, and Appendix E, and F. Inaccurate representation of this work led to erroneous conclusions by Peer Review of FMP science. Requests that actual contractor work be presented in the appendices.	The Farallon Institute was subcontracted to assist the Project Management Team with developing scientific advice for the management of Pacific Herring. This work produced a number of valuable contributions to the field of ecosystem-based fishery management, and the parts that were used in the development of the FMP's management framework were provided to the Peer Review, are reproduced in Appendices E and F. However, there were other components of the work produced that were evaluated by the Project Management Team, the Department, and the Steering Committee that were deemed to be not suitable for use in the management framework at this time. The Peer

				Review committee requested to see, and were provided, additional components from the Farallon Institute's work that were not used in the Herring FMP during the review process. As such, the review committee's final recommendation does take into account these additional components as well.
15	Julie Thayer, Ph.D. (Continued)	FMP Chapter 7, Section 7.6.3	15-b. Chapter 7 incorrectly states that the predictive model needs to be tested before use, though it has already been validated against 27 years of SF Bay biomass.	The Herring FMP adopts the multi-indicator predicted model as an option for estimating Spawning Stock Biomass in the San Francisco Bay management area. The Final Herring FMP Section 7.6.3 has been edited to clarify the requirements for use of the multi-indicator predictive model. Specifically, the model's use depends on availability of required data and its continued predictive skill.
15	Julie Thayer, Ph.D. (Continued)	FMP Appendix E	15-c. Appendix E summarizes a draft report of the SSB forecasting model submitted by Farallon Institute early in the FMP development process, instead of the final publication of this work which included key revisions to the original draft	The information summarized in appendices E and F includes the portions of the work produced by the Farallon Institute under subcontract by the Project Management Team that were included in the Herring FMP. The final publication referred to (Sydeman and others, 2018) does not include the multi-indicator predictive model adopted by the Herring FMP. However, this publication is referenced in the FMP, including in Appendix E, as appropriate.
15	Julie Thayer, Ph.D. (Continued)	FMP Chapter 9, Appendix R	15-d. Considerations for future research and management should include the importance of making ecosystem-based catch adjustments more meaningful. Re-instate appendix R, allow wider discretion on quota adjustment bounds in HCR framework.	Appendix R was drafted, but omitted from the May-dated Draft FMP in error (see response to Comment 9-a). It has been included in the Final FMP and contains information on the development of the Harvest Control Rule framework, as well as guidance for amending the Decision Tree as the field of ecosystem-based fishery management develops. Any increase in the bounds on ecosystem-based quota adjustment beyond those indicated in Chapter 7 (Figure 7-3) and Appendix R (Figure R-3) will require FMP amendment.

15	Julie Thayer, Ph.D. (Continued)	FMP Sections 2.4, 5.6, Chapter 8	15-e. Importance of temporal variability in spawning should be explicitly stated in the FMP (w/ specific recommendations for Sections 2.4, 5.6, and Chapter 8).	The observed temporal variability in Herring spawning is stated a number of times throughout the Herring FMP. In particular, Section 2.4 and Figure 2-4 describe the available information on this variability. Section 8.6 also flags changes in observed spawning habitat over time as a key uncertainty and avenue for future research.
15	Julie Thayer, Ph.D. (Continued)	FMP Appendices	15-f. The FMP is prohibitively large and difficult to navigate due to myriad of appendices, both current and historical information. Suggest final document only include immediately-relevant supplemental material such as formulas and decision trees, w/ clear page numbering. Historical info should be separated into distinct files that can be downloaded separately, and are also clearly referenced.	California's Herring fishery is complex, with a long history of management. The FMP serves as a central repository for all of the available information on Pacific Herring and its management in California. Pending adoption, for ease of download, the FMP body and appendices will be made available separately.
16	Jennifer Fearing Fearless Advocacy Oral comment at FGC meeting 8/8/2019	FMP General	16-a. Strong support for adoption in October. The FMP is a tremendous step forward for Ecosystem-Based Management. Appreciate CDFW incorporating Appendix R	Support for the Herring FMP is appreciated. Appendix R was drafted but was omitted in error (see response to Comment 9-a). It has been included in an updated draft of the FMP and is available for review.
16	Jennifer Fearing (Continued)	FMP Section 7.5.3	16-b. As per NGO Letter (see Commenter 9), recommendations to strengthen MLMA compliance w/out altering timeline for adoption, request Fish and Game Commission direct CDFW to address those recommendations prior to adoption.	Section 7.5.3 has been amended in the Final Herring FMP to include criteria for determining when a given management area's spawning stock biomass is considered overfished or otherwise depressed under Tier 2. If the stocks drops below these limits, the quotas will be set to zero to promote stock rebuilding. This brings the management plan into compliance with the MLMA, which states that FMPs must specify overfishing limits and rebuilding plans.

