

# Summer Flounder, Scup, and Black Sea Bass Board Meeting



ASMFC Winter Meeting

# Presentation Overview



- Background
- Timeline
- Technical Committee (TC) recommendations on methodology for adjusting 2022 recreational measures for summer flounder
- TC progress on developing standardized reduction tables for black sea bass
- Thompson Tau outlier analysis on MRIP harvest data for black sea bass
- Board Consideration:
  - Approval of methodologies for developing regional proposals for SF and BSB 2022 recreational measures
  - Discuss outlier analysis

# Background



- December 2021: Board/Council adopted conservation equivalency for 2022 summer flounder and black sea bass recreational management
  - Summer Flounder: 16.5% liberalization in regional measures
  - Black Sea Bass: 28% reduction in regional measures
- Board/Council approved a one-inch increase in the scup rec minimum size for 2022
  - Expected to achieve a 33% reduction in harvest

# Timeline



- **December:** Board/Council decided to pursue regional conservation equivalency to achieve the RHL.
- **January:** TC met to recommend guidelines for the states to use in developing regional proposals
- **January-February:** States in the process of collaborating to develop regional proposals.
- **January Commission Meeting:** Board approves a methodology for the states to use in developing regional proposals
- **February 21:** Regions submit proposals
- **Late-February:** TC reviews proposals
- **Early March SFSBSB Board Meeting:** Board reviews regional proposals, TC recommendations, and establishes final measures.
- **March:** Commission sends a letter to the Regional Administrator certifying the Board-approved measures, in combination, will achieve but not exceed the RHL.

# Addendum XXXII: Summer Flounder



- 6 regions (MA, RI, CT-NY, NJ, DE-VA, NC)
- Rec measures for all states within a region will consist of the same size limits, bag, and season
- Measures should be adjusted unidirectionally
- Aim for minimal discrepancy in measures between bordering states

# TC Recommendations on Summer Flounder Proposal Criteria



- Consider adjustments to bag, min or max size, season, and gear modifications.
- Liberalizations calculated in lbs
- Rec data should be pooled across 2018-2021
  - 2021 data should be included if available
- Measures may be split by mode
- Non-compliant harvest data still assumed to occur under new regulations

# Summer Flounder Proposal Criteria



- TC recommends calculating liberalizations sequentially by measure change.
  - If liberalizations are calculated independently, the following interaction equation should be used:  
*Total Liberalization* =  $X\% + Y\% + (X\% * Y\%)$

Example:

Lower min size increases harvest by 20%

Higher bag increases harvest by 15%

Final increase in harvest = 38%

# Addendum XXXII: Black Sea Bass



- 3 regions (MA-NY, NJ, DE-NC)
- TC recommends how the coastwide harvest reduction is distributed among the regions
- States develop measures in a manner that ensures each state takes an equitable reduction.
- The Board should reduce interregional differences between measures when possible, taking into account regional differences in availability.



# TC Recommendations on Black Sea Bass



- TC recommends restrictions to recreational regulations for black sea bass be applied equally across regions.
- TC recommends standardizing the reduction analysis to support coordination between states within regions.

# Black Sea Bass Reduction Tables



- TC in the process of developing tables to standardize methodology for calculating reductions
- Final tables will apply the following criteria:
  - Reductions are calculated in lbs
  - Analysis uses rec data from 2018-2020
    - 2021 may be used to inform length-frequency distributions
  - Non-compliant harvest assumed to still occur
  - Reductions are calculated sequentially (interaction equation not needed).



