



Technical Committee Recommendations on Management and Monitoring Inconsistencies with FMP Requirements

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ASMFC Shad and River Herring Management Board

October 30, 2019

Background



- October 2017: TC identified several inconsistencies between state management programs FMP requirements (Amendments 2 & 3)
- Amendments 2 and 3 require all states and jurisdictions to submit SFMPs for all systems that remain open to river herring and shad harvest (commercial and/or recreational)
 - Catch and release fishing will be permitted on any system.
 - SFMPs must demonstrate fisheries are sustainable, with quantifiable sustainability target(s) and annually monitoring

TC Task – October 2017



Board tasked TC to develop proposed improvements to Amendments 2 and 3 with regard to the following items:

1. Management and monitoring of rivers with low abundance and harvest of shad and river herring
2. Standardization of Sustainable Fishery Management Plan (SFMP) requirements: content, metrics, and management responses to triggers
3. Incorporation of stock assessment information into SFMPs and discussion on the timeline for renewing plans
4. Clarification of *de minimis* requirements as they pertain to SFMPs
5. Review of the number of years of data are required before developing a SFMP

Development of TC Task



- TC Task Group formed to address task by gathering state information on harvest, monitoring, SFMPs
- Task group summarized details and evaluated each case of inconsistency for TC Report
- TC developed recommendations for resolving each inconsistency, with rationale
- Discussion of additional TC Task items

Inconsistencies with FMP



- Inconsistencies with Amendment 2 and 3 requirements:
 1. Tributaries of river systems that do have SFMPs and monitoring, but the tributaries are not explicitly addressed in the SFMP
 - Include tributaries of larger systems under the SFMP for the mainstem, and apply management metrics and responses to those tributaries
 2. Rivers with harvest addressed by a SFMP, but without monitoring to support sustainability
 - Apply management metrics and response from other appropriate monitored system(s), or catch and release only regulations
 3. Rivers legally open to harvest without a SFMP and/or monitoring, but where little or no harvest of shad or river herring is suspected
 - Catch and release only regulations, or consider development of an alternative management regime

Tributaries



State	Species	Areas of Inconsistency
NJ	Shad	Tributaries of the Delaware River not in SFMP
DE	Shad	Brandywine and Broadkill: tributaries not in Delaware River SFMP
	Shad	Back Creek: tributary of Delaware River
NC	Shad	Meherrin, Cashie, Northwest River, North Landing River: tributaries not in Albemarle Sound SFMP
	Shad	Black River: tributary not in SFMP
SC	Shad & RH	Winyah Bay System tributaries (Waccamaw, Little Pee Dee, Lynches, Black, Sampit, Bull Creek): not in SFMPs
	Shad & RH	Tributaries of the Santee-Cooper System (Wateree, Congaree, Broad): not in the SFMPs
	Shad	ACE Basin (Ashepoo, Salkehatchie): tributaries not in SFMP.
GA	Shad	Altamaha tributaries not in SFMP
FL	Shad	St. Johns system: monitoring not representative of all tributaries

State SFMP; Limited Monitoring



State	Species	Areas of Inconsistency	Recommendations
ME	RH	Statewide 25 fish bag limit, limited monitoring.	Address cases where recreational harvest occurs in rivers not currently monitored under the river herring SFMP with a relevant monitoring threshold from other watersheds that relates to a defined management response.
NC	Shad	Little River: Not in SFMP, no monitoring	Address in shad SFMP by applying sustainability metrics from the Winyah Bay system in SC; NC should include an equal management response in their SFMP to SC.
SC	Shad/ RH	Little River: Not in SFMP, no monitoring	Address Little River in SFMPs by applying management response to sustainability metrics from the Winyah Bay system
	Shad	Wando and Ashely Rivers, Coosawhatchie River: Not in SFMP, no monitoring	Apply metrics from the Santee-Cooper system to the Wando and Ashely, and apply metrics from the Savannah River to the Coosawhatchie. If necessary, add additional detail about management responses.
	RH	Wando, Ashely, ACE Basin system, Coosawhatchie River, Savannah River: Not in SFMP, no monitoring	1) Implement catch and release regulations for all unmonitored systems, 2) Implement Alternative Management Regime; or 3) apply statewide metrics to unmonitored rivers with defined management response
GA	Shad	Satilla, St. Marys: Not in SFMP, some monitoring in Satilla only.	Include Satilla and St. Marys in shad SFMP for recreational harvest, and apply the Altamaha sustainability metric, triggers and management response to those systems.