17	Geoff Shester Oceana FMP Steering Committee +3,091 California Residents Letter dated 9/24/2019	FMP and Regulations General	17-a. General support for Herring FMP and associated implementing regulations. Discussion of importance of Herring's ecosystem role, stresses importance of precautionary management for Herring. Commends Fish and Game Commission and Department of Fish and Wildlife for precautionary management, describes FMP in historic terms due to ecosystem adjustments. Points out that adoption of FMP and implementing regulations will advance implementation of Commission's forage species policy and ensure responsible fishery management moving forward. Requests that Commissioners please protect Herring and adopt the FMP.	The Department appreciates support for the FMP and the description of its various benefits to Herring and the California Current Ecosystem, as well as the future of responsible fishery management in California.
17	Geoff Shester Oral Comment at FGC Meeting 10/10/2019	FMP	17-b. Adoption is long-time coming, asking FGC to adopt as is without any further changes. Long road, including starting with forage species policy in 2012, then sat down with industry and Audubon to see what this could look like, raised money, and helped reviewed content along the entire way. Support CDFW, have brought all sides together for a very controversial issue where both sides were fighting adamantly for their views, compromised and think this does result in a number of positive aspects (including ecosystem based quota adjustments and tiered mgt.), been a valuable experience and ask Commission to adopt. Moving forward would be good to have a lessons learned, but think we have something we can all be proud of.	Support for the Herring FMP is appreciated. The FMP had valuable input from a variety of interested parties and the financial support from contributors was essential to its completion.
17	Geoff Shester (continued)	Implementing Regulations	17-d Ask FGC to adopt implementing regs package for FMP.	Support for adoption of the implementing regulations package is appreciated.
17	Geoff Shester (continued)	Implementing Regulations	17-e Support CDFW's proposal to do a follow up package for HEOK comments.	The Department has committed to working to resolve some of the concerns with the proposed HEOK regulations, including meeting the HEOK representative at a Marine Resources Committee meeting on November 5, 2019 and the possibility of a follow up rulemaking

				package in 2020 to address the remaining HEOK issues.
17	Geoff Shester (continued)	Implementing Regulations	17-f Hoped the regs would apply this season, but learned they will not go into effect until next season. Latest biomass estimate presented at the DHAC was ~ 8k tons which is well below the threshold and if the FMP was implemented it would be considered a depleted state.	The spawning stock biomass estimate of 8,030 is one of the lowest on record, however existing regulations establish a 750 ton gillnet quota during the 2019-20 season. This quota allows for a gillnet-sector target harvest rate (this year's quota as a percentage of last year's biomass) of 9.3%, which the Department considers to be precautionary.
17	Geoff Shester (continued)	Implementing Regulations	17-g Consider the current stock of the population for the rec bag limit considerations. Do support rec bag limit.	The Fish and Game Commission selected a ten-gallon recreational bag limit from the 0-10 gallon range provided by the Department.
18	Dan Yoakum Commercial Participant Letter dated 9/24/2019 Attached to Email dated 10/02/2019	FMP and Regulations General	18-a. The Department did not adequately incorporate recommendations from the HEOK sector into the FMP's rulemaking package. As a result, proposed regs create potential for violations when trying to conduct normal HEOK operations. Several specific issues are identified as (comments 18-b through 18-h), and Mr. Yoakum requests that the Department work with him to resolve these issues.	Department staff engaged with Mr. Yoakum, in his capacity as the HEOK-sector representative, by way of multiple, formal, in-person meetings, as well as numerous phone calls, regarding the proposed regulations. The Department has committed to working with Mr. Yoakum to resolve some of the concerns with the proposed HEOK regulations mentioned in his letter, including meeting at a Marine Resources Committee meeting on November 5, 2019 and the possibility of a follow-up rulemaking in 2020 to address the remaining HEOK issues. Regarding specific issues identified by Mr. Yoakum with this regulatory package, see responses to comments 18-b through 18-h below.
18	Dan Yoakum (continued)	FMP Section 7.8.1.1, Title 14 CCR §55.02(d)	18-b. Doing away with permit quotas will result in increased competition, reduced cooperation, inferior quality product, and will be inconsistent with HEOK regulations in Canada, Alaska, and Washington.	Proposed regulations in §55.02(d) state that the Director of the Department shall set quotas for all sectors according to Chapter 7 of the FMP. Under the FMP, HEOK permits are separate from Herring gillnet permits. Section 7.8.1.1 of the FMP's Chapter 7 describes HEOK quota as being set to a product weight equivalent to approximately 1% of the total quantity of eggs produced by the most recent SSB. The permit quotas under regulation prior to the FMP were

