



Technical Committee Technical Committee Progress on Board Tasks



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ASMFC Shad and River Herring Management Board

May 5, 2021

Outline



1. Technical Guidance Document for Implementation of Amendments 2 and 3 to the Shad and River Herring Fishery Management Plan
 - Background
 - Review Technical Guidance Document
 - Consider Approval
2. Methods to Evaluate Bycatch in Mixed-stock Fisheries in State Waters
 - Background
 - Progress
3. Technical Committee Recommendations on Addressing Fish Passage Performance
 - Background
 - Review TC recommendations



Technical Guidance Document for Implementation of Amendments 2 and 3 to the Shad and River Herring Fishery Management Plan

Background



- In 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

Background



- In February 2021, Board reviewed and supported TC recommendations on these items
- Board Tasked TC with developing a technical guidance document consistent with the TC recommendations for use in SFMP and AMP development and evaluation
- Draft Technical Guidance Document included in Board materials

Technical Guidance (1)



1. Management and monitoring of rivers with low abundance and harvest of shad and river herring

Recreational Harvest Information	Monitoring Data to Support SFMP	
	Sufficient	Insufficient
None (Species Absent)	1. NA	2. AMP
Unknown (Species Present)	3. SFMP	4. AMP/Catch & release
Known/ Suspected	5. SFMP	6. Catch & release

Technical Guidance (2)



2. Standardization of SFMP requirements

- A. SFMPs should provide details on management response to the stock falling below defined sustainability target or threshold, including:
 - Types of restrictions that can be considered (can provide multiple options for restrictions)
 - State must notify the Board in the next annual compliance report if a stock falls below an SFMP threshold, and pursue implementation of management response for following calendar year
- B. Management restrictions implemented in response to a stock falling below the sustainability target/threshold must stay in place until the sustainability target(s) have been met for at least 5 consecutive years of sufficient data collection
- C. Cooperative development of sustainability targets, SFMPs, and consistent management measures for interjurisdictional waterbodies

3. Incorporation of stock assessment information into SFMPs and discussion on the timeline for renewing plans

- TC will continue to review information on required and ongoing monitoring efforts and develop recommendations for improvements to data for use in SFMPs and assessments.
- Maintain 5 year timeline for SFMPs to be reviewed and updated as needed

Technical Guidance (4)



4. Clarification of *de minimis* requirements as they pertain to SFMPs

- Maintain current definition in 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

5. Review of the number of years of data required before developing a SFMP

- TC guidance:
 - **Shad**: minimum of 10 years of data required to establish primary sustainability metric in SFMP/AMP, with TC discretion
 - **River Herring**: the standard for data time-series length for SFMP metrics should be 10 years.
 - The TC may accept a time series trend of 7-9 years, with consideration of additional information to justify shorter time series (e.g. exploitation rate, stock size, etc.)

Alternative Management Plans



Guidance on the use of AMPs:

- AMPs should include the following components:
 - Rationale or justification for why SFMP cannot be used
 - Justification that proposed management program will be conservationally equivalent to catch and release only regulations
 - Explanation of how the state will determine if/when an AMP is no longer appropriate (data source and trigger, e.g. 3 yrs of harvest)
 - Description of management response if trigger is met
 - E.g. If harvest is documented through a creel survey for 3 consecutive years, catch and release only regulations will be implemented statewide or for specified systems
 - If management trigger in AMP is met, state must notify Board in next annual compliance report, and pursue implementation of management response for the following calendar year.



Methods to Evaluate Bycatch in Mixed-stock Fisheries in State Waters

Background



- In August 2020, the Board tasked the TC with “identifying potential paths forward to improve shad stocks along the coast considering the assessment results.”
- System-specific TC recommendations presented at February 2021 meeting.
- TC identified need to understand and reduce impacts to external stocks of directed mixed-stock fisheries (e.g. Hudson river shad caught in Delaware Bay)
- TC tasked with “developing methods to evaluate bycatch removals in directed mixed-stock fisheries in state waters in order to understand and reduce impacts to stocks outside the area where directed catch occurs”

Task Roadmap



- Define goals and expectations
- Identify known or potential mixed stock fisheries
- Collect available data on mixed stock harvest and composition
 - Past and present DNA studies, tagging data, and commercial and recreational harvest data to determine where mixed stock harvests occur and to what degree
- Determine feasibility of developing modeling methods to estimate composition of mixed-stock fisheries
- Evaluate novel and/or existing methods of reducing or eliminating mixed-stock harvest
- Develop recommendations for the Board on reducing or eliminating mixed-stock harvest or recommend research priorities going forward to address this task.

