Chesapeake Bay Program SRS: Quarterly Progress Meeting

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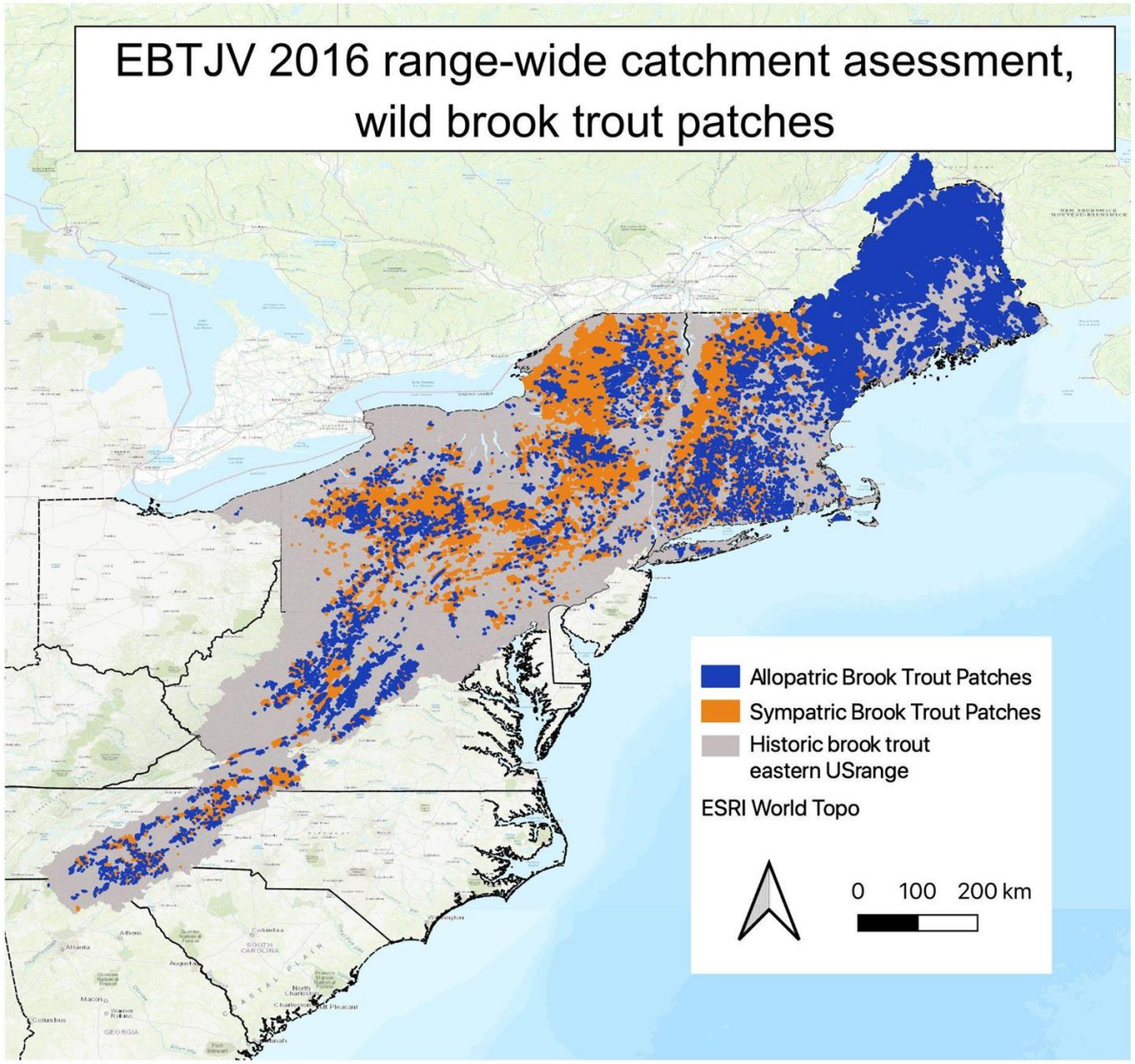
A Reminder of Importance of Eastern Brook Trout

- Brook Trout used to be found throughout much of the Chesapeake Bay watershed
- Historically it was one of the most abundant fish species in the non tidal portion of the watershed
- Occupying ~30% of the former range



A Reminder of the Importance of Eastern Brook Trout

- Brook Trout are a sentinel species for water quality in headwaters streams.
- Their presence is an indicator of intact riparian forests and reduced sediment and nutrient transport.
- This species requires the highest water quality.

