

PROPOSED AGENDA

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL

Pacific Fishery Management Council
Online Meeting
April 7 – 9, 2022

Instructions on how to connect to advisory body meetings will be posted on the Council's [April 2022 meeting webpage](#) prior to the first day of the meeting. Coastal Pelagic Species Advisory Subpanel meetings are open to the public and there will be one daily opportunity for public comment. Specific times on this agenda are subject to change once the meeting begins. Agenda items listed under the Advisory Body Administrative Matters are in numerical order; other agenda items reflect their Council Meeting Agenda numbering. Breaks will be taken as necessary, at the discretion of the Co-Chairs. The CPSAS will be joining the Coastal Pelagic Species Management Team (CPSMT) and the Scientific and Statistical Committee (SSC) meetings for specific agenda items, as indicated below.

Thursday April 7, 2022 – 8:00 a.m.

CPSAS Administrative Matters

1. Roll Call, Introductions, Announcements Jessi Doerpinghaus
2. Agenda Overview David Crabbe/Mike Okoniewski

E. Coastal Pelagic Species

1. National Marine Fisheries Service Report Josh Lindsay/Dale Sweetnam
(8:15 a.m.; CPSAS join the CPSMT; Report to Council Saturday April 9)

CPSAS Administrative Matters

3. Member Updates and Discussion All
(9 a.m.)

BREAK (10 a.m.)

3. Sardine Assessment and Management Measures – Final Peter Kuriyama/André Punt
(10:15 a.m.; CPSAS join the SSC; Report to Council Saturday, April 9)

2. 2022 Exempted Fishing Permits – Final Approval Kirk Lynn/Diane Pleschner-Steele

(11:15 a.m.; CPSAS join the CPSMT; Report to Council Saturday, April 9)

Mike Okoniewski

LUNCH

F. Coastal Pelagic Species

- 4. Fishery Management Plan Management Categories
(1 p.m.; Report to Council Saturday, April 9)

Alan Sarich

PUBLIC COMMENT PERIOD
2 p.m.

CPSAS Administrative Matters (continued)

- 3. Work Session – Develop and Review Supplemental Reports as Needed
(2:15 p.m.)

All

Friday, April 8, 2022 – 8:00 a.m.

H. Administrative Matters

- 4. Future Council Meeting and Workload Planning
(8 a.m.; Report to Council Wednesday, April 13)

All

CPSAS Administrative Matters (continued)

- 4. Work session – Develop and Review Supplemental Reports as Needed
(9 a.m.)

All

PUBLIC COMMENT PERIOD
11 a.m.

LUNCH

CPSAS Administrative Matters (continued)

- 5. Review and Finalize Supplemental Reports as Needed
(1 p.m.)

All

Saturday, April 9, 2022 – 8:00 a.m.

Note: Members of the CPSAS will be attending the Council’s CPS agenda items on Saturday, April 9 and may reconvene as needed. Public comment will be taken as time allows, at the discretion of the CPSAS Co-Chairs.

CPSAS Administrative Matters (continued)

6. Work Session and Attend Council Floor Session as Needed
(8 a.m.)

All

Adjourn

PFMC
03/22/22

PROPOSED AGENDA

COASTAL PELAGIC SPECIES MANAGEMENT TEAM

Pacific Fishery Management Council
Online Meeting
April 7 – 9, 2022

Instructions on how to connect to advisory body meetings will be posted on the Council's [April 2022 meeting webpage](#) prior to the first day of the meeting. Coastal Pelagic Species Management Team (CPSMT) meetings are open to the public and the agenda includes opportunities for public comment. Specific times on this agenda are subject to change once the meeting begins. The CPSMT will meet each day from 8 a.m. until 5 p.m. or until business for the day has been completed. Agenda items listed under the Advisory Body Administrative Matters are in numerical order; other agenda items reflect their Council Meeting Agenda numbering.

Thursday April 7, 2022 – 8:00 a.m.

CPSMT Administrative Matters

- | | |
|--------------------------------------------|--------------------|
| 1. Roll Call, Introductions, Announcements | Jessi Doerpinghaus |
| 2. Agenda Overview | Kirk Lynn |

E. Coastal Pelagic Species

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 1. National Marine Fisheries Service Report
(8:15 a.m.; With CPSAS; Report to Council Saturday April 9)
Rapporteur: Kym Jacobson | Josh Lindsay
Dale Sweetnam |
| 2. Fishery Management Plan Management Categories
(9 a.m.; Report to Council Saturday, April 9)
Rapporteur: James Hilger | Alan Sarich |

BREAK

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 3. Sardine Assessment and Management Measures – Final
(10:15 a.m.; Join SSC; Report to Council Saturday, April 9)
Rapporteur: Trung Nguyen | Peter Kuriyama/André Punt |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|

- 4. 2022 Exempted Fishing Permits – Final Approval Kirk Lynn/Diane Pleschner-Steele
 (11:15 a.m.; With CPSAS; Report to Council Saturday, April 9) Mike Okoniewski
 Rapporteur: Greg Krutzikowsky

LUNCH

PUBLIC COMMENT PERIOD
 1 p.m.

- CPSMT Administrative Matters (continued)
- 3. Work Session – Develop and Review Supplemental Reports as Needed All
 (1:15 p.m. – 5 p.m.)

Friday, April 8, 2022 – 8:00 a.m.

- H. Administrative Matters
- 4. Future Council Meeting and Workload Planning All
 (8 a.m.; Report to Council Wednesday, April 13)
- CPSMT Administrative Matters (continued)
- 4. Review and Finalize Reports All
 (9 a.m.)
- 5. Coastal Pelagic Species Essential Fish Habitat Review Kym Jacobson
 (11 a.m.)

LUNCH

- CPSMT Administrative Matters (continued)
- 6. Fishery Management Plan Housekeeping Kirk Lynn
 (1 p.m.)

PUBLIC COMMENT PERIOD
 2 p.m.

- CPSMT Administrative Matters (continued)
- 7. Work Session as Needed All
 (2:15 p.m.)

Saturday, April 9, 2022 – 8:00 a.m.

Note: Members of the CPSMT will be attending the Council’s CPS agenda items on Saturday, April 9 and may reconvene as needed. Public comment will be taken as time allows, at the discretion of the CPSMT Chair.

CPSMT Administrative Matters (continued)

8. Work Session and Attend Council Floor Session as Needed
(8 a.m.)

All

Adjourn

PFMC
03/22/22

PROPOSED AGENDA

Enforcement Consultants

Pacific Fishery Management Council
Online Meeting
April 7-12, 2022

Instructions for how to connect to Advisory Body webinars will be posted on the Council's [April 2022 Meeting webpage](#) prior to the first day of the meeting.

The main work session for the Enforcement Consultants (EC) will occur 9 a.m. Thursday morning, April 7. Additionally, the EC may convene on an ad hoc basis at other times during the Council meeting (April 8-12), as the need arises. Ad hoc sessions will be posted on the [Council meeting webpage](#) as soon as they are scheduled. Dates and times on this agenda are subject to change once the meeting begins.

EC meetings are open to the public, and public comments will be taken as noted in the agenda. Agenda items listed under the Enforcement Consultant Administrative and Other Matters are in numerical order; other agenda items reflect their Council Meeting Agenda numbering.

Thursday, April 7, 2022 – 9 a.m. (Main Work Session)

Enforcement Consultant Administrative and Other Matters

1. Roll Call, Introductions, Chair Remarks and Announcements, etc. Greg Busch
2. Meeting Information and Agenda Overview Jim Seger
3. Approve Agenda Enforcement Consultants

Council Agenda Items for Possible Comment

There may or may not be enforcement issues associated with all of the following items. Items on the Council Agenda, but not listed here, may also be considered during the Enforcement Consultants meeting.

D. Salmon Management

- D.2 Tentative Adoption of 2022 Management Measures for Analysis

Council Action: Adopt Tentative 2022 Ocean Salmon Management Measures and any Necessary Harvest Specifications for Collation and Analysis