Progress on Task



- TC formed a task group to address the task
- Task group sent a data request and data template to all state representatives for information on mixed-stock fisheries and/or bycatch
- Task group will meet May 14th to review data and discuss work plan and next steps



Recommendations on Addressing Fish Passage Performance

Background



- August 2020: Board tasked TC with “identifying potential paths forward to improve shad stocks along the coast considering the assessment results.”
- TC recommendations presented at February 2021 meeting.
- TC indicated further action is needed to improve fish passage along the coast
 - passage mortality poses substantial threat to shad stocks & limits recovery potential
 - assessment analysis suggests passage barriers reduce coastwide spawner production potential by up to 41%.
 - TC prepared a memo with recommendations for Board action related to passage

Key Information



- The cumulative effect of barriers should be recognized as one of the largest and most pervasive obstacles to the recovery of American shad.
 - Barriers/associated hydroelectric facilities can cause delays, injuries or stress, and mortality to upstream and downstream migrants at juvenile and adult life stages.
 - Assessment modeling showed less than a 10% increase in spawner production potential vs no passage at all at first barrier under current passage efficiency
- Science-based and quantitative fish passage performance criteria are needed to test the effectiveness of the fish passage facilities to achieve management goals
- USFWS and the NMFS have fish passage prescription authority under the Federal Power Act
- States also often have the ability to use a required Water Quality Certificate during relicensing to address fish passage

TC Recommendations



- The following actions are needed to reduce the negative effects of barriers and provide increased opportunities for population recovery:
 1. Dam/barrier removal is the preferred approach to restore fish species habitat access
 2. When dam removal is not an option, the development and use of fish passage performance standards in river systems based on available data, fish passage modeling tools, and fish passage expertise is recommended.
 - If the required information to develop performance standards are not available, it should be developed
- **The TC recommends the Commission send letters to the agencies with relevant authorities to request prioritization of these actions when considering licensing/permitting of projects that might impede access to spawning grounds and out-migration.**

Next Steps



Board Actions for Consideration:

- Consider Approval of Draft Technical Guidance Document
- Consider sending letters to agencies with relevant authorities to request prioritization of TC recommendations
 - USFWS, NMFS, FERC
 - Relevant state-specific permitting agencies



Questions?



Shad Habitat Plan Updates



ASMFC Shad and River Herring Management Board

May 5, 2021

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
- In February 2020, Board asked states to update habitat plans
 - New plans for Merrimack and Hudson Rivers
- Board approved 6 plan updates in February 2021
 - Maine, New Hampshire, Maryland, North Carolina, Savannah River, Georgia

Plan Updates for Board Consideration



- May 2021: 6 habitat plan updates evaluated by TC and submitted for Board consideration:
 - Massachusetts
 - Rhode Island
 - Connecticut
 - Delaware River Basin
 - South Carolina
 - Florida
- **The TC recommends approval of all plan updates**



Habitat Plan Updates

Massachusetts Coastal Rivers



- New sections on shad runs in the Jones, North, South, and Neponset rivers.
- New summary Table 1 on all known MA coastal rivers with shad runs.
- New reporting on shad electrofishing monitoring in the South River and Indian Head River.
- New maps from GIS Diadromous Fish data layer showing shad run locations with impediments.

Rhode Island



- Pawcatuck River Projects
 - White Rock Dam Removal
 - Potter Hill Fishway Improvements (although a final removal/partial removal has not been completed)
 - Bradford Rock Ramp
 - Lower Shannock Falls Dam Removal
 - Horseshoe Falls Fishway
 - Kenyon Mill Rock Ramp Fishway
- Pawtuxet River Projects
 - Partial Dam Removal at Pawtuxet Falls

Connecticut



- **Threats Assessment**

- Dam inventory
- Passage injury/mortality
- Inventory of altered water quality
- Water withdrawals, toxic and thermal discharge
- Channelization and dredging
- Land use inventory and assessment
- Climate change
- Competition and predation

- **Habitat Assessment**

- Increased access to historic and current spawning and rearing habitat

- **Habitat Restoration**

- Water quality improvement
- Impingement/Entrainment at dams
- Climate Change planning
- Shad transplantation program

Delaware River Basin



- **Introduction**
 - information on new funding program that may support future habitat restoration for shad and herring
- **Background**
 - more information on salt front location and primary historical spawning grounds, impacts to habitat and water quality
- Updated main stem and tributary habitat assessment
- Updated nursery habitat section
- **Threats assessment**
 - Updated information on barriers, climate change, invasive species, water management, impingement/entrainment
 - Removed text on natural gas development, dissolved oxygen, emerging contaminants, American eel weirs, and dredging

South Carolina



- Acknowledgement of approved joint Shad Habitat Plan for the Savannah River SC/GA
- Updated information regarding the Yadkin/Pee Dee River FERC license issued to Duke Energy.
- For all river systems: access links for new regulatory online tools that include updated information for point source discharge, dredging permits, and any mining activities.
- Updated information regarding the Santee Cooper FERC license, not yet issued.
- Additional Fish Passage Considerations

Florida



- St. Johns River

- City of Deltona has received a permit for a raw water intake in Lake Monroe.
- Updated the Basin Management Action Plan (BMAP) for Lake Jesup, a lake that discharges by the spawning grounds
- BMAPs for 3 first magnitude springs that discharge to St. Johns River

- Econlockhatchee River

- historic reference of shad spawning and recent findings that demonstrate continued use by spawning shad
- hydrologic changes over time

- Ocklawaha

- The St. Johns River Water Management District updated its review of the impacts of removing the dam on nutrient dynamics downstream. Reference added.

Next Steps



- *Today*: Consider approval of the 6 plans presented today
- Recommendation: Remaining states update habitat plans (and submit new plans for Hudson and Merrimack) in time for next Board meeting
- *Summer 2021*: TC evaluates new habitat plans and proposed updates



Questions?