



American Shad and River Herring SFMP Updates



ASMFC Shad and River Herring Management Board
October 23, 2024

Plan Updates for Board Consideration



The TC evaluated SFMP updates for:

- New Hampshire (River Herring)
 - Proposal to reopen fishery
- Maine (River Herring)
- Massachusetts (American Shad)
- Connecticut (American Shad)

Background



- Amendments 2 & 3 of the Shad and River Herring FMP require states wishing to have a fishery must submit a Sustainable Fishery Management Plan that will:
 - “demonstrate their stock could support a commercial and/or recreational fishery that will not diminish the future stock reproduction and recruitment.”
- Plans are updated and reviewed every 5 years to reassess stock status and sustainability

New Hampshire Update



New Hampshire River Herring Fisheries

- Managed on a statewide basis
- Data from six rivers within the Great Bay Estuary are combined to develop the Great Bay Indicator Stock used to develop sustainability metrics
- Harvest primarily personal use as bait in the Striped Bass fishery and as bait in the lobster fishery
- Between 2010-2020 statewide landings ranged from 5,361 to 22,652 fish
- 95-100% of harvest occurs in the Estuary

New Hampshire Update



New additions to SFMP

1. Updated instantaneous mortality rates
2. Standard error calculations for Visual Time Counts
3. Updated data from the 2024 River Herring Benchmark Assessment
4. Updated escapement target

New Hampshire Update



Sustainability Targets.

Fishery-dependent: Exploitation rate < 20% on Great Bay Indicator Stock

Fishery-independent: Escapement target of 94,589 fish (216 fish/surface acre)

Management Action Threshold. Annual review of both sustainability targets.

Management Actions.

If fishery-dependent target not met:

- 1) Add additional days or areas of prohibited harvest of river herring;
- 2) Implement or lower a daily harvest limit for state-permitted harvesters;
and/or
- 3) Implement a daily catch limit for recreational anglers.

If fishery-independent target not met: prohibition of harvest for all river herring fisheries in state waters.

Plan recommended for approval by the Technical Committee

New Hampshire Proposal



- Fishery closed in 2021 due to low spawning run counts in 2019 and 2020 leading to a failure to meet fishery-independent target. Proposal to reopen fishery for 2025 FY
- With new passage estimates in the Exeter River, the Great Bay indicator Stock in New Hampshire has been above the fishery-independent target escapement level of 94,598 fish for the past four years.
- Reasons given for low run counts
 1. Low water temperatures and decreased flows during the early part of spawning season
 2. Cocheco River
 - Equipment failure and fishway modifications in 2016 led to loss of efficiency and decreased river herring passage
 3. Exeter River
 - Dam and fishway removed in 2016
 - Poor Exeter River counts at Pickpocket fishway 13.4 km upstream despite thousands of fish observed passing former Great Dam location

