FISH HABITAT

Riparian restoration planting site in Pennsylvania

Outcome:

Continually improve effectiveness *of fish habitat conservation and restoration efforts by identifying and characterizing critical spawning, nursery and forage areas within the Bay and tributaries for important fish and shellfish, and use existing and new tools to integrate information and conduct assessments to inform restoration and conservation efforts.*

Fish Habitat Management Approaches

- Compile and identify available data on habitats, habitat vulnerabilities and fish utilization
- Identify stressors to fish habitat and evaluate scale
- Map and target high-value fish habitat for improved conservation and restoration.
- Communicate importance of fish habitat
- Evaluate examples from other regions and engage with the ACFHP

Fish Habitat Activities 2020-2021

Compile and identify available data on habitats, habitat vulnerabilities and fish utilization

1. Complete research projects on habitat utilization and connectivity for black sea bass and summer flounder
2. GIT-funded project – Chesapeake Bay striped bass nursery habitat assessment
3. Create maps linking fish spawning habitat requirements of shad, herring, striped bass to water quality trends using long-term tidal monitoring data

Fish Habitat Activities 2020-2021

Building blocks of regional assessment

Identify stressors to fish habitat and evaluate scale

Nontidal

- Evaluation of information at 1:100,000 for the entire non-tidal portion of the watershed.
- Evaluation of different scales and summary assessment methods in a test area where data are available.
- Begin a nontidal watershed assessment at 1:100K, (to compare with existing NFHP assessment)

Tidal

- Build analytical/statistical framework for candidate tributary using physical and biological datasets
- Obtain and incorporate feedback on analytical framework from regional experts.
- Develop recommendations to extend the analytical framework to Chesapeake Bay tidal areas

Identify options for joint NOAA-USGS pilot with non-tidal and tidal habitats.

Fish Habitat Activities 2020-2021
Products from previous data inventory

Identify stressors to fish habitat and evaluate scale

1. Summary of fish metadata and data gaps (nontidal and tidal) specific to biological fish data.
2. Updated inventory of stressors and predictors, their spatial scale and identification of data gaps (nontidal and tidal)
3. American eel habitat assessment- Identify suitable habitat in the Chesapeake Bay (and Delaware Bay) in support of integrating a GIS habitat assessment into the American eel stock assessment (ASMFC).

Fish Habitat Activities 2020-2021

Map and target high-value fish habitat for improved conservation and restoration.

1. Develop nontidal species occupancy maps showing where different species occur
2. Collect and assess bathymetric LIDAR data on the Potomac and Shenandoah Rivers.
3. Develop a percent hardened shoreline GIS layer using existing shoreline inventory data and connect to shoreline threshold results

Fish Habitat Activities 2020-2021

Communicate importance of fish habitat

1. Report on stakeholder needs- A summary of meetings that includes NOAA (tidal) and USGS (nontidal) meetings including a list of potential projects, actions, and timeframe.
2. Improved Cross Outcome Coordination: Committed coordination with key CBP workgroups to assure shared resources, information and priorities while reducing duplication of efforts: Groups include: Healthy Watersheds, Stream Health, Brook Trout, Climate Resiliency, Local Engagement Coordination.
    a. Continue working to determine intersections with the healthy watersheds assessment and how to overlay a future fish habitat assessment layer

Fish Habitat Activities 2020-2021

Communicate importance of fish habitat

3. Develop infographic for each state that communicates the economic impact of fisheries to the jurisdiction, and number of fishing participants per county.
4. GIT-funded project- Developing communications and guidance on shoreline protection options for coastal landowners.

Fish Habitat Activities 2020-2021

Evaluate examples from other regions and engage with the ACFHP

1. Coordination with NRHA inland assessment and ACFHP Northeast assessment
2. Summary of lessons learned and variables used in previous fish habitat assessments presented to assessment steering committee.

State Needs

Where does invasive aquatic species fit in the Bay Program?

Each jurisdiction (MD/DE/VA) interviewed stated that understanding of invasive species was a priority.

State Needs

Where does invasive aquatic species fit in the Bay Program?

Possible workplan actions-

1. Study on invasive blue catfish in the Patuxent River.
    a. Data visualization tool of invasive blue catfish tagging study on distribution and movement patterns.
    b. Summary of the management challenges and priority science needs of invasive blue and flathead catfish.
2. White paper report reviewing regional and national aquatic invasive species plans and governance bodies involved in decision-making to better understand science needs related to invasive aquatic species.