E. Coastal Pelagic Species Management

- E.2 Exempted Fishing Permits (EFPs) for 2022-2023 - Final Action

Council Action: Adopt Final EFP Recommendations for 2022-2023 Fisheries

- E.3 Pacific Sardine Assessment, Harvest Specifications, and Management Measures – Final Action
Council Action: Adopt a Pacific Sardine Assessment, Final Harvest Specifications, and Management Measures for the 2022-2023 Pacific Sardine Fishery
- D. Salmon Management (continued)
 - D.3 Clarify Council Direction on 2022 Management Measures Council Guidance and Direction
- G. Pacific Halibut Management
 - G.1 Incidental Catch Limits for the Salmon Troll Fishery – Final Action
Council Action: Adopt Final Incidental Pacific Halibut Catch Recommendations for 2022 and Early 2023 Non-Indian Salmon Troll Fisheries
- D. Salmon Management
 - D.5 Further Direction for 2022 Management Alternatives Council Guidance and Direction
- F. Groundfish Management (continued)
 - F.4 Preliminary Preferred Management Measure Alternatives for 2023-2024 Fisheries (continues Tuesday)
Council Action: Adopt Any Remaining Harvest Specifications and Preliminary Preferred Alternatives for Management Measures in 2023-2024 Fisheries
 - F.6 Non-trawl Sector Area Management Measures
Council Action: Review the Range of Alternatives and Adopt Preliminary Preferred Alternatives, As Appropriate
- F. Groundfish Management (continued)
 - F.7 Electronic Monitoring Update
Council Action: Provide Guidance on Issues, Priorities, Workload, and Schedule for Continued Program Development
 - F.8 Inseason Adjustments for 2022 – Final Action
Council Action: Adopt Final Inseason Adjustments for 2022, as Necessary, to Achieve but Not Exceed Annual Catch Limits and Other Management Objectives
- I. Enforcement
 - I.1 Annual U.S. Coast Guard West Coast Fishery Enforcement Report
Council Action: Consider the U.S. Coast Guard Report
- D. Salmon Management (continued)
 - D.6 2022 Management Measures - Final Action
Council Action: Adopt Final Management Measures for 2022 Ocean Salmon Fisheries
- H. Administrative Matters (continued)
 - H.2 Membership Appointments and Council Operating Procedures
Council Action: Consider Appointments to Council Committees and Advisory Bodies; Consider Changes to Council Operating Procedures
 - H.3 Future Council Meeting Agenda and Workload Planning
 Council Discussion and Guidance on Future Meeting Agenda and Workload Planning

PUBLIC COMMENT

There will be one public comment period each session, which will occur after the EC completes its initial discussions and prior to finalization of its decisions for the session.

Enforcement Consultant Administrative and Other Matters (*continued*)

4. Enforcement Webpage
5. Other

Friday, April 8, 2022 through Tuesday April 12, 2022

Meet as necessary (see Council meeting webpage for dates and times).

ADJOURN

PFMC
03/18/22

PROPOSED AGENDA

Groundfish Advisory Subpanel

Pacific Fishery Management Council
Online Meeting
April 8-12, 2022

Instructions for how to connect to Groundfish Advisory Subpanel (GAP) webinar will be posted on the Pacific Fishery Management Council's [April Meeting Webpage](#) prior to the first day of the meeting.

GAP meetings are open to the public. Times listed in the agenda are approximations and agenda items may be rescheduled or canceled. The following Groundfish and Administrative Agenda items reflect the Council Meeting Agenda numbering. Times not specified for discussion and/or presentations are for the GAP's drafting and reviewing of statements.

A dedicated public comment agenda item has been scheduled for each day.

Friday, April 8, 2022 – 8:00 AM

GAP Administrative Matters

1. Roll Call, Introductions, Announcements, etc. Susan Chambers, Chair
2. Opening Remarks and Agenda Overview Brett Wiedoff
3. Approve Agenda

F. Groundfish Management

1. National Marine Fisheries Service Report Keeley Kent/Craig Russell
(8:30 a.m.; Joint Session with the GMT in the GAP; Report to the Council Sunday, April 10)
4. Preliminary Preferred Management Measure Alternatives Todd Phillips
for 2023-2024 Fisheries
(9:30 a.m.; Joint Session with the GMT in the GAP; Report to Council Monday, April 11)
6. Non-trawl Sector Area Management Measures Brett Wiedoff/Jessi Doerpinghaus
(11:00 a.m.; Joint Session with the GMT in the GAP; Report to Council Monday, April 11)

Public Comment Period

(11:45 a.m. or immediately following the previous agenda item)

F. Groundfish Management (*Continued*)

7. Electronic Monitoring Update Brett Wiedoff/NMFS
(1:00 p.m.; Report to Council Tuesday, April 12)

3. Biennial Harvest Specifications for 2023-2024 Fisheries – Final Action
(2:00 p.m.; Report to Council Sunday, April 10)

Public Comment Period

(3:00 p.m. or immediately following the previous agenda item)

F. Groundfish Management (*Continued*)

2. Trawl Cost Recovery Chris Biegel
(3:15 p.m.; Report to Council Sunday, April 10)

H. Administrative Matters

1. Final West Coast Regional Framework for Determining the Best Scientific Information Available John DeVore
(4:00 p.m.; Report to Council Sunday, April 10)

F. Groundfish Management (*Continued*)

5. Implementation of the 2022 Pacific Whiting Fishery Under the U.S./Canada Agreement John DeVore
(4:30 p.m.; Report to Council Monday, April 11)

Saturday, April 9, 2022 – 8:00 AM

F. Groundfish Management (*Continued*)

8. Inseason Adjustments for 2022 — Final Action Todd Phillips
(8:30 a.m.; Joint session with GMT in the GAP; Report to Council Tuesday, April 12)

GAP Administrative Matters

4. Draft and Review Statements
(9:30 p.m.)

F. Groundfish Management (*Continued*)

4. Preliminary Preferred Management Measure Alternatives for 2023-2024 Fisheries (*continue discussion*)
(10:30 a.m.; Report to Council Monday, April 11)

Public Comment Period

(11:30 a.m. or immediately following the previous agenda item)

GAP Administrative Matters

5. Draft and Review Statements
(1:00 p.m.)

Sunday, April 10, 2022 – 8:00 AM

GAP Administrative Matters

6. Draft and Review Statements
(8:00 a.m.)

Note: Members of the GAP will be attending the Council’s Groundfish Agenda Items F.1 through F.3 and will reconvene after the conclusion of F.3. Times are approximate.

H. Administrative Matters (Continued)

- 3. Future Council Meeting Agenda and Workload Planning Susan Chambers/Brett Wiedoff
(1:00 p.m.; Report to the Council Wednesday, April 13)

Public Comment Period

(1:45 p.m. or immediately following conclusion of Council’s Groundfish Items)

GAP Administrative Matters

- 7. Draft and Review Statements
(2:00 p.m.)

Monday, April 11, 2022 – 8:00 AM

GAP Administrative Matters

- 8. Draft and Review Statements
(8:00 a.m.)

Note: Members of the GAP will be attending the Council’s Groundfish Agenda Items on Monday, April 11 and will reconvene after Agenda Item F.6 concludes.

Tuesday, April 12, 2022 – 8:00 AM

GAP Administrative Matters

- 9. Draft and Review Statements
(8:00 a.m.)

Note: Members of the GAP will be attending the Council’s Groundfish Agenda Items on Tuesday, April 12 and will reconvene after Agenda Item F.4 concludes.

ADJOURN

PFMC
3/18/2022

PROPOSED AGENDA

Groundfish Management Team

Pacific Fishery Management Council
Online Meeting
April 7-12, 2022

Instructions for how to connect to the Groundfish Management Team's (GMT) webinar will be posted on the Pacific Fishery Management Council's [April Meeting Webpage](#) prior to the first day of the meeting.

GMT meetings are open to the public. Times listed in the agenda are approximations and agenda items may be rescheduled or canceled. The following Groundfish and Administrative Agenda items reflect the Council Meeting Agenda numbering. Times not specified for discussion and/or presentations are for the GMT's drafting and reviewing of statements.

A dedicated public comment agenda item has been scheduled for each day.

Thursday, April 7, 2022 – 8:00 AM

GMT Administrative Matters

1. Roll Call, Introductions, Announcements, etc. Melissa Mandrup, Chair
2. Opening Remarks and Agenda Overview Todd Phillips
3. Approve Agenda
4. Review of [3/25/2022 Webinar](#) Items

F. Groundfish Management

3. Biennial Harvest Specifications for 2023-2024 Fisheries – Final Action
(*continue discussion from webinar*)
(8:30 a.m.; Report to Council Sunday, April 10)
4. Preliminary Preferred Management Measure Alternatives Todd Phillips
for 2023-2024 Fisheries
(10:30 a.m.; Report to Council Monday, April 11)

Public Comment Period

(1:00 p.m. or immediately following the previous agenda item)

F. Groundfish Management

8. Inseason Adjustments for 2022 — Final Action Todd Phillips
(1:30 p.m.; Report to Council Tuesday, April 12)

GMT Administrative Matters

5. Draft and Review Statements
(2:00 p.m.)

Friday, April 8, 2022 – 8:00 AM

F. Groundfish Management

1. National Marine Fisheries Service Report Keeley Kent/Craig Russell
(8:30 a.m.; Joint Session with the GAP in the GAP; Report to the Council Sunday, April 10)
4. Preliminary Preferred Management Measure Alternatives Todd Phillips
for 2023-2024 Fisheries
(9:30 a.m.; Joint session with GAP in the GAP; Report to Council Monday, April 11)
6. Non-trawl Sector Area Management Measures Brett Wiedoff/Jessi Doerpinghaus
(11:00 a.m.; Joint Session with the GAP in the GAP; Report to Council Monday, April 11)

Public Comment Period

(1:00 p.m. or immediately following the previous agenda item)

F. Groundfish Management

3. Biennial Harvest Specifications for 2023-2024 Fisheries
– Final Action (*continued*)
(1:30 p.m.; Report to Council Sunday, April 10)

GMT Administrative Matters

6. Draft and Review Statements
(2:30 p.m.)

Saturday, April 9, 2022 – 8:00 AM

F. Groundfish Management

8. Inseason Adjustments for 2022 — Final Action Todd Phillips
(8:30 a.m.; Joint session with GAP in the GAP; Report to Council Tuesday, April 12)

H. Administrative Matters

1. Final West Coast Regional Framework for Determining the Best
Scientific Information Available (*continue discussion from 3/25 webinar*)
(9:30 a.m.; Report to the Council Sunday, April 10)

F. Groundfish Management

6. Non-trawl Sector Area Management Measures (*continue GMT discussion*)
(10:30 a.m.; Report to Council Monday, April 11)

Public Comment Period

(1:00 p.m. or immediately following the previous agenda item)

F. Groundfish Management

3. Biennial Harvest Specifications for 2023-2024 Fisheries – Final Action
and
4. Preliminary Preferred Management Measure Alternatives for 2023-2024 Fisheries
(1:30 p.m., continue discussion on both items and draft statements, as appropriate)

Sunday, April 10, 2022 – 8:00 AM

Note: Members of the GMT will be attending the Council’s Groundfish Agenda Items F.1 through F.3 and will reconvene after the conclusion of F.3. Times are approximates.