				<p>derived from a system that subtracts HEOK quota from the total gillnet quota, despite the HEOK sector not taking any adult fish. The rationale for setting HEOK quotas at 1% of the most recent SSB's egg deposition is addressed in Appendix N of the Herring FMP.</p> <p>Department staff will work with Mr. Yoakum to incorporate allocation of the HEOK quota to individual permittees in a follow-up rulemaking in 2020 (see response to comment 18-a).</p>
18	Dan Yoakum (continued)	Title 14 CCR §164(h)(4)	18-c. Prohibiting weekend landings will negatively affect the quality of product, and effectively reduce fishable time by 1/3, since HEOK must be harvested and landed immediately after spawn on the kelp, and participants cannot control when fish spawn.	As described in the Necessity and Rationale for this regulatory change, the intent of this requirement was to improve the Department's ability to track the catch relative to the quota and determine when the quota has been reached. Quota managed fisheries, like the HEOK fishery, require staff to be able to track landings in near-real time, and it is difficult for Department staff to track landings at night and/or during the weekend. However, in light of points made by Mr. Yoakum's comment, the Department will work to address this issue in a follow-up rulemaking in 2020 (see response to comment 18-a).
18	Dan Yoakum (continued)	Title 14 CCR §164(a)(3)	18-d. The definition of "processing" omits washing/rinsing, which needs to be included.	The Department will address this issue in a follow-up rulemaking in 2020 (see response to comment 18-a).
18	Dan Yoakum (continued)	Title 14 CCR §164(g)	18-e. Proposed regulations prohibit marine mammal deterrent devices during HEOK fishing in San Francisco Bay.	The HEOK sector is a high-visibility fishery in San Francisco Bay. Department program staff worked closely with Law Enforcement Division staff on this requirement, and it was made clear to Mr. Yoakum that he would not be allowed to harass seals and/or sea lions in San Francisco Bay. An experimental fishery permit is an available option to HEOK participants who would like to develop seal-exclusion gear that does not harass marine mammals.