No SFMP; Harvest Allowed



State	Species	Areas of Inconsistency	Recommendations
ME	Shad	All rivers: No SFMP, some monitoring	1) Implement catch and release only regulations for shad, or 2) Develop sustainability metrics using the JAIs and fishway counts from monitored systems to create a SFMP or Alternative Management Plan with a management response to a trigger for all unmonitored rivers
GA	RH	All rivers: No SFMP; only monitoring in Savannah and Altamaha regularly, in Ogeechee every 5 years	1) Implement catch and release only regulations for river herring statewide, or 2) develop an Alternative Management Regime justifying the absence of statewide harvest regulations.
FL	RH	St. Marys: No SFMP, no monitoring	1) Implement catch and release only regulations for river herring statewide, or 2) develop an Alternative Management Regime justifying harvest regulations. Take management consistency with Georgia into account.
	RH	St. Johns system: no SFMP, some monitoring	1) Implement catch and release only regulations for river herring statewide, or 2) develop an alternative management plan justifying the statewide harvest regulations.

Other Cases



State	Species	Areas of Inconsistency	Recommendations
NH	RH	Salmon Falls River: Irregular monitoring	No changes to monitoring; make NH SFMP clear as to how monitoring in the Great Bay system is sufficient to inform sustainability and management of Salmon Falls.
DE	Shad	Chester River, Choptank River: No SFMP, no monitoring	Implement catch and release only regulations on the Chester and Choptank
FL	Shad & RH	Pellicer, Tomoka, and Nassau Rivers: No SFMP; no monitoring; no shad or river herring	1) Implement catch and release only regulations, or 2) describe in SFMP/or Alternative Management Plan that these systems are not part of the alosa range.

TC Recommendations



- Catch and release only regulations
 - Most clear cut and sustainable
 - Have been implemented by most states without appropriate SFMP metrics
- Application of sustainability metrics from monitored systems
 - Broad approach, assumes trends for unmonitored systems will be similar to monitored systems
- Alternative Management Regimes
 - May be appropriate for systems with no known harvest

Alternative Management Regimes



- Must demonstrate the proposed management program will not contribute to overfishing of the resource or inhibit restoration of the resource.
- Must show to the Management Board's satisfaction that the alternative proposal will have the same conservation value as Amendment 2
- All changes in state and jurisdictional plans must be submitted in writing to the Management Board and the Commission either as part of the annual FMP Review process or with the annual compliance report.

De Minimis



- Amendments 2 and 3:
 - “States that report commercial landings of [river herring/shad] that are less than 1% of the coastwide commercial total are exempted from sub-sampling commercial and recreational catch for biological data”
- Does not exempt states from requirement to prohibit (recreational) harvest and possession, with exceptions for systems with a sustainable fishery

Additional TC Discussion



- Modify the required monitoring tables in each of the amendments to provide more clarity and consistency in the requirements.
- Require more definitive management responses to sustainability metrics in SFMPs.
- Add language to provide guidance for when and how Alternative Management Regimes can be used.

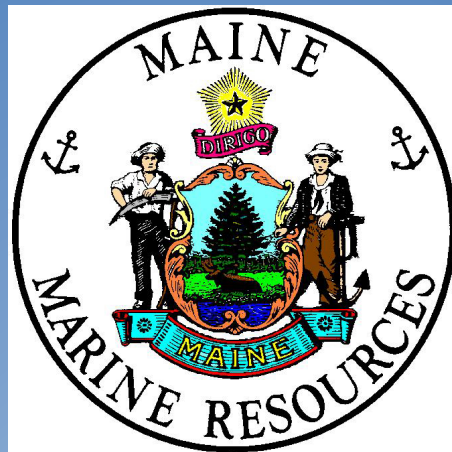
Next Steps



- Board Next Steps
 - Provide direction to states to resolve inconsistencies
 - Define timeline for states to implement changes
 - Determine if changes to FMP are warranted
- TC Next Steps
 - Address items 2 and 3 of TC task with shad assessment
 - Evaluate SFMP changes or Alternative Management Regimes, as directed by Board

