

Committee Staff Summary for July 17-18, 2024 MRC

4. Commercial California Halibut Fishery Bycatch Evaluation for Fisheries Management Review

Today's Item	Information <input checked="" type="checkbox"/>	Action <input type="checkbox"/>
(A) Discuss lessons learned from the set gill net evaluation, and potential application to the trawl fishery bycatch evaluation		
(B) Receive update on California halibut (halibut) trawl grounds assessment regarding tow time		

Summary of Previous/Future Actions

(A)		
<ul style="list-style-type: none"> Commission referred halibut management review to the Marine Resources Committee (MRC) 		August 19-20, 2020
<ul style="list-style-type: none"> Commission referred to MRC bycatch evaluation to support halibut management review 		December 15-16, 2021
<ul style="list-style-type: none"> Received updates on bycatch evaluation for commercial halibut <i>set gillnet and trawl fisheries</i> 		March 24 and July 14, 2022; MRC
<ul style="list-style-type: none"> Received and discussed Department bycatch analysis and report; MRC recommendation to conduct first bycatch acceptability evaluation for halibut <i>set gillnet fishery</i> (approved by Commission in December 2022) 		November 17, 2022; MRC
<ul style="list-style-type: none"> Received and discussed Department updates and evaluation of bycatch acceptability for halibut <i>set gillnet fishery</i>; MRC recommendation to develop management options to address bycatch concerns (approved by Commission in August 2023) 		March 14, 16 and July 20, 2023; MRC
<ul style="list-style-type: none"> Received and discussed potential management measures to address set gillnet bycatch; MRC recommendation for near- and long-term regulatory approach for specified measures (approved by Commission in December 2023; scheduled near-term rulemaking for April 2024 notice) 		November 16, 2023; MRC
<ul style="list-style-type: none"> Received Department update; MRC recommendation to begin evaluating bycatch for halibut <i>trawl fishery</i> and schedule MRC discussion on lessons learned from set gill net bycatch evaluation to apply to trawl (Commission approved MRC recommendation in April 2024) 		March 19, 2024; MRC
<ul style="list-style-type: none"> Today discuss lessons learned from <i>set gill net</i> bycatch evaluation; consider applying to the <i>trawl fishery</i> bycatch evaluation 		July 17-18, 2024; MRC

Committee Staff Summary for July 17-18, 2024 MRC

(B)

- Commission approved MRC recommendation to initiate review of current and new California halibut trawl grounds (CHTG) December 15-16, 2021
- Received and discussed Department updates on CHTG review March 24 and July 14, 2022; MRC
- Department presented evaluation of southern CHTG review March 19, 2024; MRC
- **Today receive Department update on CHTG assessment related to tow time July 17-18, 2024**

Background

This agenda item builds on efforts undertaken by the Department over the past several years to review management within the California halibut fishery, which was prioritized for review according to the Marine Life Management Act and master plan for fisheries.

(A) *Lessons Learned from Set Gill Net Evaluation – Potential Application to Next Fishery Bycatch Evaluation*

After over two years focused on evaluating bycatch in the halibut set gill net fishery, the Department is in early stages of the next phase of bycatch evaluation undertaken as part of the California halibut fishery management review. Consistent with previous Commission direction, the next evaluation focuses on halibut trawl gear, following guidance in the master plan for fisheries. The effort also follows completion of the Department's evaluation of bycatch in the halibut set gill net fishery and advancing a near-term rulemaking to address bycatch concerns and information gaps (regulation changes are scheduled for adoption in August 2024).

In March 2024, the Department presented an update on managing set gill net fisheries, and recommended beginning the evaluation of bycatch for the halibut fishery using trawl gear in both federal and state waters (see Exhibit 1 for additional background). Recognizing that halibut set gill net marked the first application of the four-step bycatch evaluation framework outlined in the fisheries master plan, MRC acknowledged the potential for valuable lessons learned from the initial process.

In April 2024, the Commission approved MRC's recommendation to proceed with the halibut trawl evaluation. Additionally, the Commission supported scheduling an MRC discussion on potential lessons learned from the halibut set gill net bycatch evaluation that could be applied to the upcoming trawl evaluation.