# **Smoothing outliers in MRIP black sea bass harvest estimates**

Summer Flounder, Scup, Black Sea  
Bass Management Board

January 25, 2022

# Background

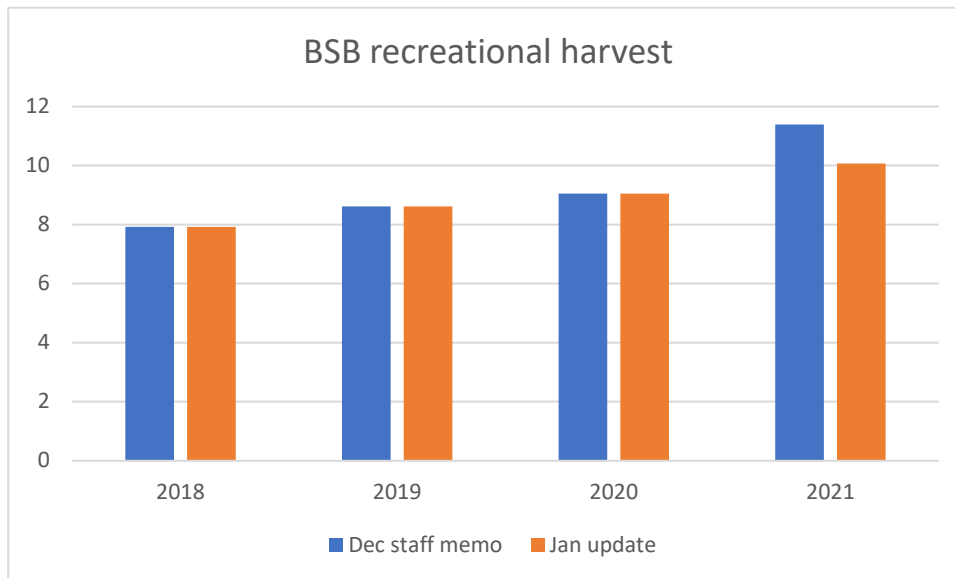


- Board / Council motion to reduce recreational BSB harvest by 28% to achieve 2022 RHL (6.74M lbs)
- TC developing standardized methods to evaluate recreational management options
- Received updated 2021 harvest projections