Addendum to the Maine River Herring Sustainable Fishery Management Plan

2019 Proposal for the
Atlantic States Marine Fisheries Commission



Maine River Herring Fisheries Management

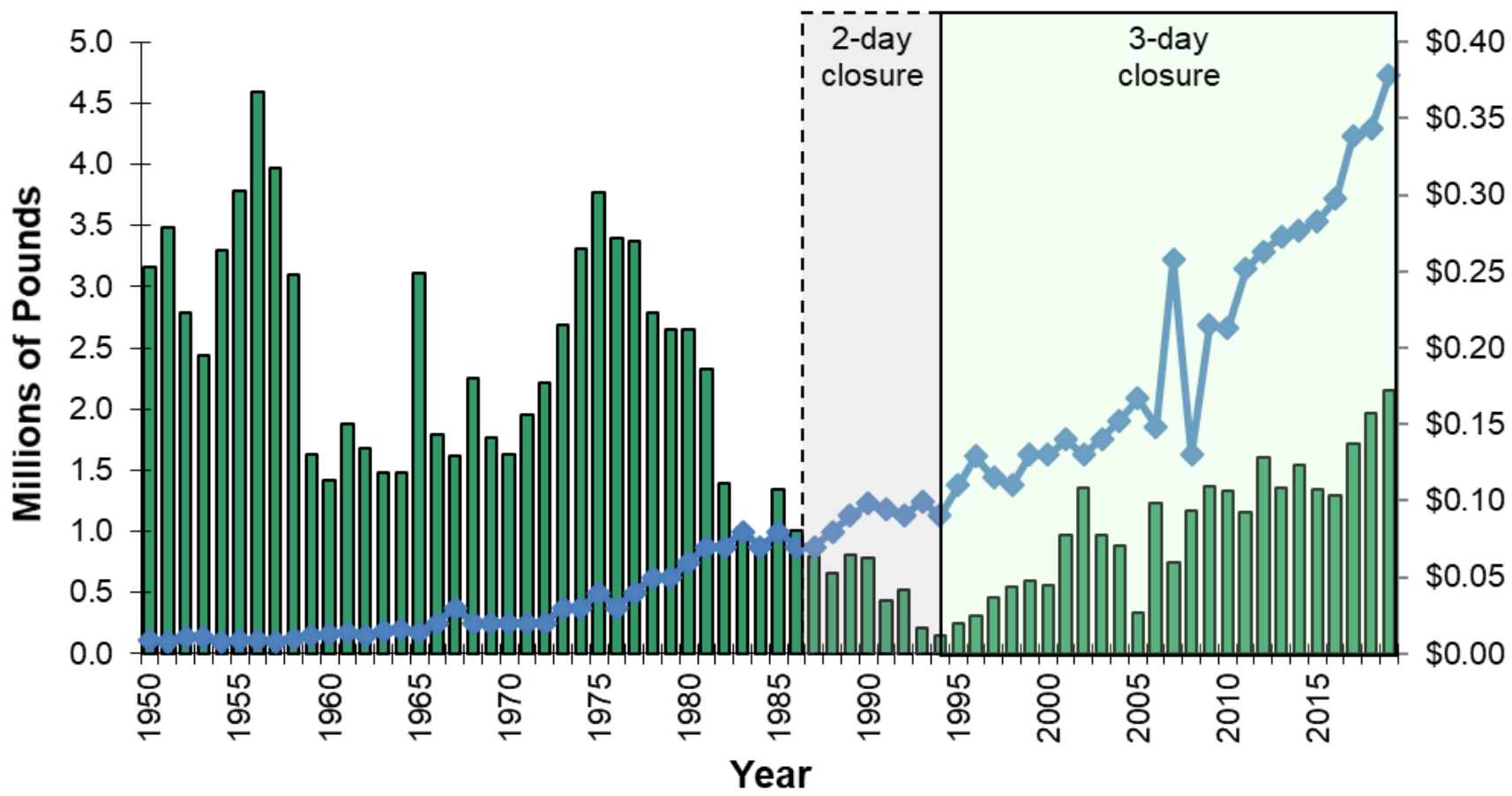
- River herring resources are strictly controlled by municipalities that own exclusive harvest rights
- One fishing location and one harvester per watershed
- Season starts when fish first arrive to June 5 with an option to fish until June 15 if approved by the commissioner
- Three consecutive days per week fish are allowed upstream to spawn (or conservation equivalent)
- No fishing in the watershed above a municipality that has exclusive harvest rights as outlined in the municipal harvest plan

Current Status of Maine River Herring Fisheries

- 36 municipalities maintain exclusive river herring harvest rights
- Maine currently has 22 municipalities in the existing SFMP
- In 2019, 17 commercial river herring fisheries were conducted by 22 municipalities
- 14 municipalities do not fish because they are not covered by the SFMP
- Maine has approximately 230 waters that support river herring populations

State of Maine Municipal River Herring (alewife & blueback herring) Landings 1950 - 2019