Update

Following the set gill net evaluation, Commission and Department staffs have actively reflected on the process, focusing on identifying aspects that worked well, areas for improvement and clarity, and transferable knowledge that can be applied to the upcoming trawl fishery evaluation. Staff envisions this collaborative effort, coupled with

Committee Staff Summary for July 17-18, 2024 MRC

perspectives shared by stakeholders and meeting participants, will support a more efficient and effective trawl evaluation, building upon the experience gained from the set gill net process.

At this meeting, the Department will present a verbal summary of the key takeaways identified through the reflection process with Commission staff. Takeaways, as well as reflections from meeting participants, are encouraged to address topics such as:

- Strengths of the initial set gill net evaluation process to carry forward;
- challenges encountered and potential improvements related to data confidentiality and data limitations;
- ambiguity and interpretation issues with terminology (e.g., “bycatch” or “unacceptable bycatch”) and within the evaluation framework;
- the importance of stakeholder engagement, relationship-building, and effective communication throughout the process; and
- the value of open discussions with stakeholders regarding data collection improvements, and participation in brainstorming solutions to minimize bycatch and improve management.

At today’s meeting, an open discussion of reflections on the set gill net evaluation process offers MRC the opportunity to provide constructive feedback, help refine approaches based on diverse perspectives, and optimize the application of the tools outlined in the master plan for fisheries as intended.

(B) ***Update on California Halibut Trawl Grounds Assessment***

At the March 2024 MRC meeting, the Department presented research collaboratively conducted with commercial fishing vessels to complete an [evaluation of CHTG](#) against performance criteria outlined in California Fish and Game Code Section 8495 (Exhibit 2 provides details on CHTGs, review requirements, and the Department evaluation). MRC requested information on tow time distribution within the CHTG assessment and the broader fishery. While the CHTG evaluation focused on bycatch and habitat impacts in the southern CHTG, it did not analyze the effect of tow time on catch.

The Department has prepared a report (Exhibit 3) comparing tow times in the fishery with those observed during the CHTG assessment, for receipt and discussion today. The Department report summarizes tow durations and catch/release disposition (live or dead) from the CHTG assessment; it also compares the average tow times in the CHTG assessment to those of the fishery, including federal waters off California. Finally, the report identifies specific datasets (from the Department and the National Oceanic and Atmospheric Administration), to be used in the full California halibut trawl bycatch evaluation scheduled for later this year.

Significant Public Comments (N/A)

Committee Staff Summary for July 17-18, 2024 MRC

Recommendation

Commission staff: Solicit input, ask clarifying questions, and identify areas for further exploration that may emerge during the discussion.

Exhibits

1. [Staff summary from Agenda Item 3, March 19, 2024 MRC Meeting \(for background purposes only\)](#)
2. [Staff summary from Agenda Item 2, March 19, 2024 MRC Meeting \(for background purposes only\)](#)
3. [Department report: California Halibut Tow Time Assessment, dated July 18, 2024](#)

Committee Direction/Recommendation (N/A)

Committee Staff Summary for March 19, 2024 MRC

For background purposes only

3. **Bycatch Evaluation in Support of the California Halibut Fishery Management Review** (*Agenda item limited to 60 minutes*)

Today's Item	Information <input type="checkbox"/>	Action <input checked="" type="checkbox"/>
(A) <i>Evaluation of bycatch in the California halibut set gillnet fishery:</i>		
Receive a verbal update on the Department's progress in developing regulatory options for near-term fishery management measures and the longer-term management measures supported by the Commission to address bycatch concerns and information gaps.		
(B) <i>Committee direction on next steps for bycatch evaluation, specific to the California halibut trawl fishery</i>		

Summary of Previous/Future Actions

- Commission referred California halibut management review to Marine Resources Committee (MRC) August 19-20, 2020
- Commission referred bycatch evaluation for California halibut management review to MRC December 15-16, 2021
- Received updates on bycatch evaluation for commercial California halibut *set gillnet and trawl fisheries* March 24 and July 14, 2022; MRC
- Received and discussed Department bycatch evaluation report; MRC recommendation to conduct bycatch acceptability evaluation for California halibut *set gillnet fishery* (approved by Commission in December 2022) November 17, 2022; MRC
- Received and discussed Department update on bycatch evaluation for the California halibut *set gillnet fishery* March 14 and 16, 2023; MRC
- Received and discussed Department evaluation of bycatch acceptability for *set gill net gear*; MRC recommendation to develop management options to address bycatch concerns (approved by Commission in August 2023) July 20, 2023; MRC
- Received and discussed potential management measures to address set gillnet bycatch; MRC recommendation for near- and long-term regulatory approach for specified measures (Commission approved MRC recommendation in December 2023 and scheduled near-term rulemaking) November 16, 2023; MRC
- **Today receive and discuss Department's progress in developing near- and long-term regulatory options for California halibut *gillnet fishery*** March 19, 2024; MRC
- Commission notice hearing for near-term rulemaking April 17-18, 2024