Public Comment Period

(1:00 p.m. or immediately following conclusion of F.3)

F. Groundfish Management

- 8. Inseason Adjustments for 2022 — Final Action (*continued*)
(1:30 p.m.; Report to Council Tuesday, April 12)

H. Administrative Matters

- 3. Future Council Meeting Agenda and Workload Planning Melissa Mandrup
(2:00 p.m.; Report to the Council Wednesday, April 13)

GMT Administrative Matters

- 7. Draft and Review Statements
(2:30 p.m.)

Monday, April 11, 2022 – 8:00 AM

Note: Members of the GMT will be attending the Council’s Groundfish Agenda Items on Monday, April 11 and will reconvene after Agenda Item F.6 concludes.

GMT Administrative Matters

- 8. Draft and Review Statements
(8:00 a.m.)

Tuesday, April 12, 2022 – 8:00 AM

Note: Members of the GMT will be attending the Council’s Groundfish Agenda Items on Tuesday, April 12 and will reconvene after Agenda Item F.4 concludes.

GMT Administrative Matters

- 9. Draft and Review Statements
(11:00 a.m.)

ADJOURN

PFMC
3/21/2022

PROPOSED AGENDA

Habitat Committee

Pacific Fishery Management Council
Online Meeting
April 7 – 8, 2022

Instructions for how to connect to advisory body webinars will be posted on the Council's [April 2022 meeting webpage](#) prior to the first day of the meeting. Habitat Committee (HC) meetings are open to the public. To ensure the public may comment on the agenda items below, a dedicated public comment agenda item has been scheduled for each day. Times on this agenda are subject to change once the meeting begins. Agenda items listed under Habitat Issues are in numerical order; other agenda items reflect their Council meeting agenda numbering. Times not specified for discussion and/or presentations will be allocated to the advisory body's drafting and reviewing of statements, reports, etc. The Habitat Issues agenda item (C.1) is on Friday, April 8.

Thursday, April 7, 2022 – 8:00 a.m.

Habitat Committee Administrative Matters

1. Introductions and Approval of Agenda
Overview of HC Report Development Process
(8 a.m., 30 minutes)
Correigh Greene
Correigh Greene/Kerry Griffin
 2. Klamath Dam Removal Draft Environmental Impact Statement
(8:30 a.m., 30 minutes)
Glen Spain
Notes: Scott Heppell
 3. Central Valley Chinook
(9 a.m., 1 hour)
Stephen Maurano
Notes: Eric Wilkins
- BREAK (10 a.m. – 10:15 a.m.)
4. Member Updates
(10:15 a.m., 1 hour)
All
Notes: Fran Recht
 5. Work Session as Needed
(11:15 a.m., 45 minutes)
All

LUNCH (12 p.m. – 1 p.m.)

Habitat Committee Administrative Matters (continued)

- 6. National Oceanic and Atmospheric Administration (NOAA)
Deep Sea Coral Research and Technology Program
(1:00 p.m., 1.5 hours)

Liz Clarke/Tom Laidig
Notes: Arlene Merems

BREAK (2:30 p.m. – 2:45 p.m.)

<p>PUBLIC COMMENT PERIOD 2:45 p.m.</p>

Habitat Committee Administrative Matters (continued)

- 7. Review and Finalize HC Report
(2:45 p.m., 2 hours)

All

<p>Friday, April 8, 2022 – 8:00 a.m.</p>

Habitat Committee Administrative Matters (continued)

- 8. Habitat Committee Elections
(8 a.m., 30 minutes)

Kerry Griffin

F. Groundfish

- 6. Non-trawl Rockfish Conservation Area Range of
Alternatives
(8:30 a.m., 2.5 hours)

Brett Wiedoff/Jessi Doerpinghaus
Notes: Arlene Merems

Habitat Committee Administrative Matters (continued)

- 9. Habitat Committee Work Session as Needed
(11 a.m., 1 hour)

All

LUNCH (12 p.m. – 1 p.m.)

Habitat Committee Administrative Matters (continued)

- 10. Habitat Committee Operating Procedures
(1 p.m., 1 hour)

Correigh Greene/Kerry Griffin

H. Administrative Matters

- 3. Future Council Meeting Agenda and Workload Planning
(2 p.m., 30 minutes)

Correigh Greene
Notes: Waldo Wakefield

<p>PUBLIC COMMENT PERIOD 2:30 p.m.</p>

BREAK (2:45 p.m. – 3 p.m.)

Habitat Committee Administrative Matters (continued)

- 11. Finalize Supplemental Reports All
(3 p.m., 1 hour)
- 12. Review Marine Planning Letters as Needed All
(4 p.m., 1 hour)

ADJOURN

PFMC
03/23/22

PROPOSED AGENDA

Model Evaluation Workgroup

Doubletree by Hilton Hotel Seattle
18740 International Boulevard
Seattle, WA 98188
Phone: 206-246-8600
Cascade Room 3-4 and Online
April 7, 2022

Pertinent information will be posted to the Council's [April 2022 meeting webpage](#) prior to the first day of the meeting. Model Evaluation Workgroup (MEW) meetings are open to the public, and there will be one opportunity for public comment. Times on this agenda are subject to change once the meeting begins. Agenda items listed under the MEW Administrative Matters are in numerical order; other agenda items reflect their Council Meeting Agenda numbering. Times not specified for discussion and/or presentations will be allocated to MEW's drafting and reviewing of statements, reports, etc.

Thursday April 7, 2022 — 10:00 a.m.

MEW Administrative Matters

1. Roll Call, Introductions, Announcements, etc. Angelika Hagen-Breaux, Chair
2. Opening Remarks and Agenda Overview Robin Ehlke, Staff Officer
3. Approve Agenda MEW

D Salmon Management

4. Methodology Review Preliminary Topic Selection Angelika Hagen-Breaux
(11:00 a.m. discussion with Salmon Technical Team (STT), in STT room;
1:30 p.m. discussion with Science and Statistical Committee (SSC), in SSC room
Report to the Council Sunday, April 10)

Public Comment

1. (2:30 p.m.) Angelika Hagen-Breaux

ADJOURN

(5:00 p.m.)

PROPOSED AGENDA

Salmon Advisory Subpanel

Doubletree by Hilton Hotel Seattle
18740 International Boulevard
Seattle, WA 98188
Phone: 206-246-8600
Cascade Rooms 5-6 and Online
April 7-12, 2022

Pertinent information will be posted on the Council's [April 2022 meeting webpage](#) prior to the first day of the meeting. Salmon Advisory Subpanel (SAS) meetings are open to the public and there will be one daily opportunity for public comment. Dates and times on this agenda are subject to change once the meeting begins. SAS Administrative matters are in numerical order; other agenda items reflect their Council meeting agenda numbering. Times not specified for discussion and/or presentations will be allocated to the advisory body's drafting and reviewing of statements, reports, etc.

Thursday, April 7, 2022 — 8:00 a.m.

SAS Administrative Matters

- | | |
|--------------------------------------------------|----------------------------|
| 1. Roll Call, Introductions, Announcements, etc. | Richard Heap, Chair |
| 2. Opening Remarks and Agenda Overview | Robin Ehlke, Staff Officer |
| 3. Approve Agenda | SAS |

D. Salmon Management

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 2. Tentative Adoption of 2022 Management Measures for Analysis
(8:15 a.m., discussion with STT, Report to the Council Friday, April 8) | Richard Heap |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------|

G. Pacific Halibut Management

- | | |
|---------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1. Incidental Catch Limits for 2022 Salmon Troll Fishery – Final Action
(9:00 a.m., Report to the Council Sunday , April 10) | Robin Ehlke |
|---------------------------------------------------------------------------------------------------------------------------------|-------------|

Public Comment

- | | |
|----------------|--------------|
| 1. (9:10 a.m.) | Richard Heap |
|----------------|--------------|

Friday, April 8, 2022 — 8:00 a.m.

Public Comment

2. (8:00 a.m.) Richard Heap

D. Salmon Management (*continued*)

3. Clarify Council Direction on 2022 Management Measures
(8:15 a.m., Report to the Council Saturday, April 9) Richard Heap

SAS Administrative Matters (*continued*)

4. On Council floor for Agenda Items C.1, D.1, and D.2 (~11:00 a.m.)

Saturday, April 9, 2022 — 8:00 a.m.