Millions of Pounds Price Per Pound



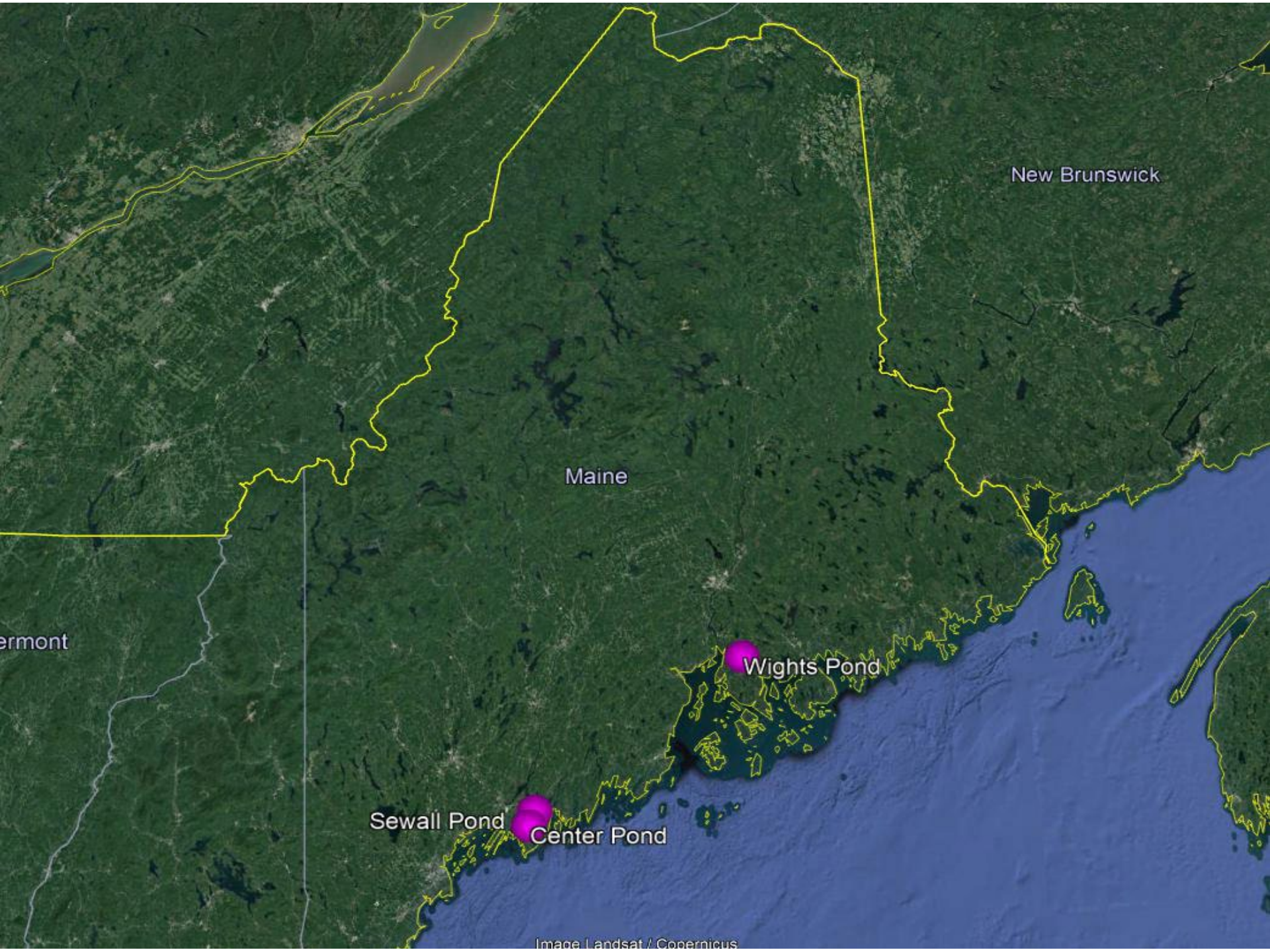
Objectives of Adding Three Fisheries While Continuing Restoration

- Capitalize on considerable community involvement, interest, participation and fundraising to build or maintain passage and monitor river herring runs
- Utilize the ability to harvest as a tool to continue river herring restoration interest statewide
- Develop a plan to assess the merits of a provisional process to harvest a limited number of fish while runs are under restoration and do not meet current Maine SFMP criteria

Substantial Restoration Projects

- Restoration projects underway in 2019 will open 53.7 square miles of spawning habitat for river herring
- Estimated Population increase of 8.1 to 13.6 million fish within 10 years





New Brunswick

Maine

Vermont

Wights Pond

Sewall Pond
Center Pond

Proposed Harvest Limits and Data for Selected Waters within the Addendum

Proposed Harvest @ 15% of Time Series Mean					
		Sewall Pond	Center Pond	Wight's Pond	
Years of Data		12	7	8	
Lake/Pond Surface Area		43	75	135	
Average Run Size		19,013	27,702	45,503	
@.15 TSM	Number	2,852	4,155	6,825	
	Bushel	24	35	57	


Sustainability Defined for the Proposed Fisheries in the Addendum

For the fisheries within this addendum sustainability will be defined as follows:

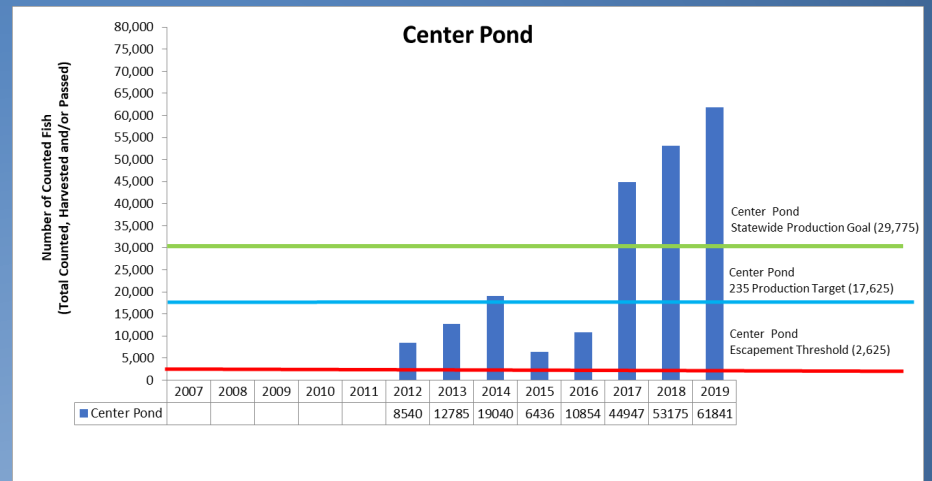
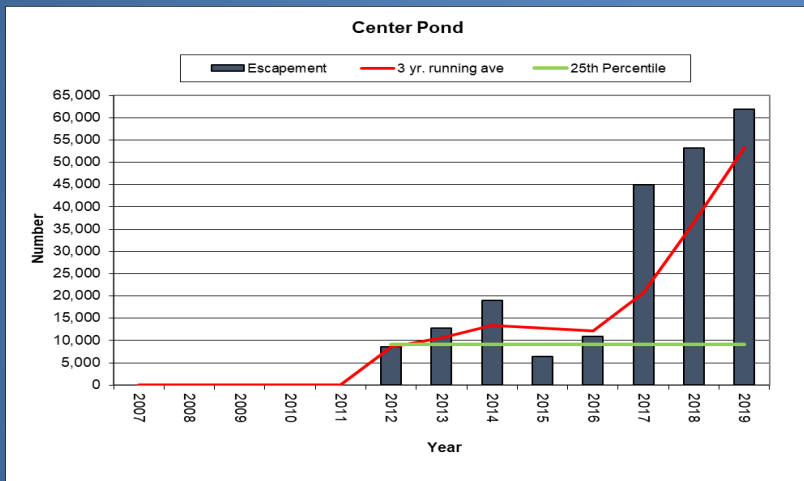
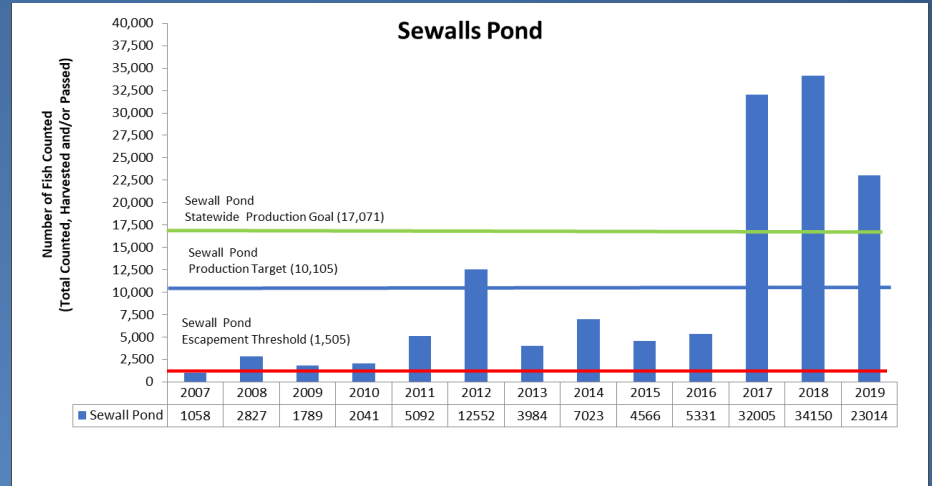
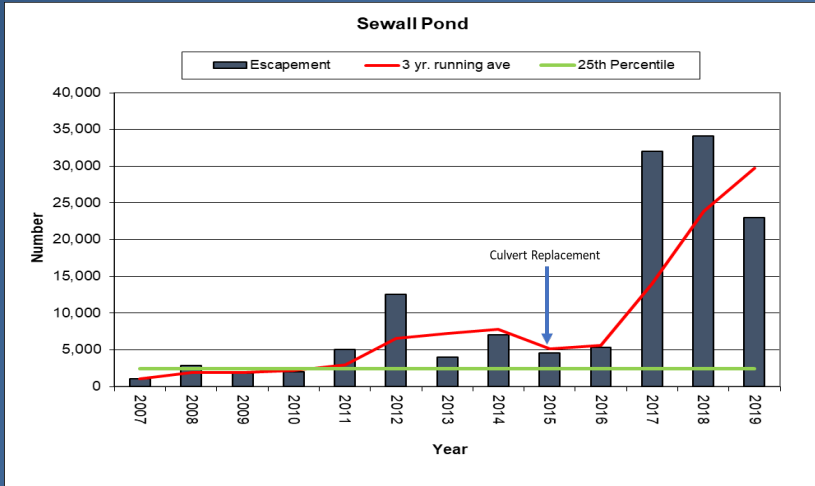
Annual release of 235 spawning fish per surface acre to provide an alewife population capable of increasing annual river herring run size. The run must demonstrate a repeat spawning ratio of 20 percent, Z-estimates of < 2.0 , and an age structure that demonstrates the presence of older age fish (ages 3-7).

The goal is to achieve existing Maine SFMP criteria for each of the proposed waters within a 5-year period or close the recreational and commercial river herring fisheries.