Committee Staff Summary for March 19, 2024 MRC
For background purposes only

Background

Management review of the California halibut fishery commenced in late 2020, consistent with the requirements of the Marine Life Management Act (MLMA) and using the framework outlined in *2018 Master Plan for Fisheries, A Guide for Implementation of the Marine Life Management Act* (master plan) for meeting those requirements. A key requirement of the fishery management review is evaluating and addressing unacceptable bycatch in a way that limits bycatch to acceptable types and amounts.

The California halibut fishery management review has presented the first opportunity to use the [four-step framework for evaluating bycatch laid out in Chapter 6 of the master plan](#), to: (1) collect information on the type and amount of catch, (2) distinguish target, incidental, and bycatch species, (3) determine “acceptable” types and amounts of bycatch, and (4) address unacceptable bycatch.

In November 2022, the Department provided a bycatch assessment report for the commercial trawl and set gillnet California halibut fisheries, fulfilling steps 1 and 2 of the bycatch evaluation framework. In December 2022, the Commission approved an MRC recommendation to separate evaluation of the set gill net gear type from the trawl gear type for the remaining California halibut bycatch evaluation steps. The Commission supported moving forward with steps 3 and 4 for the California halibut set gillnet fishery first, to be followed by the California halibut trawl fishery.

(A) Evaluation of Bycatch in the California Halibut Set Gillnet Fishery

In July 2023, the Department completed Step 3 of the bycatch evaluation framework and, in August 2023, the Commission approved the MRC recommendation to proceed to Step 4 of the bycatch evaluation framework to develop a suite of potential management measures to address bycatch concerns and data gaps.

In November 2023, the Department presented a suite of potential management measures for the set gillnet fishery, proposing a regulatory approach focused on several measures for near-term implementation and others to be explored and developed on a longer timeline. The near-term recommendations included soak time limits, increased gear markings, and mesh depth limits, while the long-term recommendations included developing a pilot project for electronic monitoring, electronic logbooks, and observer coverage. See Exhibit 1 for background information about the potential management measures.

At its December 2023 meeting, the Commission approved the MRC recommendation to support the Department developing a set gillnet rulemaking consisting of soak time limits (with a range of 24 to 48 hours), mesh height restrictions (25-mesh depth or net height maximum for California halibut-targeted set gill nets and 50-mesh depth or net height maximum for white seabass-targeted set gill nets), and gear marking developed in consultation with stakeholders. In addition, the Commission requested that, at today’s MRC meeting, the Department provide an update on the rulemaking as well as information about potential electronic monitoring, electronic technology, and observer coverage for discussion purposes.

Committee Staff Summary for March 19, 2024 MRC*For background purposes only**Update*

Since December, Department staff has focused on engaging with members of the set gillnet fleet and Department law enforcement, to discuss elements of the near-term rulemaking. In February, the Commission approved adding the near-term rulemaking to its schedule to begin in April 2024. The Department has been developing rulemaking documents while simultaneously initiating exploratory efforts into potential long-term management measures.