- Noticed some apparent anomalies with MRIP harvest estimates
- Both could affect magnitude of required harvest reduction

# 2021 harvest projections



- Preliminary W5 data made available
- Replace previous W5 projection; re-estimate W6 projections

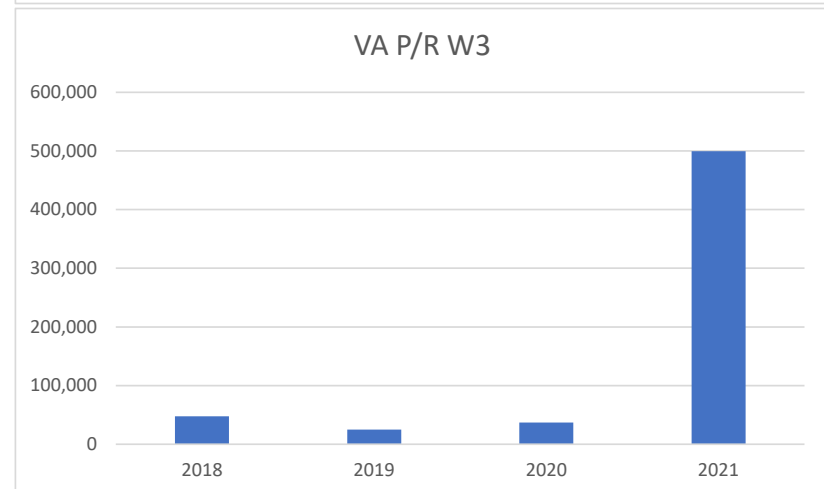
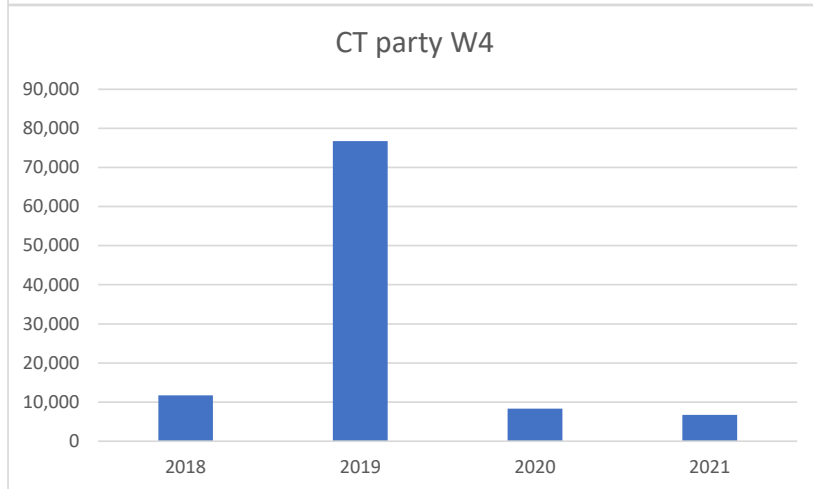
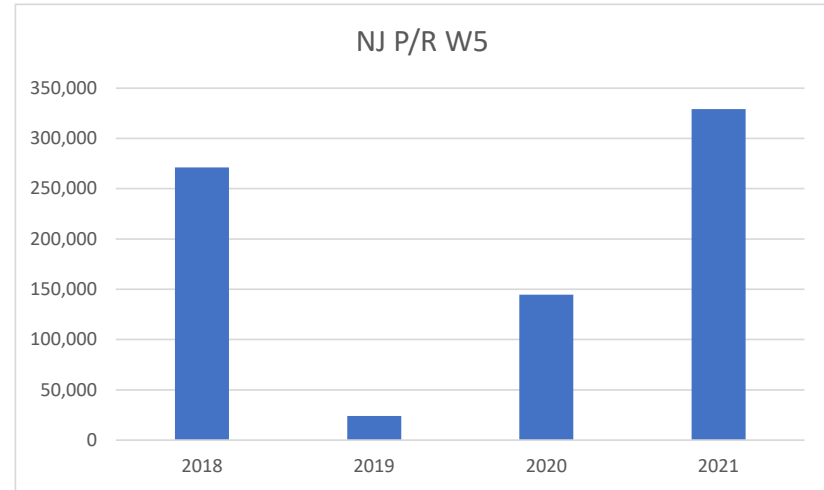
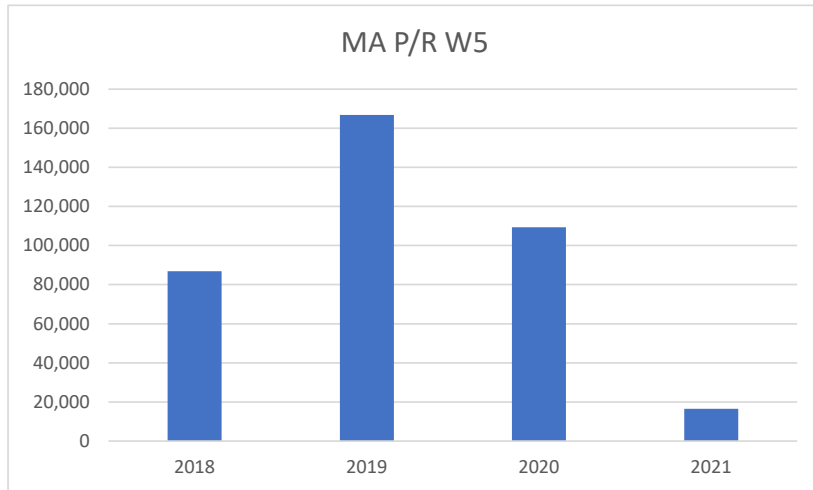