Definition of Production Terms

-  **Escapement Threshold** - 35 fish per acre. Used as minimum escapement number to manage original commercial river herring fisheries. Based on commercial harvest, escapement and production in six watersheds for years 1971 - 1983
-  **Production Target** - 235 fish per acre. Number expected return from Escapement Threshold based on data 1971 - 1983
-  **Production Goal** - 397 fish per acre. Mean return based on current commercial harvest and escapement from seven watersheds 2005 - 2017

Run Trends for Proposed Fisheries



Technical Committee Concerns

- Maintain consistency with Amendment 2 of the River Herring FMP
- River herring runs that are under restoration and simultaneously harvested need to make progress toward meeting biological metrics that indicated sustainability (age structure, total mortality, repeat spawning, total returns).
- Increasing time series trends in total instantaneous mortality (Z) for repeat spawning fish should not exceed Z -collapse based on the current river herring assessment.
- Recognize that these are small watersheds with very small runs that are susceptible to overharvest.
- Two of the three runs do not meet the standard 10 year data requirement to make sound biological decisions within the existing assessment process.
- Harvest will impact restoration progress and may prevent achieving long-term sustainability.

Management Safeguards to Protect the River Herring Resource and Address Technical Committee Concerns

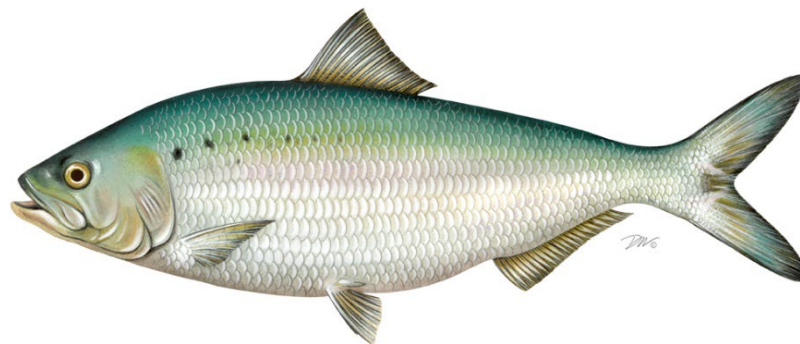
- **Decreasing trends in running three-year averages of annual run counts.**
If the run demonstrates a declining trend in the running three-year average of annual run counts the fishery will close for the following year.
- **Increasing time series trends in total instantaneous mortality (Z) for repeat spawning fish.**
If the fishery does not achieve a Z-estimate of 2.0 or less for repeat spawners for the current year the fishery will be reduced by five percent of the TSM for the remainder of the five-year harvest period or until the Z-estimate falls below 2.0.
- **Decreasing time series trends in repeat spawning rates.**
If the average number of repeat spawning fish for the TSM and sample year do not achieve 20 percent the fishery will be reduced by five percent for the remainder of the five-year harvest period or until either the annual repeat spawning rate or the mean for the time series exceeds 20 percent.
- **Decreasing time series trends in age structure.**
River herring populations that do not demonstrate the presence of fish ranging in age from three to seven years will be reduced by ten-percent at the end of the 2022 addendum review period.

Control Rules and Assessment Criteria Summary

- Harvest will occur after May 18 to allow older river herring to escape the fishery.
- Municipalities that allow a recreational fishery must enumerate and subtract the recreational harvest from the commercial catch allowance for the season.
- The release of a minimum spawning stock threshold of 235 fish/acre. A commercial fishery that does not meet the 235 spawning stock escapement will close until fishery achieves the escapement goal the following year.
- Annual review of age data, mortality rates, and repeat spawning rates derived from annual data collection to assess the need to reduce harvest numbers or suspend any fishery short of the 5-year period.



Shad Habitat Plans



ASMFC Shad and River Herring Management Board

October 30, 2019

Background



- Amendment 3 requires all states and jurisdictions to submit a habitat plan for American shad
 - summary of current and historical spawning and nursery habitat, threats to those habitats, and habitat restoration programs

Status of Plans



- Most plans approved in 2014
 - Florida updated in 2017
 - No habitat plans for Merrimac and Hudson Rivers

Next Steps



- Recommendation for states to update habitat plans, as needed
- Recommendation for habitat plans for Hudson River and Merrimac River to be submitted to TC
- TC evaluates new habitat plans and proposed changes
- Board considers plans updates for approval