Moreover, Commission and Department staffs learned about additional analyses of set gillnet bycatch recently conducted by the academic partner who completed the bycatch assessment report for trawl and set gill net California halibut fisheries, along with his graduate student. Their additional analyses use modeling techniques to better understand the impacts and drivers of bycatch in the set gillnet fishery for several sensitive species (e.g., marine mammals, tope sharks). They have shared preliminary results with Commission and Department staffs on estimated historical bycatch, drivers of bycatch risk, and bycatch hotspots, providing important context that could help inform soak time limits and potential future spatial/temporal closures. Their results also reinforce the Department's review of bycatch acceptability and demonstrate the type of analyses that would be helpful if conducted prior to any spatial or temporal closures. Key results, which the researchers agreed to allow us to share, include:

- The estimated yearly bycatch of California sea lion, northern elephant seal, harbor seal, and harbor porpoise falls well below the potential biological removal¹ for each species.
- Temporal and spatial variables (latitude, longitude, and depth) were more important than distance to shore, temperature, soak time, mesh size, or island area in determining the drivers of bycatch risk for the species evaluated.
- Marine mammal and shark species demonstrated different spatial bycatch hotspots. For example, California sea lions and harbor seals were more frequently captured in the northern region (at or above 34°N) around the Channel Islands, closer to shore, and in shallow water depths. In contrast, tope sharks were more often captured in the southern region away from the Channel Islands, offshore, and in deep water depths.

The academics are currently finishing their final report and manuscript, which will be shared with the Commission and Department to help inform future potential management measures.

Today's Meeting

Today the Department will provide a verbal summary of outreach efforts to engage the set gillnet fleet and interested stakeholders on the proposed near-term management measures, development of the near-term set gillnet rulemaking, and expected timeline. For long-term measures, the Department will share progress on options for electronic monitoring; it does not have an update on observer coverage or spatial/temporal closures at this time.

¹ Potential biological removal is defined by the Marine Mammal Protection Act as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population.

Committee Staff Summary for March 19, 2024 MRC
For background purposes only

(B) Committee Direction on Next Steps for Bycatch Evaluation, Specific to the California Halibut Trawl Fishery

Given the anticipated timeline for completing Step 4 of the bycatch evaluation framework for the California halibut set gillnet fishery, the Department is poised to continue the bycatch evaluation process for the California halibut trawl fishery, starting at Step 3 of the framework. As mentioned in Agenda Item 2, the Department's evaluation of the California halibut trawl grounds in state waters will contribute to the broader evaluation of bycatch in the fishery for the trawl gear type. The Department is ready to proceed with Step 3 of the bycatch evaluation framework across both state and federal waters for the California halibut trawl fishery.

Today also presents an opportunity to reflect on and learn from the California halibut set gillnet fishery's bycatch evaluation process and identify any key insights or potential areas for improvement, and for MRC to provide direction and guidance to apply to the California halibut trawl fishery evaluation.

Significant Public Comments

An environmental non-governmental organization expresses gratitude for the analysis of bycatch in the California set gillnet fishery, but deems the current level of bycatch unacceptable and states a belief that there is a need for immediate action to protect oceans. For the short-term regulatory changes, they recommend implementing an 18-hour soak time limit, enforcing stricter regulations on gear loss, and managing mesh depth. In addition, they suggest a pilot project for electronic monitoring systems and observer coverage to support data improvements. Lastly, they advocate for the retirement of latent permits, establishing hard caps on bycatch, and gradually phasing out the fishery. (Exhibit 2)

Recommendation

Commission staff: (A) Discuss updates on advancing near- and long-term management measures for the California halibut set gillnet fishery; and (B) support initiating Step 3 of the bycatch evaluation framework for the California halibut trawl fishery, encompassing both federal and state waters, and offer guidance on the evaluation approach, drawing on the experience from the set gill net process.

Department: Continue the bycatch evaluation for California halibut trawl gear in both federal and state waters.

Exhibits

1. [Staff summary from November 16, 2023 MRC meeting, Agenda Item 2](#) (for background purposes only)
2. Email and letter from Elizabeth Purcell, Environmental Policy Coordinator, and Teri Shore, Board of Directors, Turtle Island Restoration Network, received March 5, 2024

Committee Staff Summary for March 19, 2024 MRC
For background purposes only

Committee Direction/Recommendation

The Marine Resources Committee recommends that the Commission support the Department's recommendation to move forward with an evaluation of bycatch for California halibut trawl gear, in both federal and state waters.

Committee Staff Summary for March 19, 2024 MRC
For background purposes only

2. California Halibut Trawl Grounds Review

Today's Item **Information** **Action**

Receive and discuss Department evaluation of the California halibut trawl grounds in state waters as part of the California halibut fishery management review.