	Harvest (M lbs)	
	Dec staff memo	Jan update
2018	7.92	7.92
2019	8.61	8.61
2020	9.05	9.05
2021	11.33	10.07
2022 RHL	6.74	6.74
Redux needed	27.0%	24.4%

# Data evaluation



- Visual inspection of raw MRIP data identified potentially anomalous estimates



# Data considerations



- Regulations remained relatively unchanged from 2018 – 2021
- Expectation that harvest would be similar across years
- Possible reasons for anomalous values
  - Stock abundance / availability
  - Angler behavior
  - Sample size

# Identification of outliers



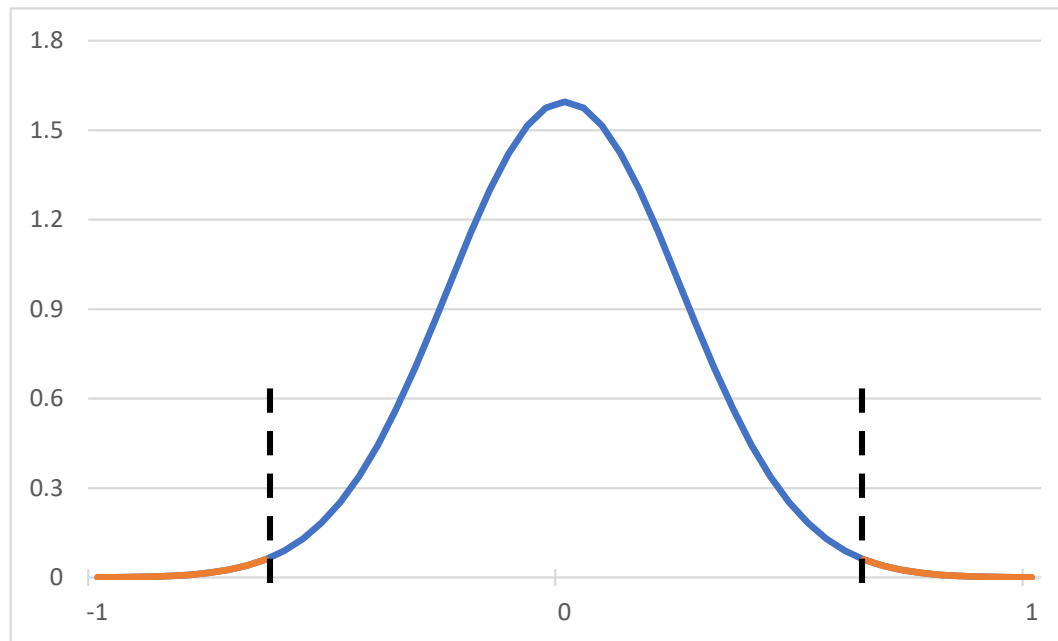
- Consider quantitative / statistical methods to identify outliers
- Revisit previous TC analysis to rescale NY and NJ 2017 party/charter estimates
  - March 2018 meeting materials
- Modified Thompson's tau analysis