2018 Shad and River Herring FMP Review and Compliance



Presented to Shad and River Herring
Management Board
October 28, 2019

Outline

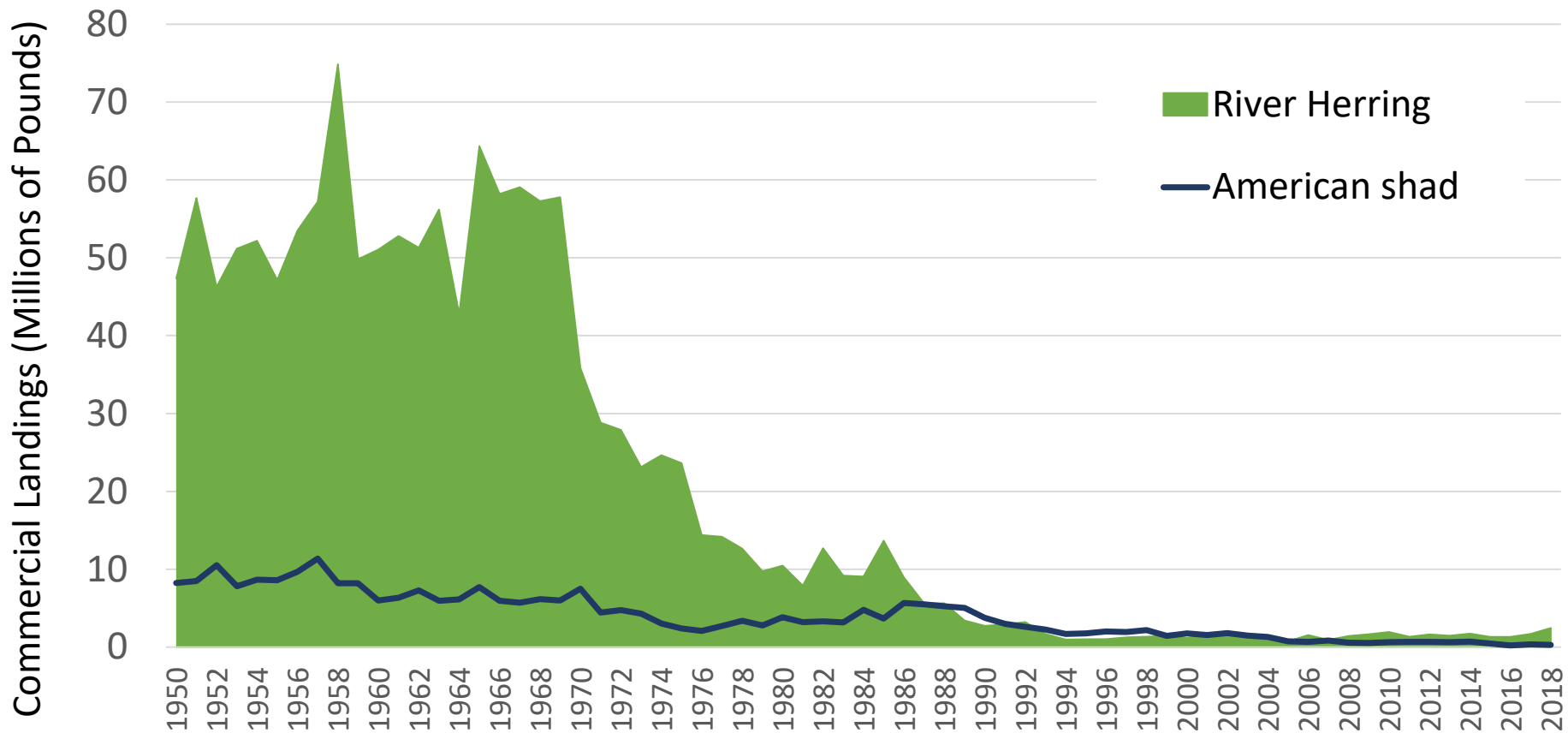


1. Landings
2. Fish Passage
3. Stocking Efforts
4. Sturgeon Interactions
5. *De minimis* requests
6. PRT Report



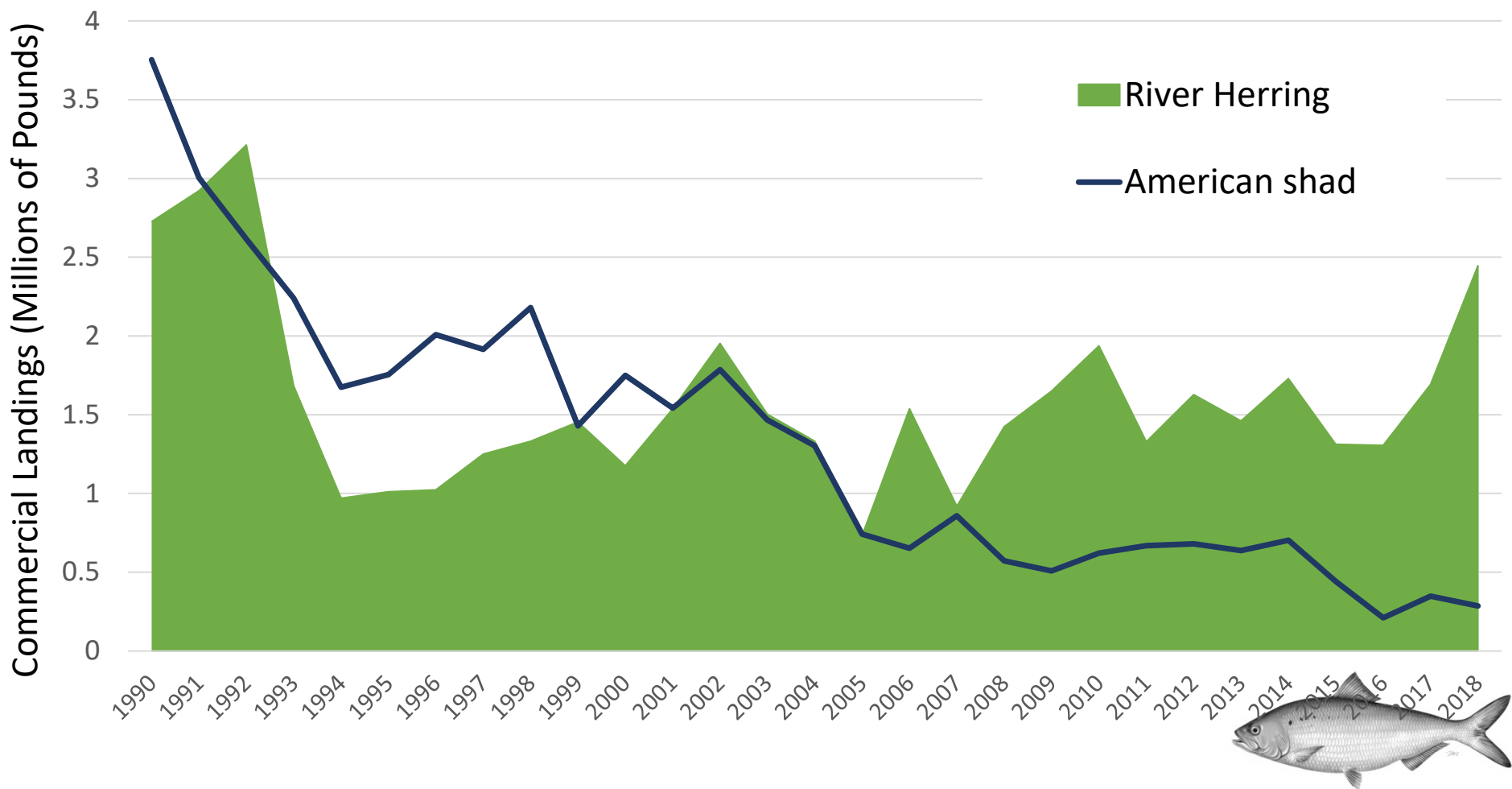
Shad & River Herring Commercial Landings 1950 - 2018

Source: ACCSP, Technical Committee and ASMFC Compliance Reports



Shad & River Herring Commercial Landings 1950 - 2018

Source: ACCSP, Technical Committee and ASMFC Compliance Reports



Commercial Landings



	River Herring	American Shad	Hickory Shad
Maine	*	*	*
New Hampshire	*	0	0
Massachusetts	173,971	*	0
Rhode Island	0	0	11,529
Connecticut	0	20,530	*
New York	*	*	*
New Jersey	0	16,960	*
Delaware	0	9,638	0
PRFC	3,372	37,820	0
Virginia	0	4,310	2,700
North Carolina	0	53,878	75,481
South Carolina	289,978	107,829	*
Georgia	0	27,484	6,010
Total	2,445,538	285,523	97,284



Required Passage Counts



- Counts required in ME, NH, MA, RI, CT, PA, MD, and SC
- Coastwide total passage in 2018:
 - 9.4 million river herring
 - 642,688 shad



Coastwide Stocking



- 2018: shad fry stocked in NH, MA, RI, PA, DE, MD, Potomac River, NC, SC and GA
- No stocking in James River, Virginia in 2018
- Total shad stocked in 2018: 22.8 million



Sturgeon Interactions



- 343 interactions were reported in 2018
 - 11 fatalities
- Reported by CT, NJ, PRFC, VA, NC, SC, GA
- RI data not yet available



De minimis Requests



Shad

- ME, NH, MA, FL

River herring

- NH, FL
- These states meet the requirements for *de minimis*.



PRT Report



- Several states allow recreational harvest for shad and/or river herring in absence of an approved SFMP
 - **Maine:** no SFMP for shad, statewide recreational creel limit of 2 fish per day
 - **Georgia:** no SFMP for river herring, no regulations to prohibit recreational harvest of river herring
 - **Florida:** no SFMP for river herring, statewide recreational creel limit of 10 fish for aggregated alosine species



PRT Report



- Not all monitoring requirements listed under Amendments 2 and 3 were completed/reported (see Table 6 in FMP Review).
 - Characterization of other losses, variance, characterization of recreational harvest, length and age frequency, and degree of repeat spawning.
- Most states did not submit their monitoring data in a separate Excel file along with the compliance report, as is required by Amendment 3.
- Clearer reporting from states and jurisdictions that share required monitoring
- All sections of the compliance report should be addressed



Board Action



- Consider approval of the 2019 Shad and River Herring FMP Review, state compliance reports, and *de minimis* status for Maine, New Hampshire, Massachusetts and Florida



PRT Report



Questions?