Summary of Previous/Future Actions

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|--|----------------------------|
| • Commission referred California halibut trawl grounds review to MRC | August 18, 2021 |
| • Received Department proposal for review of halibut trawl grounds; MRC recommendation regarding halibut trawl grounds | November 9, 2021; MRC |
| • Commission approved MRC recommendation to initiate review of current and new halibut trawl grounds | December 15-16, 2021 |
| • Department update on California halibut trawl grounds review | March 24, 2022; MRC |
| • Department update on California halibut trawl grounds review | July 14, 2022; MRC |
| • Today's update from the Department | March 19, 2024; MRC |

Background

In 1971, California law (Fish and Game Code Section 8495) established specific areas for trawling for California halibut within state waters. These areas, called the California Halibut Trawl Grounds (CHTG), were designated in southern California to provide areas for trawling this species in soft bottom habitats near the coast of Santa Barbara and Ventura counties. The law requires the Commission to review available data and scientific information and close any areas in the CHTG where it finds the use of halibut trawl gear in these areas: (1) does not minimize bycatch, (2) is likely damaging sea floor habitat, (3) is adversely affecting ecosystem health, or (4) impedes reasonable restoration of kelp, coral, or other biogenic habitats. The first assessment of the CHTG in 2008 resulted in the Commission closing one of four sub-areas. The law requires the grounds to be evaluated triennially to assess whether CHTG areas still meet the performance criteria to remain open. The evaluation presented today is the first evaluation since 2008.

In 2018, new potential CHTG areas were designated through legislation in previously closed zones off Monterey Bay and San Luis Obispo County; however, the law specifies that the new CHTG areas must remain closed until the use of trawl in these areas is evaluated against the four performance criteria to support an opening. In 2021, trawl representatives requested the Commission initiate opening these new grounds. In response, the Commission requested MRC and the Department to explore options for evaluating CHTG areas during the California halibut fishery management review.

Committee Staff Summary for March 19, 2024 MRC
For background purposes only

At the November 2021 MRC meeting, the Department presented a proposed plan to evaluate both the existing and new CHTG areas using the performance criteria and guidance in *2018 Master Plan for Fisheries, A Guide for Implementation of the Marine Life Management Act* (see Exhibit 1 for additional background). The proposed plan would involve collaboration with fishermen and possible use of the new experimental fishing permit (EFP) program, which authorizes participating fishermen to sell their catch (defined as “compensatory fishing”). In December 2021 the Commission approved an MRC recommendation to support the Department-proposed review of existing and new CHTG based on the performance criteria and bycatch evaluation guidance in the master plan for fisheries, through transparent engagement of the trawl fleet and stakeholders.

Despite approval of a trawl grounds evaluation plan in 2021, in 2022 the Department notified MRC that it had encountered an obstacle, finding that existing law prevents issuing EFPs for testing trawling activities in closed state waters like Monterey Bay and San Luis Obispo (Fish and Game Code subdivision (a)(3) of Section 1022). Additionally, because fishermen need to sell their catch to manage the costs of participation, using scientific permits (which prohibits sale of catch) isn’t feasible. As a result, the Department chose to prioritize evaluating the currently operational CHTG areas in southern California, postponing the assessment of closed CHTG areas.

Update

The Department has completed its survey and evaluation of trawling in the southern CHTGs according to the performance criteria. The Department’s *Evaluation of the California Halibut Trawl Grounds* details and discusses methods, data collection, results, and conclusions (Exhibit 2).

Today, the Department will present an overview of its evaluation and conclusions, and highlight next steps in the context of the California halibut management review (Exhibit 3). No specific action is recommended at this time, recognizing that the broader evaluation of bycatch in the California halibut trawl fishery needs to be completed (see Agenda Item 3(B), this meeting).

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

1. Staff summary and exhibits from November 9, 2021 MRC meeting, Agenda Item 5 (*for background purposes only*)
2. Department report: *Evaluation of the California Halibut Trawl Grounds*, dated March 2024
3. Department presentation

Committee Direction/Recommendation (N/A)

California Halibut Tow Time Assessment
California Department of Fish and Wildlife

**Report to the Marine Resources Committee of the California
Fish and Game Commission**

July 18, 2024



California halibut, *Paralichthys californicus*.
Photo credit: S. Lescht-Smith, CDFW



At the Marine Resources Committee’s (MRC) March 2024 meeting, the California Department of Fish and Wildlife (CDFW) presented the MRC with the results of an assessment ([Tanaka et al. 2024](#)) of the California Halibut Trawl Grounds (CHTG). Using the Marine Life Management Act Master Plan for Fisheries (Master Plan) for guidance and best available information, including onboard observation, CDFW evaluated four Performance Criteria listed in Fish and Game Code §8495: 1) does not minimize bycatch; 2) is likely damaging the seafloor; 3) is adversely affecting ecosystem health; or 4) impedes restoration to kelp, coral, or other biogenic habitats (Performance Criteria).