Public Comment

3. (8:00 a.m.) Richard Heap

SAS Administrative Matters (*continued*)

5. On Council floor for Agenda Item D.3
(~4:00 p.m.)

Sunday, April 10, 2022 — 8:00 a.m.

Public Comment

4. (8:00 a.m.) Richard Heap

D. Salmon Management (*continued*)

5. Further Direction on 2022 Management Measures
(Report to the Council Monday, April 11) Richard Heap

SAS Administrative Matters (*continued*)

6. On Council floor for Agenda Items D.4 and G.1
(~2:00 p.m.)

Monday, April 11, 2022 — 8:00 a.m.

SAS Administrative Matters (*continued*)

7. On Council floor for Agenda Item D.5
(8:00 a.m.)

Public Comment

5. (8:30 a.m.) Richard Heap

D. Salmon Management *(continued)*

6. 2022 Management Measures – Final Action
(9:00 a.m., Report to the Council Tuesday, April 12) Richard Heap

Tuesday, April 12, 2022 — 8:00 a.m.

Public Comment

6. (8:00 a.m.) Richard Heap

H. Administrative Matters

3. Future Council Meeting Agenda and Workload Planning
(8:15 a.m., Report to the Council Wednesday, April 13) Robin Ehlke

SAS Administrative Matters *(continued)*

8. On Council floor for Agenda Item D.6
(3:00 p.m.)

ADJOURN

(5:00 p.m.)

PFMC

03/18/22

PROPOSED AGENDA

Scientific and Statistical Committee

Pacific Fishery Management Council

Online Meeting

April 7-8, 2022

Instructions for how to connect to the Scientific and Statistical Committee's (SSC) webinar will be posted on the Pacific Fishery Management Council's (Council's) [April Meeting Webpage](#) prior to the first day of the meeting.

SSC meetings are open to the public and public comment periods have been scheduled for each day. Additional public comments may be taken at the discretion of the Chair. Dates and times on this agenda are subject to change once the meeting begins. Agenda items listed under the SSC Administrative Matters are in numerical order; other agenda items reflect their Council Meeting Agenda numbering. Committee member work assignments are noted in parentheses at the end of each agenda item. The first name listed is the discussion leader and the second, the rapporteur. Note, times not specified for discussion and/or presentations will be allocated to the SSC's drafting and reviewing of statements, reports, etc.

Thursday, April 7, 2022 – 8 AM

SSC Administrative Matters

1. Roll Call, Introductions, Announcements, etc. Dan Holland
2. Report of the Executive Director Merrick Burden
3. Approve Agenda and March 2022 Minutes
4. Subcommittee Assignments - Current assignments are listed at the end of this agenda
5. Open Discussion and Future Meeting Planning

H. Administrative Matters

2. Membership Appointments and Council Operating Procedures (SSC Closed Session)
(9:00 a.m.; Report to the Council Friday, April 8)

BREAK (9:30 – 9:45 a.m.)

- E. Coastal Pelagic Species Management
- 2. Exempted Fishing Permits (EFPs) for 2022-2023 –
Final Action Jessi Doerpinghaus
(9:45 a.m.; **Speir, Field**; Report to the Council Saturday, April 9)

- 3. Pacific Sardine Assessment, Harvest Specifications, and
Management Measures – Final Action Peter Kuriyama and André Punt
(10:15 a.m.; **Hamel, Tsou**; Report to the Council Saturday, April 9)

- H. Administrative Matters, Continued
- 1. Final West Coast Regional Framework for Determining the Best
Scientific Information Available Sarah Shoffler and Jim Hastie
(11:15 a.m.; **Satterthwaite, Marshall**; Report to the Council Sunday, April 10)

LUNCH (12:15 – 1:30 p.m.)

- D. Salmon Management
- 4. Methodology Review Preliminary Topic Selection STT and MEW
(1:30 p.m.; **Johnson, Shelton**; Report to the Council Sunday, April 10)

PUBLIC COMMENT PERIOD
2:30 p.m. (or immediately following Agenda Item D.4)
Public comments, including comments on issues not on the agenda, are accepted at this time.

- SSC Administrative Matters (Continued)
- 6. Draft and Review Statements
(Following the public comment period)

Friday, April 8, 2022 — 8 AM

- SSC Administrative Matters (Continued)
- 7. Draft and Review Statements
(8:00 a.m.)

BREAK (9:15 – 9:30 a.m.)

- H. Administrative Matters, Continued
- 3. Future Council Meeting Agenda and Workload Planning John DeVore
(9:30 a.m.; **Holland**; Report to the Council Wednesday, April 13)

PUBLIC COMMENT PERIOD
 10:30 a.m. (or immediately following Agenda Item H.3)
 Public comments, including comments on issues not on the agenda, are accepted at this time.

SSC Administrative Matters (Continued)

8. Draft and Review Statements
 (10:30 a.m.)

SSC Subcommittee Assignments

Salmon	Groundfish	Coastal Pelagic Species	Highly Migratory Species	Economics	Ecosystem-Based Management
Alan Byrne	John Budrick	André Punt	John Field	Cameron Speir	Kristin Marshall
John Budrick	Fabio Caltabellotta	John Budrick	Fabio Caltabellotta	Dan Holland	John Field
Owen Hamel	John Field	Alan Byrne	Dan Holland	André Punt	Melissa Haltuch
Galen Johnson	Melissa Haltuch	John Field	Kristin Marshall		Dan Holland
Steve Munch	Owen Hamel	Owen Hamel	André Punt		Galen Johnson
Will Satterthwaite	Kristin Marshall	Steve Munch			André Punt
Jason Schaffler	André Punt	Will Satterthwaite			Will Satterthwaite
Ole Shelton	Jason Schaffler	Tien-Shui Tsou			Ole Shelton
Cameron Speir	Tien-Shui Tsou				Cameron Speir
Tien-Shui Tsou					

Bold denotes Subcommittee Chairperson

ADJOURN

PFMC
 03/17/22

Scientific and Statistical Committee

Pacific Fishery Management Council
Online Meeting

March 8-9, 2022

Members in Attendance

Dr. John Budrick, California Department of Fish and Wildlife, Belmont, CA
Mr. Alan Byrne, Idaho Department of Fish and Game, Boise, ID
Dr. Fabio Caltabellotta, Oregon State University, Corvallis, OR
Dr. John Field, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA
Dr. Melissa Haltuch, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Owen Hamel, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Dan Holland, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Galen Johnson, SSC Chair, Northwest Indian Fisheries Commission, Olympia, WA
Dr. Kristin Marshall, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Steve Munch, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA
Dr. André Punt, University of Washington, Seattle, WA
Dr. William Satterthwaite, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA
Dr. Jason Schaffler, Muckleshoot Indian Tribe, Auburn, WA
Dr. Ole Shelton, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Cameron Speir, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA
Dr. Tien-Shui Tsou, Washington Department of Fish and Wildlife, Olympia, WA

Members Absent

None.

SSC Recusals for the March 2022 Meeting		
SSC Member	Issue	Reason
Dr. Kristin Marshall	E.8 - Initial Stock Assessment Plan and Terms of Reference	Dr. Marshall contributed to the Stock Assessment Prioritization Workbook
Dr. Will Satterthwaite	H.2 - California Current Ecosystem and Integrated Ecosystem Assessment (IEA) Report	Dr. Satterthwaite contributed content for the annual California Current Integrated Ecosystem Assessment (IEA) Report

A. Call to Order

Dr. Galen Johnson called the meeting to order at 0800. Mr. Merrick Burden briefed the Scientific and Statistical Committee (SSC) on their tasks at this meeting.

Dr. Dan Holland was elected to be the next SSC Chair and Dr. Jason Schaffler was elected to be the next Vice Chair. Dr. Steve Munch volunteered to serve on the Salmon and Coastal Pelagic Species (CPS) Subcommittees.

D. Salmon Management

2. Review of 2021 Fisheries and Summary of 2022 Stock Forecasts

The Scientific and Statistical Committee (SSC) discussed the Review of 2021 Ocean Salmon Fisheries and Preseason Report I for 2022. Dr. Michael O’Farrell (Southwest Fisheries Science Center, Salmon Technical Team [STT] Chair) provided a brief summary of the reports and members of the STT were available to answer questions. The SSC appreciates the work of the STT in compiling the reports and providing an early look at key pieces of Preseason Report I in draft form, which was very helpful. The availability of the Preseason Report I was not announced until Monday March 7, limiting review of the remainder of the report. Sampling of fisheries in 2021 was not affected by the COVID-19 pandemic; however, the disruption of tagging and marking of juveniles in 2020 will affect recoveries of coded-wire-tags (CWTs) from adults of that cohort and may affect planning and implementation of mark-selective fisheries on that cohort.