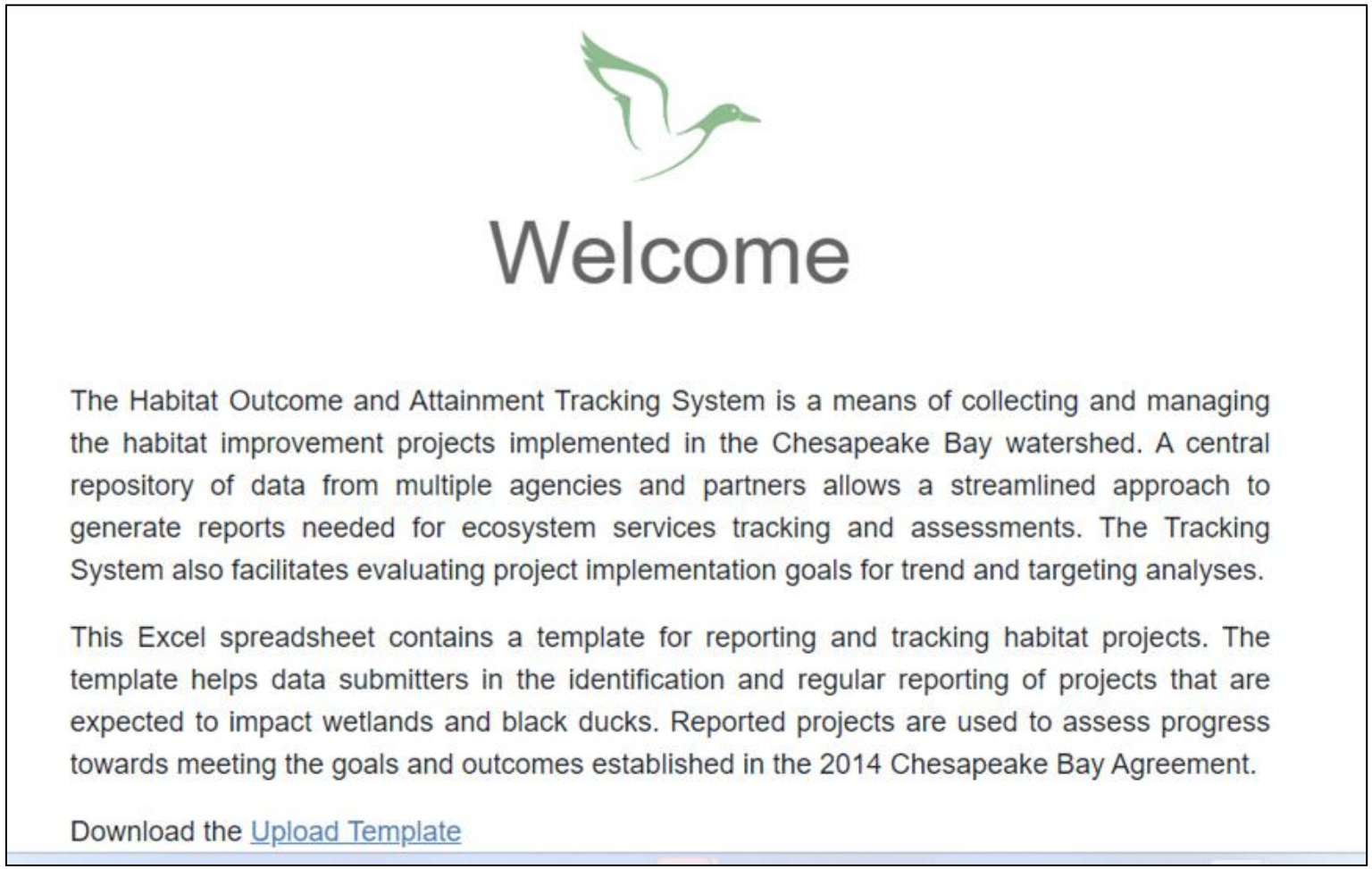
A Reminder of the Importance of Eastern Brook Trout