The initial report focused on bycatch and habitat impact and did not include an analysis of the effect of tow time on catch in the evaluation. At the request of the MRC, CDFW has completed a compilation to compare tow times in the fishery with those in the assessment.

CHTG Assessment Tow Duration and Catch Disposition

Observed tow durations for the assessment were at the discretion of the vessel captain, not influenced by the onboard observer, and ranged from 45 to 90 minutes, with an average of 70 minutes. Comparatively, based on nine years of fishery-dependent logbook data for the CHTG, tow duration averages 105 minutes (Table 1). In the table below, North represents aggregated tows from the Monterey area north to the CA-OR border. Morro Bay includes the activities at Morro Bay and Port San Luis. South includes all tows from southern California, excluding the CHTG. CHTG represents those tows that were made within the CHTG only.

Table 1. Average tow duration by region based on trawl logs 2016-2023.

Region	Number of Tows	Average Tow Duration (minutes)	Standard Error
North	5614	171.05	0.92
Morro Bay	2931	108.59	0.64
South	2457	83.12	0.84
CHTG	2848	105.11	0.95

To evaluate the effect of tow time on catch, the average catch count by disposition was binned into 45- to 90-minute intervals (Table 2). Percentages are for all observed animals and kept percentages reflect all retained marketable species. For the 60- and 75-minute bins, the increased percentage of dead releases are due to a greater number of pink seaperch, *Zalembius rosaceus*, and longspined combfish, *Zaniolepis latipinnis*. The CHTG assessment showed that approximately 65% of release mortality was attributed to these two species. Impacts from take on both species are accounted for in the full assessment report ([Tanaka et al. 2024](#)).

Table 2. Percentage by disposition for all observed animals based on tow length interval during CHTG assessment.

Tow length Interval Bin (minutes)	Number of Tows	Average Percentage of Bycatch Released Dead	Average Percentage of Bycatch Released Live	Average Percentage Bycatch Kept
45	1	3%	95%	2%
60	5	22%	71%	7%
75	15	13%	78%	9%
90	8	6%	82%	12%

Datasets Accessed for the CHTG Assessment

The CHTG assessment referenced CDFW and NOAA sourced information as the best available information and data. These datasets will be used in the statewide trawl bycatch evaluation.

Department datasets

Data Set	Attributes
Trawl log tow positions	Vessel name/number, date, Tow position, depth, retained catch by species and estimated weight
Fish ticket landings data	Landing weight by species by vessel and block. Includes landing date, gear, dock price, disposition
Licensing data	Permit holders' information, vessel specifications, permit count
Department onboard observation data	Observed species (retained and discards) count by disposition, total weight by disposition available for most species
habitat (kelp, biogenic, hard bottom)	Kelp, biogenic, hard bottom habitat. Location and surface area of each type
Trawl survey cruise reports	Survey dates, general locations, observed catch information

NOAA datasets

Data Set	Attributes	Source
Raw observer data- fish and invert bycatch	Gear type, sector (LE or OA), port, tow position, depth, duration, target strategy, bycatch species, retained weight, discard count and weight	WCGOP
Raw observer data- marine mammal and marine birds	Species, gear type, sector (LE or OA), interaction description, encounter outcome, tow position, depth, tow duration, target	WCGOP
WCGOP Observer coverage rate	Percent observer coverage by sector (LE or OA)	WCGOP
Habitat (coral)	Location and coverage	NOAA

Next Steps

With the completion of the CHTG assessment, CDFW is preparing to conduct a bycatch evaluation of the statewide trawl gear type, following the guidance in the [Master Plan](#). CDFW will utilize all available information, including the datasets outlined above for the full evaluation. The bycatch evaluation process is expected to begin in late summer 2024.