# Thompson's tau



- Modified Thompson's tau analysis
  - Based on student's t-distribution
  - Identifies both high and low values
  - Can set probability level for detection



# Treatment of outliers



- Thompson's tau only identifies outliers
- Several options for how to treat them
  - Keep them
  - Remove them entirely
  - Replace them
- If replacing them, need objective method to determine replacement value
- Have investigated several replacement methods, but still deliberating

# Methods



- MRIP harvest data 2018-2021
  - 2021 W6 projected
- State/year/wave/mode
  - Consistent with 2017 analysis
  - Scaled values can be used in development of state management options
- Outliers evaluated at 80%, 90%, and 95% probabilities
- Replacement
  - Probability distributions that include/exclude outlier value
  - Next closest value, with/without scaling

# Preliminary results

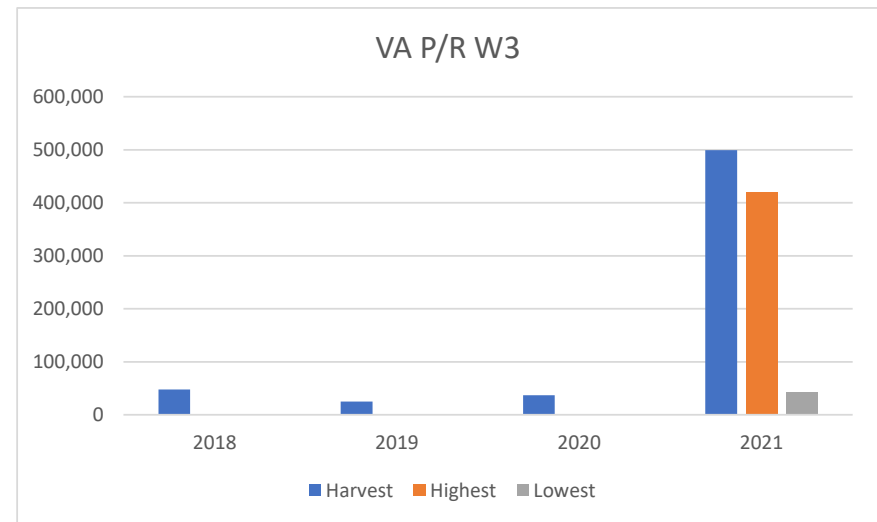
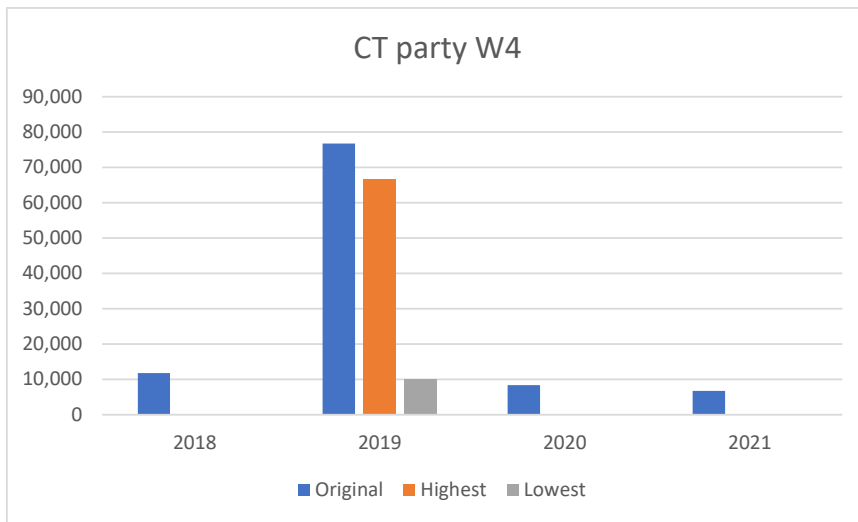
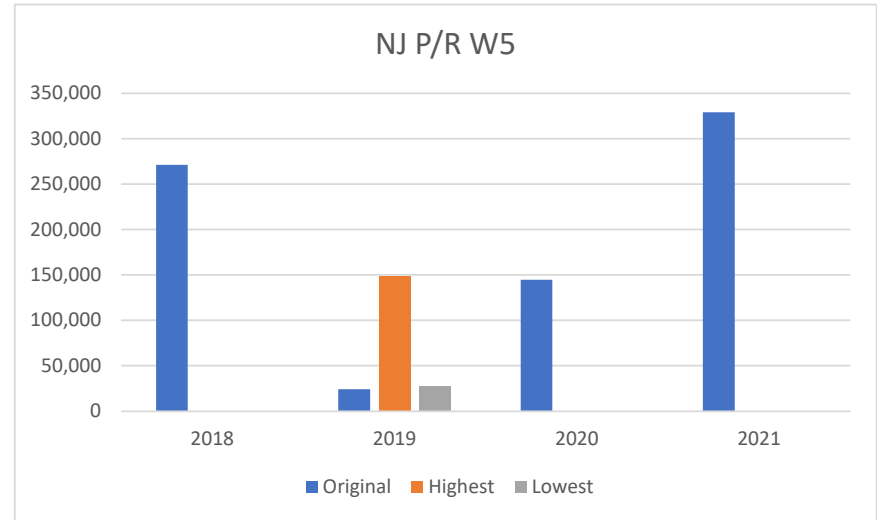
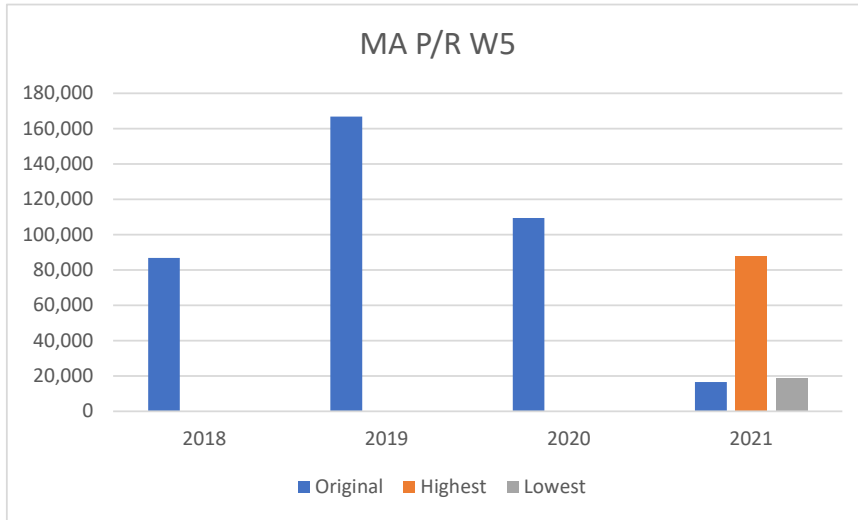


Number of outliers by year				
Year	Good	High	Low	Grand Total
2018	110	1	10	121
2019	111	3	9	123
2020	110	6	4	120
2021	99	8	12	119

Number of outliers by wave				
Wave	Good	High	Low	Grand Total
1	3	1		4
2	19		1	20
3	115	8	9	132
4	111	3	5	119
5	107	2	11	120
6	75	4	9	88

Number of outliers by mode				
Mode	Good	High	Low	Grand Total
Charter Boat	119	5	12	136
Party Boat	119	4	9	132
Private/Rental	132	5	11	148
Shore	60	4	3	67