- High recreational value for local and often rural communities
- Important cultural and natural heritage species
  - Designated by jurisdictions as “state fish” to symbolically reflect states values and cultural identity
    - New York
    - Pennsylvania
    - Virginia
    - West Virginia

Meeting our Outcome

- **OUTCOME**: An 8% increase in occupied habitat → **OFF TRACK**
  - Changes in land use and climate continue to have significant detrimental impacts on brook trout habitat
  - Resources available to mitigate these impacts are insufficient
  - ✓ More accurate system to document gains and losses in brook trout habitat is needed
  - ✓ Intervention and data support are needed to increase the rate of implementation and monitoring of conservation and restoration activities - Advertisement out for CBP Living Resource Analyst
- FY2022 GIT-Funded Project: *Facilitating Brook Trout Outcome Attainability through Coordination with CBP Jurisdictions and Partners*
  - **Contractors***: Trout Unlimited and Eastern Brook Trout Joint Venture*
  - **Project period**: January 2023 – January 2024
  - **Outcomes**:
    - Collect and compile existing data from stakeholders and analyze monitoring and implementation data necessary to adequately track progress
    - Work with CBP to develop a tracking/reporting application
      - Habitat Tracker
    - Identify opportunities for cross-GIT collaborations
      - Healthy Watersheds GIT and Fish Passage, Forestry, Stream Health, Climate Resiliency Workgroups
    - Strengthen communication and coordination with other stakeholders

Habitat Tracker



Welcome

The Habitat Outcome and Attainment Tracking System is a means of collecting and managing the habitat improvement projects implemented in the Chesapeake Bay watershed. A central repository of data from multiple agencies and partners allows a streamlined approach to generate reports needed for ecosystem services tracking and assessments. The Tracking System also facilitates evaluating project implementation goals for trend and targeting analyses.

This Excel spreadsheet contains a template for reporting and tracking habitat projects. The template helps data submitters in the identification and regular reporting of projects that are expected to impact wetlands and black ducks. Reported projects are used to assess progress towards meeting the goals and outcomes established in the 2014 Chesapeake Bay Agreement.

Download the Upload Template

The Problem

Merriam, et al. 2019. Conservation planning at the intersection of landscape and climate change: brook trout in the Chesapeake Bay watershed.

- Without significant change in current land use practices (i.e., agriculture, residential and urban development, and mining), brook trout populations will decline by an additional 40%

