



# Assessment Methods Workshop

## Ensemble Modeling and ABC adjustments

*Initiated by the BSAI Groundfish Plan Team*

Traynor Room, AFSC  
Seattle, WA  
June 27-28, 2018

**Co-chairs:** Diana Stram (NPFMC), Grant Thompson (AFSC), Alan Haynie (AFSC), Allan Hicks (IPHC)

**Invited Participants:** NPFMC SSC members, Plan Team members, AFSC stock assessment authors, Invited Speakers

### Public welcome

**Purpose:** To review ensemble stock assessment modeling and evaluate how it fits in the NPFMC system. To also discuss considerations for potentially reducing an ABC from the maximum to account for observations and uncertainties not included in the assessment model or Tier system. Produce recommendations and a report to be considered by the September Joint Groundfish Plan Team.

### WebEx information:

<b>Day 1 - Wednesday, June 27, 2018</b>
8:00 am Pacific Daylight Time (San Francisco, GMT-07:00) Meeting number: 805 789 929 Meeting password: yEJB3Tps 1-877-953-3919 (PP:5944500)
<b>Day 2 - Thursday, June 28, 2018</b>
8:00 am Pacific Daylight Time (San Francisco, GMT-07:00) Meeting number: 805 410 512 Meeting password: fe7kJwxw 1-877-953-3919 (PP:5944500)

## SCHEDULE

TIME	TOPIC	LEAD
	<b>Wednesday June 27</b>	
9:00 AM	<b>1. INTRODUCTIONS</b>	Co-chairs
9:15 AM	<b>2. PURPOSE OF WORKSHOP</b>	Co-chairs
	<b>3. ENSEMBLE MODELING</b>	
9:30 AM	3.1. Brief descriptions of ensemble modeling and model averaging	Co-chairs
10:00 AM	3.2. The dividing line between statistics and machine learning	Thompson
10:15 AM	3.3. Examples of ensemble modeling in fisheries stock assessment: the American experience	Hicks
10:45 AM	<b>BREAK</b>	
11:00 AM	3.4. Examples of ensemble modeling in fisheries stock assessment: the ICES experience	Johnson
11:30 AM	3.5. Examples of ensemble modeling in other disciplines	Bond
12:00 PM	<b>LUNCH</b>	
1:00 PM	3.6. Lessons from the 1998 NRC study	Thompson
1:15 PM	3.7. Review the 2017 SSC ensemble modeling workshop	Hicks
1:45 PM	3.8. Review the NSAW on ensemble modeling	Hanselman
2:15 PM	3.9. Choosing models in an ensemble	Thompson
3:00 PM	<b>BREAK</b>	
3:15 PM	3.10. Combining models and assigning weights	Thompson
4:00 PM	3.11. Calculating statistics and uncertainty	Thompson
4:30 PM	3.12. Pros and cons of implementation in NPFMC system	Thompson/Ianelli

TIME	TOPIC	LEAD
<b>Thursday June 28</b>		
9:00 AM	3.13. Communicating and using results	Co-chairs
9:15 AM	3.14. Workload and logistics for assessment authors	Thompson
9:30 AM	3.15. Identifying assessments amenable to ensemble modeling	Co-chairs
09:45 AM	Summarize, discuss, and make preliminary recommendations	Co-chairs
10:15 AM	<b>BREAK</b>	
	<b>4. DETERMINING ABC</b>	
10:30 AM	4.1. Review how maxABC and ABC are determined in NPFMC system	Stram
10:45 AM	4.2. Examples of reductions from maxABC in the past	Hanselman
11:15 AM	4.3. How can ensemble modeling inform maxABC and ABC	Hicks
12:00 PM	<b>LUNCH</b>	
1:00 PM	4.4. Other methods of accounting for uncertainty when determining ABC	Thompson/Hanselman
1:15 PM	4.5. Potential tools/metrics for guiding reductions	Haynie
1:45 PM	4.6. The role of ecosystem or socio-economic considerations in reductions from maxABC	Haynie
3:00 PM	<b>BREAK</b>	
3:15 PM	Summarize, discuss, and make preliminary recommendations	Co-chairs
	<b>5. REPORT</b>	
4:00 PM	5.1. Draft final recommendations to bring to the Plan Teams	Co-chairs
4:45 PM	5.2. Items for the agenda of the September Plan Team meeting and other preparations	Co-chairs
5:00 PM	<b>ADJOURN</b>	