The Council is tasked with specifying annual catch limits (ACLs) for Sacramento River fall Chinook (SRFC, indicator stock for the Central Valley fall Chinook complex), Klamath River fall Chinook (KRFC, indicator stock for the Southern Oregon/Northern California Chinook complex), and Willapa Bay natural coho. Preseason Report I presents ACLs for these three stocks (Table V-4). The forecasts for SRFC and KRFC are derived from forecast models that have been reviewed and approved by the SSC in previous years. The Willapa Bay natural coho forecast methodology was reviewed and endorsed by the SSC in November 2021. The SSC found the calculations of the

acceptable biological catches (ABCs) and corresponding ACLs correct based on the forecasts for all three stocks.

The Council adopted rebuilding plans in 2019 for five salmon stocks: SRFC, KRFC, Queets River coho, Juan de Fuca coho, and Snohomish River coho. In 2021, SRFC met the criteria for rebuilt status. The three-year geometric mean spawning escapements for the other stocks in 2022 are:

- KRFC. The three-year geometric mean natural area spawning abundance is 25,039 which is less than the minimum stock size threshold (MSST) of 30,525. The stock meets the criteria for overfished status.
- Queets River coho. The three-year geometric mean adult spawning escapement is 2,654 which is less than the MSST of 4,350. The stock meets the criteria for overfished status.
- Juan de Fuca coho. The three-year geometric mean adult spawning escapement is 6,002 which is less than the MSST of 7,000. The stock meets the criteria for overfished status.
- Snohomish River coho. The three-year geometric mean adult spawning escapement is 46,418 which is more than the MSST of 31,000, but less than the S_{MSY} of 50,000. The stock meets the criteria for not overfished / rebuilding status.

Hood Canal coho meet the overfished criteria as the three-year geometric mean adult spawning escapement is 9,990 which is less than the MSST of 10,750.

None of the Chinook or coho stocks were determined to be subject to overfishing; however, the exploitation rates for 2021 were not available except for SRFC and KRFC.

A stock is approaching an overfished condition if the three-year geometric mean of the most recent two years and the 2022 forecast of spawning escapement given last year's fishing regulations is less than the MSST. The KRFC and Juan de Fuca coho meet the criteria for being at risk of approaching an overfished condition.

The results presented in Preseason Report I are point estimates and associated uncertainties are generally not reported. The SSC reiterates its strong recommendation that PFMC salmon reports provide and incorporate appropriate measures of uncertainty as is currently done for groundfish, coastal pelagic species, and highly migratory species.

The SSC notes that there remains considerable uncertainty about which aspects of the Preseason Report I the SSC is specifically charged with reviewing and endorsing under the Pacific Coast Salmon Fishery Management Plan (FMP) and about the process of initiating potential changes to salmon reference points (e.g., MSST and MFMT; see the Salmon Subcommittee Report attached to [Agenda Item C.10.a, Supplemental SSC Report 1, June 2021](#)).

SSC Notes:

The approach used to convert the SRFC forecast from the logarithmic to arithmetic scales may warrant exploration as a Methodology Review topic. Using the median rather than the mean would be more consistent with the P^/σ approach used for groundfish and CPS and might address a recent tendency to over-forecast more than half the time.*

The KRFC and SRFC forecasted ocean harvest rates have both been under-predicted recently. The STT modified the data range used to make these predictions, which resulted in an improvement of the forecast compared to post season estimates when applied retrospectively within-sample (Appendix D). Further exploration of potential model changes should be considered as a topic for the salmon Methodology review in October.

2020 ocean sampling, especially in CA was affected by COVID and some harvest estimates and CWT recoveries were “imputed” (see the 2021 SSC statement and PRE-1 report). This affects run reconstruction for stocks that used the “imputed” 2020 harvest data.

For southern Oregon Chinook the MFMT specified in Pre-1, Table V-4 is 0.54 but in Table A-1 it is 0.78.

Check Table A-1 for errors (for example, Hallock 1977 specifies a Sacramento Fall Chinook capacity of 245,000 natural-area spawners, not 240,000) and inconsistencies with the FMP (for example, the SRFC conservation objective does not distinguish natural versus hatchery fish but the FMP [p. 49] states the goal of fisheries management for California stocks is to maximize natural production). Full references should accompany the citations.

Forecasting methodologies used for salmon stocks in Preseason Report I may have changed over the time periods shown. The SSC recommends that the STT develop a database or appendix for their report where changes to forecasting methodologies for each stock can be described and archived.

Provide a quantitative analysis of forecast performance.

No overfishing occurred however the maximum fishing mortality threshold (MFMT) reference point for many stocks are based on old data and old analysis. A review and re-analysis of MFMTs using recent data and newer methods is warranted.

Can we learn something about improving the forecasted exploitation rate of SRFC and KRFC by looking at the Sacramento winter Chinook harvest model, which did not show a similar pattern of consistent under-prediction (although post-season estimates may be so uncertain that noise simply swamps any bias that might be present).

The NMFS ESA consultation standard for the California Coastal Chinook ESU sets a limit on the preseason expectation of the KRFC age-4 ocean harvest rate $\leq 16\%$. In 2021, the realized age-4 ocean harvest rate was estimated to be 27.2%.

E. Groundfish Management

3. Stock Definitions

The Scientific and Statistical Committee (SSC) discussed options and approaches for defining stocks in the Groundfish Fishery Management Plan (FMP).

The SSC discussed the alternative uses of the word “stock”, noting that for these purposes “stock” refers to a status determination unit/management unit rather than an assessment unit. Assessment

areas should take into account, but not be dictated by, status determination/management boundaries, while status must be reported at the status determination/management unit.

A variety of information may be useful for defining stocks for status determination and management. This includes a suite of data on species biology and distribution, as well as information on data availability across space. Properly considering the available information will require a multi-stage process, including development and review of a proposed framework for defining stocks, application of said framework to FMP species, review of results, and Council deliberation and decision making. Option 2 does not provide adequate time for this process, and therefore would largely involve formalizing the status quo, while the more deliberative approach of Option 1 would still need to be undertaken at a future date.

Changes in stock definitions may occur in the future due to, for example, new or improved data or shifts in ranges due to climate change.

SSC Notes:

Any framework for defining stocks should include consideration of approaches and timing within the assessment cycle for future changes in stock definitions and associated FMP amendments, as well as for defining complexes and determining when species should be designated as ecosystem components or removed from such designation.

How to calculate stock status in the future if an assessment straddles a status determination/management boundary? Assessments or assessment sub-areas should be subsets of status determination/management units whenever possible.

4. Limited Entry Fixed Gear Catch Share Program Review

The Scientific and Statistical Committee (SSC) received a presentation from Ms. Jessi Doerpinghaus on the analyses conducted for the limited entry fixed gear catch share program review. The SSC discussed progress on the review items recommended during the June 2021 SSC statement for the previous review ([Agenda Item G.2.a, Supplemental SSC Report 1, June 2021](#)). The SSC concluded that the concerns that an observer effect might be causing underestimation of high grading (discarding of smaller marketable sized fish) had been adequately addressed. Progress has been made in collecting data on permit prices; however, collection and analysis of additional permit prices remains as a research and data need in order to evaluate barriers to entry and expectations of future profitability in the fishery. While participant data for vessel owners and dealers have been incorporated into the analysis, additional data and analysis of impacts on crew and operator remains a research and data need. The SSC also recommends adding to the research and data needs section further analysis of changes in the spatial distribution of the fishery and whether outcomes are equitable between ports and users to evaluate future alternatives for measures to increase equity.

SSC Notes:

On page 33 of the report, figure 11 the Puget Sound ports group percentage of revenue coming from LEFG revenue appeared high relative to that for the coast at nearly 50% of total revenue. This suggests a level of dependence on LEFG that does not seem plausible. The ports of landing for the Puget Sound port groups should be reviewed to ensure the values observed are consistent with historical expectations. Missing data points for dealers for 2014-2019 and 'rule of three' constraints on data availability and Trawl Operations were limited in 2020. This may be a semantic issue since the address recorded for some dealers may be in Puget Sound, but the catch is likely to have originated from the coast, since the analysis is only considering west coast landings and not effort in Puget Sound itself. Jessi will follow up regarding Puget Sound.

Fish tickets for Washington for some time periods record the address of the first receiver rather than the port of landing. This mismatch may be influencing the results on port involvement and port dependence, including possibly the issue with Puget Sound ports described above.

Consideration of implications for the primary tier fleet of gear-switching restrictions for the trawl IFQ being considered by the Council should be undertaken in the evaluation of gear switching alternatives.

8. Initial Stock Assessment Plan and Terms of Reference

The Scientific and Statistical Committee (SSC) discussed planning for new groundfish stock assessments for 2023 and 2025 and revisions to the three Terms of Reference (TOR) that guide the stock assessment process. The upcoming stock assessments will inform the harvest specifications and management measures decisions for groundfish fisheries in 2025 and beyond. Drs. Jim Hastie and Chantel Wetzel (Northwest Fisheries Science Center) presented information and analyses that support the proposed stock assessment priorities and responded to questions. These analyses remain largely unchanged since 2020. The SSC appreciates the analyses and reports completed for this agenda item.

The SSC provided Dr. Hastie with minor suggestions for modifications to the stock assessment prioritization workbook for future cycles that include a better explanation of the range and rationale for the scores used for each category of information ranked in the prioritization and provision of a consistent rationale for the calculation of the factor scores for each category.