18	Dan Yoakum (continued)	Title 14 CCR § 164(d)(1)(E) and (F)	18-f. Gear requirements for the allowable length of corklines and their marking requirements ignore that lines must be broken down into smaller segments in order to be operated.	Department program staff worked with Law Enforcement Division to develop this requirement, the intent of which is that any line engaged in fishing be 1,200 feet in length or less and adequately marked at each end.
18	Dan Yoakum (continued)	Title 14 CCR § 164(f)	18-g. The noise rule in 164(f) is unnecessary, as the HEOK sector is quiet by nature. Including this rule leaves HEOK participants open to harassment.	This requirement has always applied to all Herring permittees in §163 (including HEOK) prior to FMP-implementing regulations. Under FMP-implementing regulations, harvest of HEOK is addressed in § 164, including noise reduction requirements.
18	Dan Yoakum (continued)	Title 14 CCR § 163(e)(3)(B)	18-h. The requirement that the HEOK permittee be aboard any vessel engaged in harvesting, processing, or transporting herring eggs is not workable, as kelp is not hung aboard the vessel. Dan recommends that the requirement be changed to 'in the vicinity' of the vessel, so that permittees may be allowed to work from, for example, their raft(s).	Department program staff worked with Law Enforcement Division to develop this requirement, the intent of which is that the permittee be present during harvest, processing, or transporting of HEOK product. Language such as "in the vicinity" is vague, and could potentially be interpreted in such a way that no permittee need be present during these operations, which is not sufficient from an enforcement standpoint. However, the Department will clarify this requirement in a follow-up rulemaking in 2020 (see response to comment 18-a).
18	Dan Yoakum Oral comment at FGC meeting 10/10/2019	FMP and Regulations General	18-i. There are many problems with the regs and the HEOK fishery that came about because CDFW took recommendations but did not reach out to review them, just kept pushing it off and never talked about the changes they made.	See responses above to comment 18-a . The Department has committed to working with Mr. Yoakum to resolve some of the concerns with the proposed HEOK regulations mentioned in this letter, including meeting at a Marine Resources Committee meeting on November 5, 2019 and the possibility of a follow up rulemaking in 2020 to address the remaining HEOK issues.
18	Dan Yoakum (continued)	FMP and Regulations (Reiterated)	18-j. Reiterated comments from 9/24/2019 letter, specifically 1) maintain individual quotas. 2) Continue to allow weekend landings. And 3) to fish HEOK, you have to be able to get off the vessel while fishing HEOK.	See responses above to comment 18-b , 18-c , and 18-h .

<p>19</p>	<p>Neha Ram Student Scripps Institute of Oceanography Oral comment at FGC meeting 10/10/2019</p>	<p>Herring FMP</p>	<p>19-a. Support for Herring FMP along with some concerns. 1) pushing not only for more research on climate change effects, but also concrete mitigation measures using scientific information produced, 2) whale entanglement – collaboration, 3) mitigation measures to protect marine mammals, birds and large fish.</p>	<p>Support for the Herring FMP is appreciated, and the Department welcomes the opportunity to collaborate with stakeholders and researchers to increase our collective understanding of California's Pacific Herring stocks. Due to the small mesh size of the gillnets used and the nearshore fishing locations, whale entanglement is not likely in this fishery. Close tending of nets reduces the chance of entangling other marine mammals, birds and large fish.</p>
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Table S-2. Summary of minor corrections and changes to the Draft Herring FMP.

Document Section	Page Number	Correction
Title page	NA	<p style="text-align: center;">Draft California Pacific Herring Fishery Management Plan</p> <p style="text-align: center;">Draft</p> <p style="text-align: center;">August 08, 2019 <u>October 25, 2019</u></p>
Executive Summary	ii	<p>The overarching goal of this FMP is to ensure the long-term sustainable management of the Herring resource consistent with the requirements of the Marine Life Management Act (MLMA) and the Commission's forage species policy. In particular, it seeks to:</p> <p>(...)</p> <ul style="list-style-type: none"> • <u>describe the effects of climate change on California's Herring stocks, and identify environmental and ecosystem indicators that can inform effective management,</u>
Executive Summary	iv	<p>The currently used method is available as a backup should data be unavailable or should environmental changes compromise the predictive power of the model. The FMP adopts this multi-indicator predictive model as an option for estimating the coming year's SSB in the San Francisco Bay management area, contingent upon availability of necessary input data and continued predictive power by the model. Spawn deposition surveys remain the default method for determining SSB.</p>
Acknowledgements	xxii	<p>Finally, the <u>Gordon and Betty Moore Foundation and the National Fish and Wildlife Foundation</u> provided the necessary funding to support the Project Management Team, composed of Dr. Sarah Valencia, Huff McGonigal, and David Crabbe.</p>
2.8, Figure 2-5 caption	2-10	<p>Figure 2-5. Observed age distribution of the research catch in San Francisco Bay, Percent at age, by number, of ripe fish for the San Francisco Bay spawning stock biomass. Based on age composition of the research catch (excluding age-1 fish), 1982-83 through 2017-18 seasons. Note that no sampling was conducted in final age composition was not determined for the 1990-91 and 2002-03 seasons.</p>