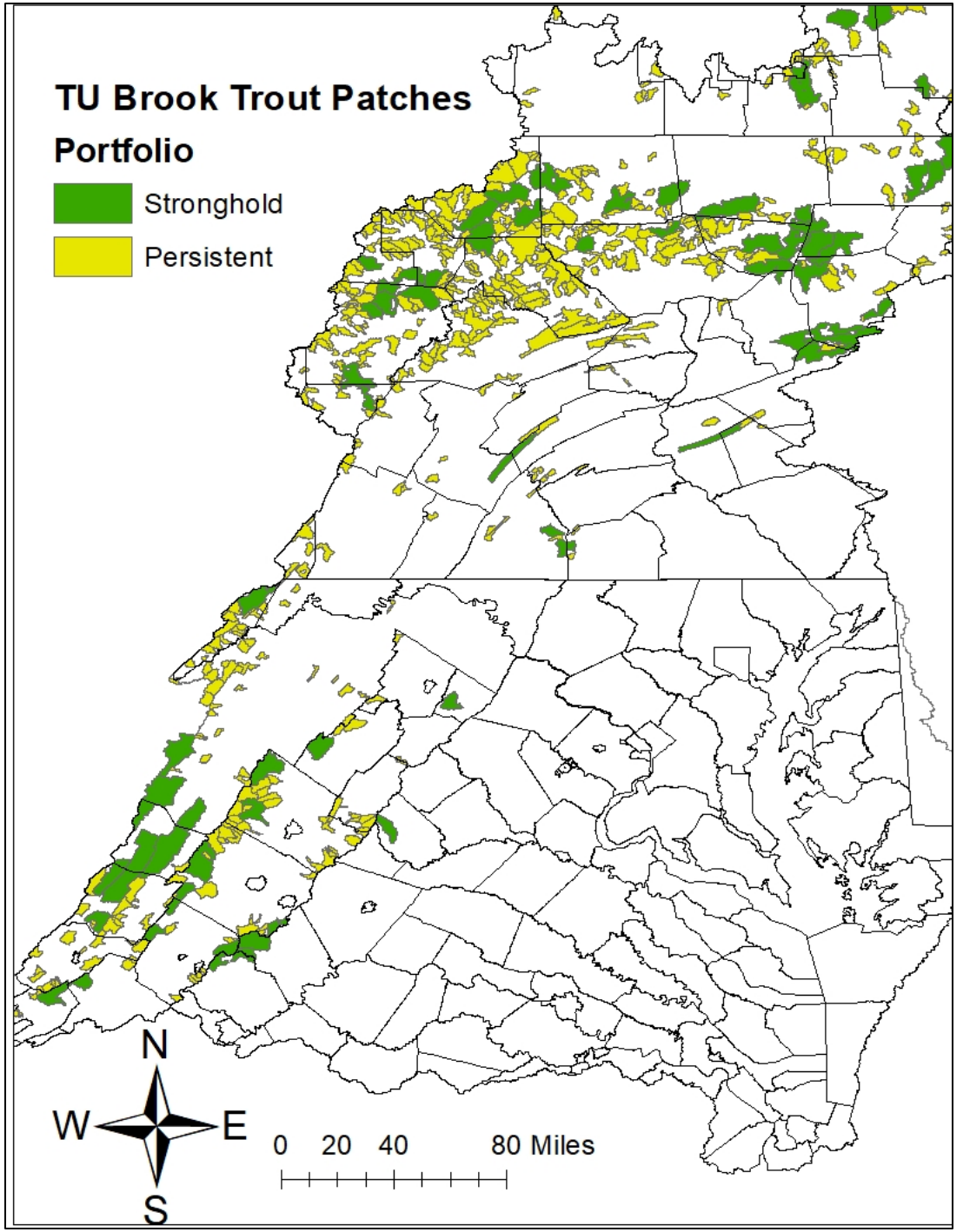
Batiuk, et al. 2023. Rising Watershed and Bay Water Temperatures - Ecological implications and Management Responses.

- Both land use and climate change are causing rising water temperatures
- Need to work with local jurisdictions to target restoration in priority brook trout (headwater) watersheds
    - **Accelerate forested riparian buffers to protect coldwater streams

EBT Priority Habitat
Strongholds and Persistent Patches

Stronghold Patches: 2,500/km adult EBT

Persistent patches: 500 - 2,499/km adult EBT



Priority Practices for Outcome Attainment

- Increase Habitat Occupancy (i.e., net gain)
  - **Restore streams polluted by Acid Mine Drainage (AMD)**
    - Treat priority AMD sites that can quickly be repatriated by nearby Brook Trout populations
    - Often in Environmental Justice Areas
  - **Improve Aquatic Organism Passage (AOP)**
    - Culvert replacements and dam removals

- Protect and Increase Resiliency of Existing Populations (i.e., no net loss)
  - **Conserve stronghold and resilient Brook Trout patches**
    - Conservation easements and land acquisitions
    - Local zoning ordinances
  - **Increase forested cover in stronghold and resilient Brook Trout patches (≥75% forested threshold)**
    - Riparian buffer implementation
    - Legacy mine land reforestation

What we need to be successful

- Intentional partnerships that bundles and targets resources in priority EBT watersheds
  - Possible partners: County governments, jurisdictional forestry departments, DOTs, and Mine Land Departments, NRCS
  - Formalized agreements?
    - e.g., MOU, other?

- These agreements would create collaborative partnerships to leverage resources for brook trout conservation to:
  - Scale up reforestation of Brook Trout patches
  - Scale up aquatic organism passage
  - Scale up acid mine drainage restoration
  - Scale up land conservation easements and acquisitions within Brook Trout patches

Management Board Discussion

The Management Board directs the Bay Program to develop a cross programmatic strategy that can be adopted by County, State, and Federal Agencies to develop agreements that promote brook trout habitat in priority counties that currently have stronghold or persistent Brook Trout patches.