The SSC discussed the interaction between the species prioritized for stock assessments, many of which are nearshore species, and the Council action on groundfish stock definitions and future Fishery Management Plan amendments that will define regions for management units and stock status determinations. Despite this uncertainty in future stock definitions, stock assessment considerations for a few more highly prioritized stocks were discussed. Black rockfish is an important recreational species with new data to inform future assessments. Rosethorn and Redbanded rockfishes could be assessed as full or data-moderate assessments, but both of these assessments will need to address the higher than usual uncertainty in the catch data given these species are very minor components of rockfish fisheries. Treefish is likely to only be possible to assess using data-moderate methods. Brown rockfish would likely need to be conducted as a full

single-area assessment in California waters because this assessment would depend on recreational catch per unit effort for an index of abundance; there is limited age data for Brown rockfish. Rex and English soles are good candidates for length-based data-moderate assessments.

While update assessments require less time for review, they require nearly the same amount of time to complete for the analyst. Catch-only projections could be completed for stock assessments that cannot be updated due to limited staff capacity for full and update assessments. Alternatively, data-poor methods could be applied to such stocks or a less intensive update method, such as those informed with just lengths and indices, could be considered.

The SSC reviewed marked-up versions of the three TOR that will guide the groundfish stock assessment process for 2023-2024 . The changes reflect the outcomes from the 2021 Groundfish Stock Assessment Process Review Workshop held in January 2022, including input from stock assessment authors. The SSC recommends that future data-moderate assessments be reviewed in a stock assessment review (STAR) Panel. The SSC recommends that suggested changes to the TOR be available for public review. The SSC did not recommend changes to the Methodology Review TOR. The SSC Groundfish Subcommittee intends to hold a webinar during April 2022 to resolve comments in the current draft TOR. The SSC concurs with the CPS Management Team plan for revised CPS TORs that could be considered during the June and November Council meetings.

SSC Notes:

Check the equations in the stock assessment prioritization document for calculating commercial fishery importance. Add text that explains the origin of the power function, it is very precise.

Add text in the stock assessment prioritization document that explains the range of scores and the origin of the negative factor value for choke species.

Add text in the stock assessment prioritization document that explains why the ecosystem factor scores tail off quickly. Provide a consistent rationale for calculation of factor scores across the categories that feed into the final prioritization.

Add the steepness value to pages 15-16 of the stock assessment prioritization document.

Both rosethorn and redbanded rockfish tend to be infrequently encountered in fisheries targeting more abundant rockfish species and are generally landed in multiple market categories. The combination of sparse occurrence in multiple market categories is typically associated with greater uncertainty in recent and historical catch estimates (as discussed during the 2017 review of "Improving Catch Estimation Methods in Sparsely Sampled Mixed-Stock Fisheries" (https://www.pcouncil.org/documents/2017/09/e3_att1_improvingcatchest_sept2017bb.pdf/)).

The scope of less intensive stock assessment update methods would need to be defined in the TOR. The GFSC should discuss at the April TOR review the potential for reduced reporting requirements for such updates if clear limits on the data updated sufficiently reduces the

complexity of the update. If sufficiently different from a typical update with greater latitude for changes, a separate description of the “lite” update may need to be added to the TOR.

Stock assessments that are older than 10 years are generally considered to be expired, although catch-only projections have been used to extend these assessments. The SSC needs to determine how best to update projections for expired assessments.

Change the draft Rebuilding TOR on p. 6 (bottom of page) to refer to the buffer rather than the sigma.

H. Ecosystem Management
2. California Current Ecosystem and Integrated
Ecosystem Assessment (IEA) Report

The Scientific and Statistical Committee (SSC) met with representatives of the California Current Integrated Ecosystem Assessment (CCIEA) team, Drs. Toby Garfield (Southwest Fisheries Science Center) and Chris Harvey (Northwest Fisheries Science Center). The SSC’s discussion with the CCIEA team encompassed three topics, which are reported upon below in turn: 1) the 2022 California Current Ecosystem Status Report ([CCIEA Team Report 1](#)), 2) the report of the August 31 - September 1 2021 SSC Ecosystem Subcommittee (SSCES) meeting (appended to the end of this statement), and 3) ecosystem science review topics proposed for 2022 ([CCIEA Team Supplemental Report 2](#)).

Review of the 2022 CCIEA Ecosystem Status Report

The Ecosystem Status Report provides important information on environmental, biological, social, and economic indicators and provides an ecosystem perspective on West Coast fish stocks, fisheries, and coastal communities for the Council process. The SSC commends the CCIEA team’s openness and responsiveness to Council and SSC questions and recommendations, and their continuing efforts to improve the Status Report each year. Significant additions to the report this year include an indicator of krill biomass off northern California potentially relevant to Klamath River Fall Chinook, quantitative marine survival projections in association with some salmon indicators, information from acoustic trawl surveys for Coastal Pelagic Species, albacore diet information, analyses of overlap between wind energy areas and non-confidential limited-entry groundfish bottom trawl fishing activity, expansion of the fishery participation network analyses, and a climate change appendix.

Recent changes in distribution and abundance of species and in fisheries have been accompanied by rare combinations of extremes that make it difficult to identify drivers of observed changes, a challenge that is likely to be further intensified by ongoing climate change. Further development of the climate change appendix would be an important step in attempting to address this challenge.

An overarching theme in this year’s Ecosystem Status Report is that oceanic indicators largely returned to states similar to generally favorable pre-2013 conditions, aside from a marine heatwave that largely remained far offshore, while conditions in freshwater were characterized by drought, record heat, and reduced snowpack and flows.

The SSC discussed several issues that could affect the interpretation of the indicators in the report including:

1. Natural-area Sacramento River Fall Chinook (SRFC) escapement in 2019 (giving rise to the dominant age-3 age class for 2022 fisheries) is described as “relatively favorable” for natural-area Central Valley Fall Chinook and noted as having “met goal” in Table 3.3.2. However, while natural-area escapement in 2019 was higher than other years under consideration, there is currently no natural-area escapement goal established for SRFC, and multiple studies indicate that natural production would be maximized at substantially higher escapements than the typical natural-origin fraction of the current combined goal.
2. The boundaries between colors in stoplight charts are based on ranks and are sensitive to the time period used for reference, and subject to change over time.
3. Increased incorporation of predator-prey considerations into salmon indicators could be warranted.
4. A “sawtooth” pattern of strong upwelling followed by relaxation events is apparent in 2021, which is thought to be characteristic of good conditions for productivity. Further quantifying this pattern through the development of indicators that capture the variation in upwelling over relevant timescales and link to productivity could strengthen the biological relevance of upwelling indicators to managed species.

Ecosystem Science Review Report from 2021

The SSC reviewed the SSC Ecosystem Subcommittee (SSCES) report from its meeting held via webinar on August 31 and September 1, 2021 and discussed the report with SSCES Chair Dr. Kristin Marshall (NWFSC). The SSC agrees with the SSCES recommendations that:

1. Future CCIEA reports should identify times when environmental conditions are beyond thresholds associated with poor salmon forecast performance in the past;
2. A size-based krill indicator would be a useful addition to the Klamath River Fall Chinook stoplight table and a biomass indicator would be a helpful addition (these were included in the 2022 report);
3. It would be useful to include port-level network analyses in future CCIEA reports (some analyses were added to the 2022 report); and
4. It would be helpful to see more cross references between the CCIEA report and other Council materials, for example mention of the CCIEA report in salmon reports and vice versa.
5. The SSC also agreed with the SSCES recommendations to develop robust juvenile groundfish abundance indices based on spatially-explicit information on size and abundance from the West Coast Bottom Trawl Survey to inform management between assessments, such as through assessment prioritization scoring or scientific uncertainty buffers. These analyses should focus on species that are well-sampled by the survey and not associated with rocky habitats.

The SSCES reviewed six documents, five of which were journal articles that are cited in the SSCES report and publicly available (but in some cases behind paywalls) and one unpublished addendum to an earlier article produced specifically for the SSCES meeting. The addendum is

attached at the end of the SSCES report. In the future, the SSC recommends establishing a process for posting items (or at least links for copyrighted material) provided for SSCES review to the briefing book under an appropriate agenda item to facilitate transparency and public access to materials reviewed by the SSC. A single, easily found repository of all previous SSC Ecosystem Subcommittee reports and a consistent process for distributing the Subcommittee reports would also be useful and increase transparency.

Proposed Ecosystem Science Review Topics for 2022

The CCIEA team has proposed three potential topics for review in September 2022 ([Supplemental IEA Team Report 2](#)): 1) strategic review of the salmon indicator portfolio, 2) reference periods for plotting recent means and trends in fishery landings and revenues, and 3) development of the climate change appendix.