New Hampshire Proposal



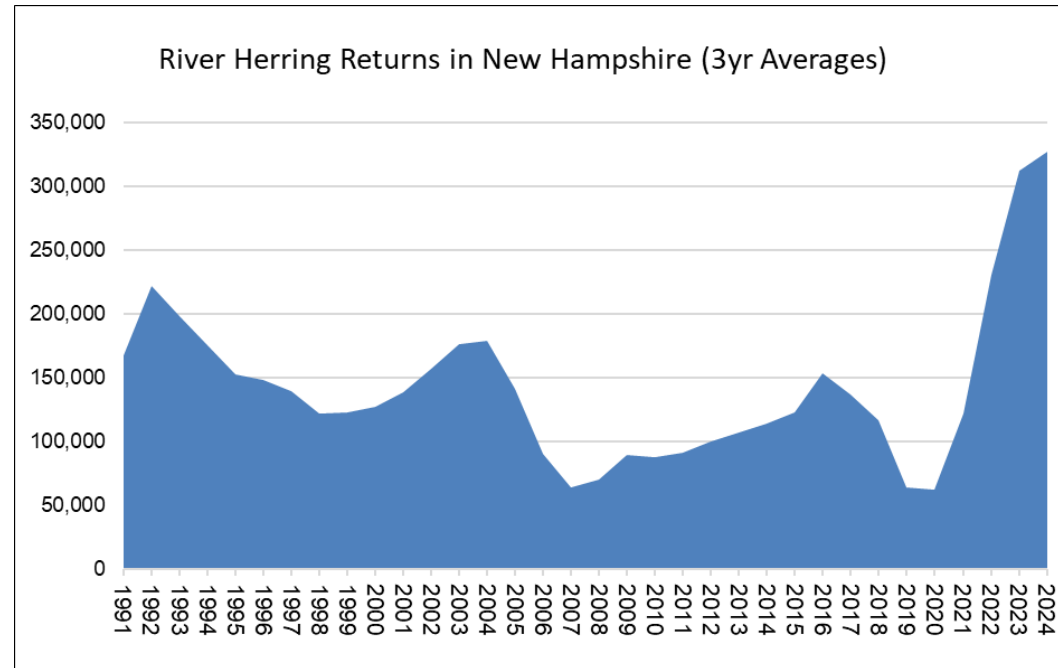
Corrective actions

Cocheco River:

- Fishway converted back to operate as it had prior to the modifications in 2016
- More consistent water flows

Exeter River:

- It was determined that numbers of river herring reaching the Pickpocket fishway was not providing an accurate reflection of fish migrating past the former Great Dam location
- Therefore, enumerating fish at the former Great Dam location would provide a better estimation of returns to the Exeter River
- New monitoring method using time counts starting in 2021

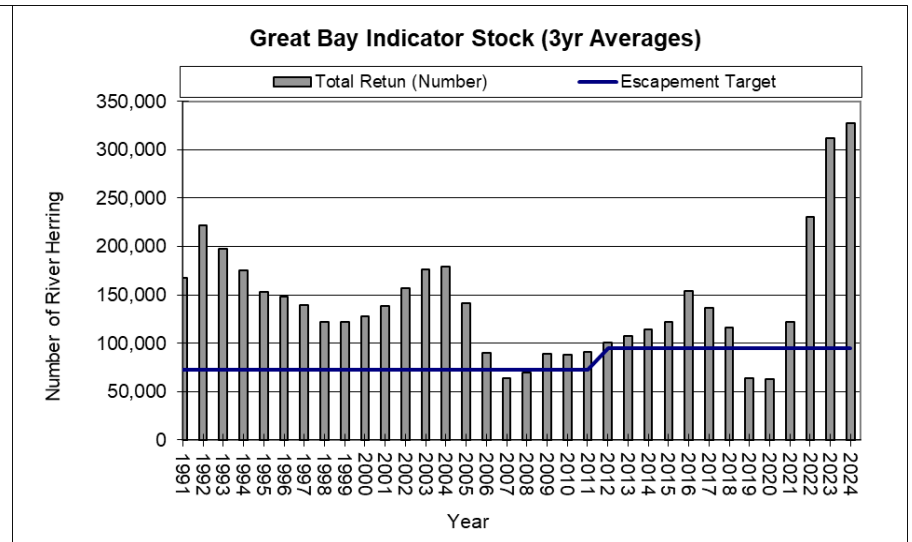
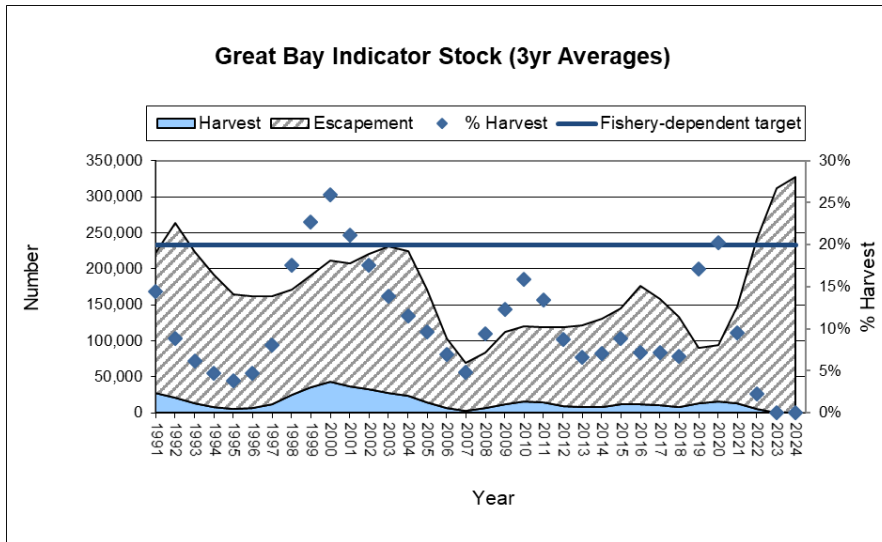