- At a minimum, the programmatic strategy should include representatives and input from the following groups: Local Government Advisory Committee (LGAC), Water Quality GIT, Healthy Watersheds GIT, and the Brook Trout, Stream Health, Forestry, and Fish Passage Workgroups

- In addition, jurisdictions should include forestry departments, DOTs, Mine Land Departments, NRCS

Thank you

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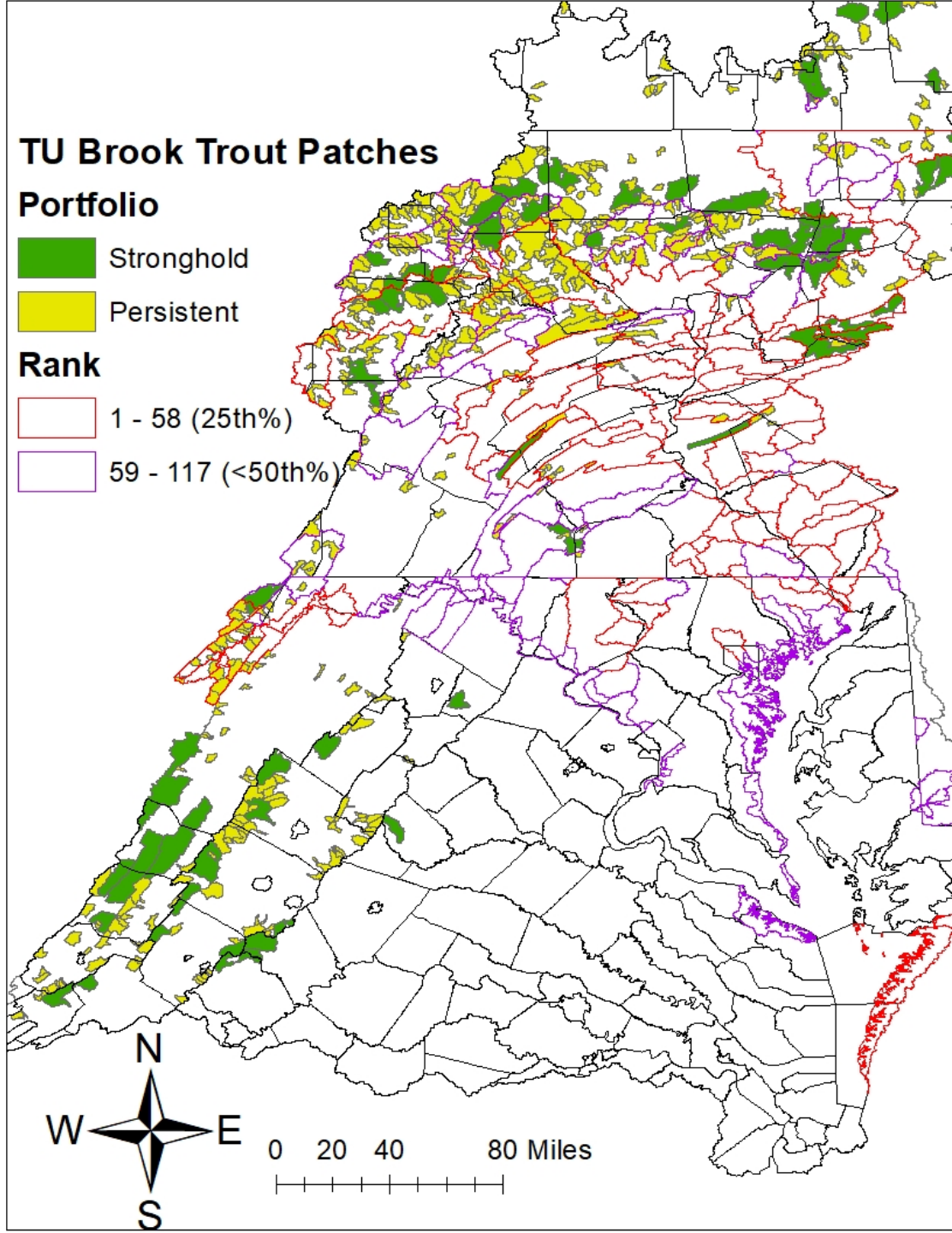
Priority Eastern Brook Trout Habitat
and
Ranked Most Effective Basins



Priority Eastern Brook Trout Habitat Clipped to top 25% and 50% ranked Most Effective Basins