The SSC and CCIEA team agreed that point 2 could be addressed without the need for a meeting, with input from relevant advisory subpanels, and then the end product could be reviewed during the March meeting review of the first Ecosystem Status Report to incorporate it. The SSC recommends scheduling a half day for each of the two remaining topics in a September 2022 meeting of the SSCES, noting that both are complicated and ambitious topics that will likely require multiple meetings with additional advisory bodies to fully address. The salmon review could focus on identifying stocks where ecosystem information would be most useful, and how it could be used to better inform management, which could include data-poor stocks and/or stocks whose life histories are not amenable to conventional forecasting techniques. The climate change review could initially focus on technical discussions between the SSCES and the CCIEA team as well as identifying potential processes for involving additional advisory bodies. Given the focus on salmon, the SSC Salmon Subcommittee, Salmon Technical Team, and Salmon Advisory Subpanel should be invited to attend the SSCES meeting in September.

SSC Notes:

From November 2021 Future Planning statement: In March, we may want to discuss an IEA Workshop to talk about whether we still need all the indicators that are in the report-- authors have been doing a lot of adding, without thinking about subtracting/overlap.

There is a major marine heatwave offshore starting to appear in February 2022 - this is very early to see a marine heatwave developing.

Total fishery landings are down <1% compared to 2020 and just below the 30-year average, which is a more optimistic picture than that painted in the report due to late-breaking data on Washington salmon landings.

Rare combinations of extremes make it difficult to identify drivers of species and fisheries responses, and climate change is intensifying this challenge. The Climate Change Appendix is intended as a first step toward unraveling this, identifying needs and corresponding research capabilities and the potential for the indicators and/or forecasts that are responsive to the

identified needs. The developers are encouraging co-development with stakeholders and managers, as they want the products to be useful.

Marine indicators used for salmon are nearshore and relate to periods shortly after ocean entry – but salmon, especially Chinook, spend an extended period of time in the ocean, and not all of it is in the nearshore (though this varies by stock) and not all of the time in the nearshore is spent near the source river mouth.

Related to the sawtooth pattern in upwelling, there is a relevant paper by Mike Jacox identifying a sweet spot in strength of upwelling and when nutrients are retained long enough. The work is not yet at the stage of an indicator but is being actively worked on.

Two of the three ABC salmon stocks (Sacramento and Klamath River Fall Chinook) have freshwater indicators in the report, so could similar indicators be developed for Willapa Bay natural coho, the third ABC salmon stock? So far Brian Burke has developed quantitative indicators for upper Columbia and Snake Chinook and tried developing survival indicators for Oregon Production area hatchery coho survival but they did not work out very well. However, the potential for Willapa Bay can be explored.

In general, CCIEA authors are advised to stay away from potentially loaded language with respect to policy (e.g., status determinations, which stocks have OFLs).

Refine the description of state-by-state landings in Appendix S-54 which seems to contain some self-contradictory language, e.g., landings simultaneously among the lowest ever and within one standard deviation of the mean.

In terms of what qualifies as “good” natural-area Sacramento River Fall Chinook escapement: The SRFC rebuilding plan estimates that natural production in just the Sacramento River above Red Bluff Diversion Dam would be maximized with an escapement of 80,000 females to that area alone; Hallock 1977 as cited in the FMP suggests a natural-area escapement goal of 245,000; Munsch et al. 2020 as cited in the CCIEA report suggests natural production would be maximized by a combined fall, spring, and winter run natural-area escapement of approximately 400,000. The FMP quotes a smaller number from Reisenbichler 1986, but that document is not publicly available, and when Dr. Satterthwaite attempted to reproduce the FMP’s quoted number from his copy of the document, he was unable to do so, and noted that significant parts of the system (e.g., Battle Creek and Yuba River) were not included.

Posting journal articles to the briefing book could pose copyright concerns, but pre-copy-editing manuscripts should generally be suitable to post or linking to copies posted in the NOAA Institutional Repository. Or links to the published journal articles could be provided with the explanation that authors generally will provide reprints upon request.

3. Fishery Ecosystem Plan Initiatives

The Scientific and Statistical Committee (SSC) received a presentation from Dr. Kit Dahl (PFMC Staff) on the Fishery Ecosystem Plan (FEP) Initiatives and draft updates to the FEP appendix

proposed by the Ecosystem Workgroup (EWG). The SSC reviewed the nine proposed FEP initiatives and provided comments. The SSC is generally supportive of the appendix and commends the EWG on their work thus far on the revised FEP.

Proposed initiative 2.1, Ecosystem and Climate Information for Species, Fisheries, and Fishery Management Plans (FMPs), is a particularly promising direction for future work. Previous initiatives and the California Current Integrated Ecosystem Assessment (CCIEA) program and annual report have generated a large amount of ecosystem and climate information. However, more focus on how to make use of this information when considering specific management actions is needed. Proposed initiative 2.1 offers an opportunity to develop pathways and processes to do this. The SSC notes that the incorporation of ecosystem information in decision making is a long-term goal and this initiative should be considered a first step in a longer process.

The work described in proposed initiative 2.2, Science Policy and Planning for Understanding the Effects of Oceanographic Conditions and Recruitment on Council-Managed Finfish Species, may be better conducted once better oceanographic models and data sources are available. For example, the ongoing National Oceanic and Atmospheric Administration's Climate and Fisheries Initiative should produce operational ocean models that would be useful for modeling fish populations on the West Coast.

Proposed initiative 2.6., Supporting Fishery and Fishing Community Resilience Initiative, may be an extension of the work completed during the Climate and Communities Initiative rather than a new initiative. The SSC also notes that there is ongoing work at the Northwest and Southwest Fisheries Science Centers validating resilience indicators and evaluating resilience of West Coast fishing communities. Some elements of initiative 2.6 may duplicate this work.

Proposed initiative 2.8, Assess Flexibility in Fisheries Management Process Initiative, would work to identify ways to increase "flexibility" in how the Council makes decisions, under the assumption that the ability to change regulations more quickly is unambiguously good. However, work on this initiative should also consider ways in which this flexibility may have negative as well as positive effects on fishery stakeholders. Reducing the time it takes to complete the regulatory process may reduce opportunities for public participation in the Council process. More frequent changes in regulations may also reduce operators' ability to plan for future conditions and reduce the ability to buffer against uncertainty.

Work on proposed initiative 2.4, Cross-FMP Essential Fish Habit (EFH) Initiative, may be more productive once EFH has been defined for individual species within each FMP and is therefore a low priority relative to other proposed initiatives.

SSC Notes:

The CCIEA has proposed a broad strategic review of salmon indicators for review by the SSCES in September. The goal of this review is to determine how best to present the salmon indicators in the annual report to stakeholders and to potentially use them in management. This is similar to the goals of 2.1 and indicates some broad interest in this type of work.

One aspect to consider in initiative 2.1 is whether releasing the CCIEA report in March is the best time for applying that information to management.

Tracking FEP goals and progress as in Proposed initiative 2.7, Developing Indicators to Assess Progress Towards FEP Goals and Objectives Initiative, would be beneficial. This exercise would provide some structure to the larger process.

C. Administrative Matters, Continued

7. Future Council Meeting Agenda and Workload Planning

The Scientific and Statistical Committee (SSC) discussed workload planning and has the following updates to our November 2021 statement under this agenda item.

The SSC recommends two meetings to discuss proposed changes to two separate Stock Assessment Terms of Reference (TOR) for Groundfish and Coastal Pelagic Species (CPS). The SSC Groundfish Subcommittee proposes to meet via webinar in April to discuss the Groundfish TOR and the SSC CPS Subcommittee proposes to meet via webinar in April or early May to discuss development of the CPS TOR. Members of the Groundfish and CPS management teams and advisory subpanels are encouraged to participate in these meetings. The revisions to the TOR for groundfish stock assessments is scheduled for final review by the Council in June 2022, while review of the CPS TOR is slated for initial review in June and final review in November.

The 7th National Meeting of the Scientific Coordination Subcommittee of the Council Coordination Committee (SCS7) is scheduled for August 15-17 in Sitka, Alaska. The meeting will generally explore fishery management adaptations to a changing climate. Dr. André Punt has been invited to be a keynote speaker and other SSC members anticipated to attend include Drs. Kristin Marshall, Melissa Haltuch, Galen Johnson, Theresa Tsou, and possibly Dan Holland. The SSC will keep the Council apprised of the plans for the SCS7 meeting as they are decided.

The SSC recommends continuing to convene the annual SSC Ecosystem Subcommittee meeting with the California Current Integrated Ecosystem Assessment (IEA) team to review additions to the IEA report in September. The SSC also recommends inviting the SSC Salmon Subcommittee, Salmon Technical Team, and Salmon Advisory Subpanel to the September SSC Ecosystem Subcommittee meeting since one of the recommended topics is specifically relevant to salmon management. The salmon topic could be scheduled in the afternoon so that those attending for that topic need only attend a half day.

The SSC recommends holding the annual Salmon Methodology Review in mid-October.

The SSC Groundfish Subcommittee is planning a number of additional meetings and workshops over the next several months. The SSC Groundfish Subcommittee is planning a workshop to discuss alternative harvest control rules for spiny dogfish to reflect its lower productivity and the finding from the most recent assessment that the spawning potential ratio 50 percent harvest rate may not be sustainable. Dates for that workshop are yet to be determined.