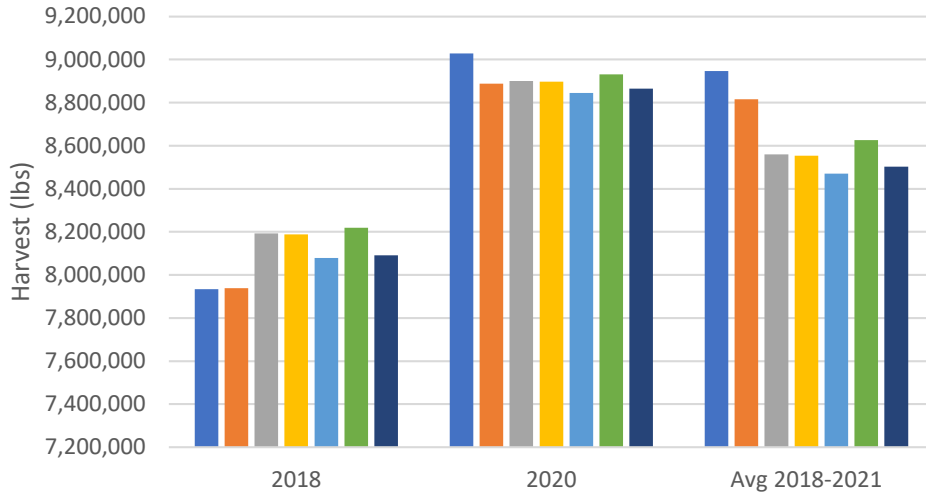
# Preliminary results



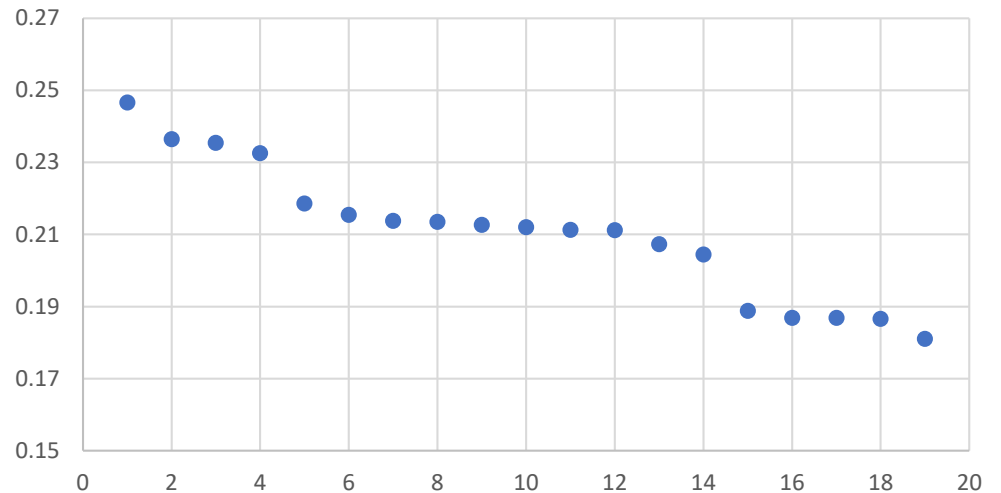
# Preliminary results



### Annual harvest (lbs)



### Reduction required



# Items ready for Board consideration



- Consider approval of TC criteria for developing regional proposals for SF and BSB 2022 recreational measures
- Consider rescinding the December 2021 BSB recreational management motion
  - Consider tasking TC to discuss the Thompson Tau outlier and smoothing analysis and recommend a new reduction percentage for BSB

# Revised Timeline for BSB



- **December:** Board/Council decided to pursue regional conservation equivalency to achieve the RHL.
- **January:** TC met to recommend guidelines for the states to use in developing regional proposals
- **January Commission Meeting:** Board approves methodology for developing regional proposals. **Board rescinds December motion for BSB, and tasks TC with determining new percent reduction recommendation for BSB**
- **Late-January:** TC meets to review outlier analysis and recommend a new percent reduction for BSB
- **February:** Board considers TC analysis and approves new reduction target % for BSB (via email vote/webinar meeting/defer to TC recommendation)
- **February 8<sup>th</sup> Council Meeting:** Council considers rescinding December motion
- **February 21:** Regions submit proposals
- **Late-February:** TC reviews proposals
- **Early March SFSBSB Board Meeting:** Board reviews state proposals, TC recommendations, and establishes final measures.
- **March:** Commission sends a letter to the Regional Administrator certifying the Board-approved measures, in combination, will achieve but not exceed the RHL.



# Questions??