*2024 data preliminary

New Hampshire Proposal



Current sustainability target values



*2024 data preliminary

New Hampshire Proposal



NH's Case for Reopening Fishery

- NH has exceeded the fishery-independent target for the last four consecutive years.
- Majority of harvest comes from the Exeter river, which already is very restrictive.
 - Two days a week, one tote of fish per day.
- Cocheco river remain closed to harvest, while improvements to fishway and fish passage continue.
- Harvest on the Cocheco is minimal and the river's closure likely won't increase fishing pressure on other river systems.
- The remaining rivers of the Great Bay Indicator Stock can support harvest opportunities while continuing to meet NH's sustainability targets.

New Hampshire Proposal



- Technical Committee Review
 - Guidance Document recommends five consecutive years above target before reopening

“If a state has implemented a management restriction in response to the stock falling below the sustainability target(s), the management restriction must stay in place until the sustainability target(s) have been met for at least 5 consecutive years of sufficient data collection.”
 - The TC was hesitant to go against previously established technical guidance, but they also acknowledge that it is unclear whether the decreases in spawning run counts in 2019 and 2020 were true reflections of abundance or due to methodology.
 - **The TC was unable to reach a consensus on whether to recommend for or against New Hampshire opening their fishery a year earlier than recommended.**



Questions?

Maine Update



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 2024, 19 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

Maine Update



Maine River Herring Fisheries Management

- River herring harvests are strictly controlled by municipalities that are granted 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 (20-25 days total)
- 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

Maine Update



New additions to SFMP

1. Five additional commercial fisheries
2. Updated fishery-independent surveys
3. Recalculated 25th percentile metric
4. Updated Z estimates from River Herring Benchmark Assessment
5. New age requirement

Maine Update



Sustainability Defined for the Proposed Fisheries

- For the fisheries to be added to the fisheries management plan sustainability will be defined as follows:
 - 1) Demonstrate a repeat spawning ratio of > 20 percent
 - 2) Z-estimates of ≤ 1.0 before a commercial fishery begins
 - 3) Annual release of 235 spawning fish per surface acre
 - 4) Age structure that demonstrates the presence of older fish (ages 3-7)

Maine Update



Management Triggers

- 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.
- If the fishery does not achieve Z-estimates of 1.67 or less for repeat spawners for the previous year the number of fishing days will be reduced until Z-estimates fall below 1.67.
- If the average number of repeat spawning fish for the sample year do not achieve 20 percent, the number of fishing days will be reduced until the annual repeat spawning rate exceeds 20 percent.
- River herring populations that do not demonstrate the presence of fish ranging in age from 3 to 7 for more than three years will result in a reduction of fishing days.

Plan recommended for approval by the Technical Committee



Questions?

Massachusetts Update



Recreational harvest of American shad to continue in Merrimack and Connecticut Rivers. All other rivers have been catch and release since 2012.

Sustainability Targets.

Merrimack River

1. Fish Lift Count – 25th percentile of Essex Dam fish lift over time series (218 shad/lift day)
2. Z estimates ≤ 0.98 – warning threshold

Connecticut River -

1. Fish Lift Count- 25th percentile of Holyoke Dam fish lift over time series (140,000 shad)
2. Passage, recruitment, and escapement thresholds defined by CT DEEP

Management Action Threshold. Three consecutive years below the benchmark triggers MassWildlife and DMF (and CT DEEP for CT river) review to consider reducing harvest.

Plan recommended for approval by the Technical Committee

Connecticut Update



Continued commercial and recreational harvest on Connecticut River.

Sustainability Targets.

1. Passage - 140,000 American shad at Holyoke fish lift (MA)
2. Recruitment – 25th percentile of time series
3. Escapement – 90%

Management Action Threshold = Stoplight Approach

Green = all three indicators are positive

Yellow = 2/3 indicators are positive

Orange = 1/3 indicators are positive

Red = all three indicators are negative

Management response varies by stoplight analysis and which indicators are positive.

All metrics used for this plan since the last update to the CT SFMP have consistently been above the threshold, or trigger values, indicating a GREEN stock status and a low level of management concern

Plan recommended for approval by the Technical Committee



Questions?