2.8	2-10	...the North Pacific Marine Heatwave (Chapter <u>Section 3.2</u>).
2.13.2.3	2-26	Herring spawning occurs in both North and South Bays, although North Bay typically receives the majority of spawning activity. Spawning has occurred every year in North Bay since the fishery began during the 1973-74 season. <u>Maximum spawning extents observed during the 2014-15 through 2017-18 seasons are presented in Appendix D.</u>
4.2, Figure 4-2 caption	4-3	California Herring landings by area in short tons between 1973 and 2017 in San Francisco Bay (blue), Tomales Bay (yellow), Humboldt Bay (gray), and Crescent City Harbor (black). <u>The commercial fishery was closed for the 2009-10 season. Note that this figure does not include landings from the ocean waters fishery (Monterey Bay).</u>
4.7.2	4-16	In 2014, the SFBHRA <u>San Francisco Herring Association</u> , a group of commercial Herring fishermen, filed a lawsuit against Pacific Gas and Electric (PG&E) for contamination of the San Francisco Bay waterfront.
4.7.3, Table 4-2 caption	4-18	2017 <u>Commercial landings and ex-vessel value for the five most valuable fisheries each in the San Francisco, Tomales, Eureka, and Crescent City ports in 2017.</u>
5.6.1, Table 5-2 caption	5-12	Table 5-2. California Herring fishery season dates <u>prior to the implementation of this FMP.</u>
5.6.2.2	5-13	Currently, Herring offloading only takes place at Pier 45 on the San Francisco waterfront. Remove sentence as unnecessary and potentially inaccurate in the future. Section is titled "Nighttime Restrictions on Unloading", and content functions just fine without this sentence.
6.2.1	6-12	Spawn surveys in Tomales and Humboldt Bays were discontinued after 2006-07 due to staffing and resource constraints. Due to low Herring roe prices and lack of processing facilities, <u>at the time of FMP development, no commercial fishing has occurred...</u>
7.4	7-6	The Tier 1 quota for Crescent City Harbor is set at ± 11 <u>11</u> tons (±10 <u>10</u> metric tons), which is 50% of the average historical <u>landings</u> and a 60% <u>63%</u> decrease from the quota prior to the adoption of this FMP.
7.5.3	7-8	Conversely, under a Tier 2 monitoring protocol, the quota shall be reduced to zero <u>as a rebuilding provision</u> in years where either the employed Rapid Spawn Assessment indicates poor spawning behavior, or spawn deposition survey-derived SSB estimates indicate an SSB too small to support fishing <u>that is overfished or otherwise depressed.</u> <u>For San Francisco Bay, the stock is considered overfished or otherwise depressed at SSB estimates below the 15,000-ton cutoff established by the HCR (see Section 7.7.1).</u>

		For Tomales Bay and Humboldt Bay, the stock is considered overfished or otherwise depressed at stock sizes that are less than 20% of the long-term average biomass (including historical and contemporary SSB estimates) for each respective management area. For Crescent City Harbor, the stock is considered overfished or otherwise depressed at SSB estimates less than 66 tons, which is approximately three times the average historical catch in that management area.
7.6.2.1	7-10	All necessary data are <u>may be</u> available by the end of September each year, and prior to the beginning of the fishing season, which begins in December.
7.6.3	7-12	While the predictive model provides a promising avenue for incorporating additional indicators into Herring management, as well as for improving predictive accuracy, the model needs to be tested before it is used to set quotas. To do this, the model must have three consecutive years where a) all of the data required are available, and b) demonstrate that over those three years it has greater predictive skill than the spawn deposition survey alone. At that point the model's use depends on availability of required data and the model's continued predictive skill (see Section 7.6.2.1, Appendix E). When these two requirements are met, the Department may decide to use the predictive model in yearly quota setting.
7.7.1, Figure 7-2 caption	7-13	HCR Harvest Control Rule describing the relationship between estimated SSB and <u>unadjusted</u> quota for subsequent season of the San Francisco Bay Herring commercial fishery.
7.7.2.3	7-21	Should one or more of the criteria in the decision tree recommend that the Department consider reducing the quota, a 300-ton (272 metric ton) reduction in the harvest should be applied <u>the target harvest rate may be reduced by up to 1%</u> (Figure 7-3).
7.7.2.3	7-22	Conversely, if an increase is warranted, a 300-ton increase to the quota should be applied <u>the target harvest rate may be increased by up to 1%</u> (Figure 7-3).
9.2	9-4	Additionally, as the science evolves, the Department may adjust the magnitude of changes to the quota recommended by the decision tree up to the limits defined in Appendix R <u>Section 7.7.2.3</u> , provided the supporting science is clearly documented (see Appendix R).
All appendices	<i>multiple</i>	<i>Insert incomplete and/or missing page numbers into all pages of all appendices</i>