The SSC Groundfish Subcommittee is planning to meet in late June or early July to review the Template Model Builder implementation of a species distribution model to generate biomass

indices along with a workshop on the treatment of indices for hook-and-line survey data. In order to accommodate Washington Department of Fish and Wildlife (WDFW) field work schedules, WDFW hook-and-line survey data and index development will be discussed at a subsequent fall meeting. The fall meeting will build on the recommendations from the early summer meeting. Pairing the Template Model Builder methodology review with the hook-and-line data and index development workshops will reduce the number of meetings and reports and provide time for proponents to work on requests while other topics are discussed.

The SSC Groundfish Subcommittee proposes a planning meeting in late July or early August to coordinate aging prioritization and catch estimation to inform the groundfish stock assessments prioritized for review in 2023.

The SSC Groundfish Subcommittee proposes conducting a workshop in late August to explore approaches for modeling large closed areas and other regulation changes in upcoming groundfish stock assessments.

The SSC Groundfish Subcommittee recommends a meeting in late September to discuss the integration of remotely operated vehicle (ROV) survey data in assessments and to review Oregon Department of Fish and Wildlife's proposed acoustic/ROV survey methodology for semi-pelagic rockfish, with the participation of a Center of Independent Experts scientist on acoustic abundance estimation methods. The outcomes of the three aforementioned methodology review and workshop meetings will inform the groundfish stock assessment accepted practices.

SSC Notes:

From the SSC's November C.10 workload planning report: The SSC supports the idea of the Council engaging with the Climate Change Adaptation Tools for California Current Fisheries project presented by Dr. Piers Chapman under open comment ([Agenda Item B.1.b, Supplemental Public Presentation 1](#)). Members of the SSC Ecosystem Subcommittee could attend meetings or workshops with the research team in order to support the development of their decision support tools at the request of the Council.

Dr. Martin Dorn might be a good person to invite for the Proposed Workshop to Develop Alternative Harvest Control Rules for Spiny Dogfish.

Proposed Workshops and SSC Subcommittee Meetings for 2022

Workshop/Meeting		Potential Dates	Sponsor/ Tentative Location	SSC Reps.	Additional Reviewers	AB Reps.	Council Staff
1	GFSC Meeting to Review Proposed Changes to the TORs	April TBD	Council/Webinar	Groundfish Subcommittee Members	Science Center Assessment Staff	GMT GAP	DeVore
2	CPSSC Meeting to Review Proposed Changes to the TORs	April/early May TBD	Council/Webinar	CPS Subcommittee Members	Science Center Assessment Staff	CPSMT CPSAS	Doerpinghaus
3	Proposed Workshop to Develop Alternative Harvest Control Rules for Spiny Dogfish	TBD	Council/Webinar	Groundfish Subcommittee Members	TBD	GMT GAP	DeVore
4	Proposed Workshop to Develop Methods for Constructing Abundance Indices Based on Hook-and-line Surveys/ sdmTMB Model Review	late June/early July TBD	Council/Webinar	Groundfish Subcommittee Members	TBD	GMT GAP	DeVore
5	Aging Prioritization and Catch Estimation Meeting for 2023 Stock Assessments	late July/Aug TBD	Council/Webinar	Groundfish Subcommittee Members	NA	GMT GAP	DeVore

6	Proposed Groundfish Subcommittee Meeting to Explore Approaches to Deal with Large Closed Areas and Other Regulation Changes in Stock Assessments	late Aug TBD	Council/TBD	Groundfish Subcommittee Members (Budrick -chair)	TBD	GMT GAP	DeVore
7	7 th National Meeting of the Scientific Coordination Subcommittee of the Council Coordination Committee	Aug 15-17, 2022	NPFMC/ Sitka, AK	Punt, Marshall, Haltuch, Holland?, Johnson, Tsou	NA	NA	DeVore
8	Proposed Workshop to Develop Methods for Constructing Abundance Indices Based on WA Hook-and-line Surveys	Fall TBD	Council/TBD	Groundfish Subcommittee Members (Hamel & Haltuch - co-chairs)	TBD	GMT GAP	DeVore
9	Proposed Methodology Review for the ODFW Acoustic/ROV Survey and Workshop for Using ROV Data in Stock Assessments	Sept 26-30, 2022	Council/Portland	Groundfish Subcommittee Members (Budrick -chair)	CIE for ROV and Acoustics	GMT GAP	DeVore
10	Ecosystem Subcommittee/CCIEA Team Meeting	Sept 2022 TBD	Council/Boise	Ecosystem Subcommittee Members	CCIEA Team	EWG EAS STT SAS	DeVore Dahl Ehlke
11	Salmon Methodology Review	Oct 2022 TBD	Council/TBD	Salmon Subcommittee Members	TBD	STT MEW	Ehlke

SSC Subcommittee Assignments

Salmon	Groundfish	Coastal Pelagic Species	Highly Migratory Species	Economics	Ecosystem-Based Management
Alan Byrne	John Budrick	André Punt	John Field	Cameron Speir	Kristin Marshall
John Budrick	Fabio Caltabellotta	John Budrick	Fabio Caltabellotta	Dan Holland	John Field
Owen Hamel	John Field	Alan Byrne	Dan Holland	André Punt	Melissa Haltuch
Galen Johnson	Melissa Haltuch	John Field	Kristin Marshall		Dan Holland
Steve Munch	Owen Hamel	Owen Hamel	André Punt		Galen Johnson
Will Satterthwaite	Kristin Marshall	Steve Munch			André Punt
Jason Schaffler	André Punt	Will Satterthwaite			Will Satterthwaite
Ole Shelton	Jason Schaffler	Tien-Shui Tsou			Ole Shelton
Cameron Speir	Tien-Shui Tsou				Cameron Speir
Tien-Shui Tsou					

Bold denotes Subcommittee Chairperson

PFMC
03/18/22

PROPOSED AGENDA

Salmon Technical Team

Doubletree by Hilton Hotel Seattle
18740 International Boulevard
Seattle, WA 98188
Phone: 206-246-8600
Cascade Rooms 3-4 and Online
April 7-13, 2022

Pertinent information will be posted to the Council’s [April 2022 meeting webpage](#) prior to the first day of the meeting. Salmon Technical Team (STT) meetings are open to the public and there will be one daily opportunity for public comment. Times on this agenda are subject to change once the meeting begins. Agenda items listed under the STT Administrative Matters are in numerical order; other agenda items reflect their Council Meeting Agenda numbering. Times not specified for discussion and/or presentations will be allocated to STT’s drafting and reviewing of statements, reports, etc.

Thursday April 7, 2022— 8:00 a.m.

STT Administrative Matters

- | | |
|--------------------------------------------------|----------------------------|
| 1. Roll Call, Introductions, Announcements, etc. | Mike O’Farrell, Chair |
| 2. Opening Remarks and Agenda Overview | Robin Ehlke, Staff Officer |
| 3. Approve Agenda | STT |

D. Salmon Management

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 2. Tentative Adoption of 2022 Management Measures for Analysis
(8:15 a.m., discussion with Salmon Advisory Subpanel (SAS),
Report to the Council Friday, April 8) | Mike O’Farrell |
| 4. Methodology Review Preliminary Topic Selection
(9:00 a.m. STT discussion.
11:00 a.m., discussion with Model Evaluation Workgroup (MEW),
1:30 p.m. discussion with Scientific and Statistical Committee (SSC,
Report to the Council Sunday, April 10) | Mike O’Farrell |

Public Comment

- | | |
|----------------|----------------|
| 1. (2:45 p.m.) | Mike O’Farrell |
|----------------|----------------|

Friday, April 8, 2022 — 8:00 a.m.

Public Comment

2. (8:00 a.m.) Mike O'Farrell

D. Salmon Management (*continued*)

3. Clarify Council Direction on 2022 Management Measures (8:15 a.m.; Report to the Council Saturday, April 9) Mike O'Farrell

Saturday, April 9, 2022 — 8:00 a.m.

Public Comment

3. (8:00 a.m.) Mike O'Farrell

D. Salmon Management (*continued*)

3. Clarify Council Direction on 2022 Management Measures (8:15 a.m.; Report to the Council Saturday, April 9) Mike O'Farrell

Sunday, April 10, 2022 — 8:00 a.m.

Public Comment

4. (8:00 a.m.) Mike O'Farrell

D. Salmon Management (*continued*)

5. Further Direction for 2022 Management Alternatives (8:15 a.m., Report to the Council Monday, April 11) Mike O'Farrell

Monday, April 11, 2022 — 8:00 a.m.

Public Comment

5. (9:30 a.m.) Mike O'Farrell

D. Salmon Management (*continued*)

6. 2022 Management Measures – Final Action (10:00 a.m., Report to the Council Tuesday, April 12) Mike O'Farrell

Tuesday, April 12, 2022 — 8:00 a.m.

Public Comment

6. (8:00 a.m.) Mike O'Farrell

H. Administrative Matters

3. Future Council Meeting Agenda and Workload Planning Mike O'Farrell
(8:15 a.m., Report to the Council Thursday, April 15)

Wednesday, April 13, 2022 — 8:00 a.m.

Public Comment

7. (8:00 a.m.) Mike O'Farrell

STT Administrative Matters

4. Preseason III work session Mike O'Farrell

ADJOURN

(5:00 p.m.)

PFMC

03/18/22