Appendix D, Figure D3 and caption	D-3	<i>Include recent ('14-'15 thru '17-'18 seasons) spawn areas in Humboldt Bay map; Figure D3. Eelgrass and other habitat types in Humboldt Bay (from Schlosser and Eicher, 2012) and Herring spawn coverage.</i>
Appendix D, Figure D6	D-6	<i>Include Noyo Harbor eelgrass map; update figure numbers in appendix.</i>
Appendix E	E-7	<i>Based on these criteria, the model that provided the best prediction for the current year SSB included three factors: SSB_{yr-1}, YOY_{yr-3} and $SST_{(Jul-Sep)_{yr-1}}$ (Table E-3 and Figure E-3). Notably, current Department fishing quotas are based on SSB_{yr-1}. The three-factor models, including the current model used by the Department out-performed simpler one- and two-factor models by a large margin (improved $r^2 = 0.64-0.67$ compared to 0.31 to 0.58; improved model fit AIC = 188 to 190 compared to 193 to 204, and reduced predictive error of 63% to 64.6% compared to 77% to 119%) (Sydeman and others, 2018; Table E-3). The three-factor model that provided the best prediction for the current year SSB included: SSB_{yr-1}, YOY_{yr-3} and $SST_{(Jul-Sep)_{yr-1}}$. Notably, current Department fishing quotas are based on SSB_{yr-1}.</i>
Appendix R	<i>multiple</i>	<i>Included Appendix R in response to public comment (see Table S-1).</i>
Appendix S	<i>multiple</i>	<i>Add Appendix S, including summary of public comments received and responses (Table S-1), and summary of changes to the FMP (Tables S-2 and S-3).</i>
Chapter 11. Works Cited	11-10	<i><u>Merkel & Associates. 2016. Noyo River and Harbor Maintenance Dredging Pre-dredge Eelgrass Survey Results Transmittal. Prepared for U.S. Army Corps of Engineers San Francisco District, September 2016.</u></i>
All	<i>multiple</i>	<i>Various corrections to capitalization, spacing, spelling, punctuation, font, nomenclature, and formatting.</i>

Table S-3. Summary of minor corrections and changes to the Final Draft Herring FMP as adopted.

Document Section	Page Number	Correction
Executive Summary	vi	<p><i>Recreational Regulations</i> – Prior to this FMP, there was no limit for the recreational take of Herring. To address this, the FMP recommends a range between 0 and 100 pounds, which is equivalent to up to 10 gallons (or two 5-gallon buckets), as establishing a <u>daily bag limit through regulation. This</u> The established bag limit is <u>should be easily enforceable and provides for a satisfying and sustainable</u> recreational experience while deterring illegal commercialization of the fishery.</p>
7.8.7	7-28	<p>This FMP establishes that a daily bag limit for recreational fishing <u>be adopted through regulation. This</u> The FMP recommends a range between 0 and 100 lb (45 kg) daily bag limit be established at which is equivalent to up to ten gallons, or two 5-gallon buckets of Herring, each containing approximately 260 Herring. Based on input from stakeholders this is considered to be an appropriate amount to provide a reasonable and sustainable amount of recreational harvest for participants. This <u>possession limit is also should also be designed to be clear and easily enforceable. For reference, two 5-gallon buckets of Herring are equivalent to 100 lb of herring, or, approximately 260 Herring per bucket.</u> Currently, there are no estimates of the recreational catch available, but this <u>a</u> possession limit will provide Department staff with a means of estimating recreational take via counting the number of recreational anglers observed during each spawning event.</p>
10.5.1	10-11	Deleted Section 10.5.1.
10.5.2	10-11	Renumbered Section 10.5.2 as Section 10.5.1.