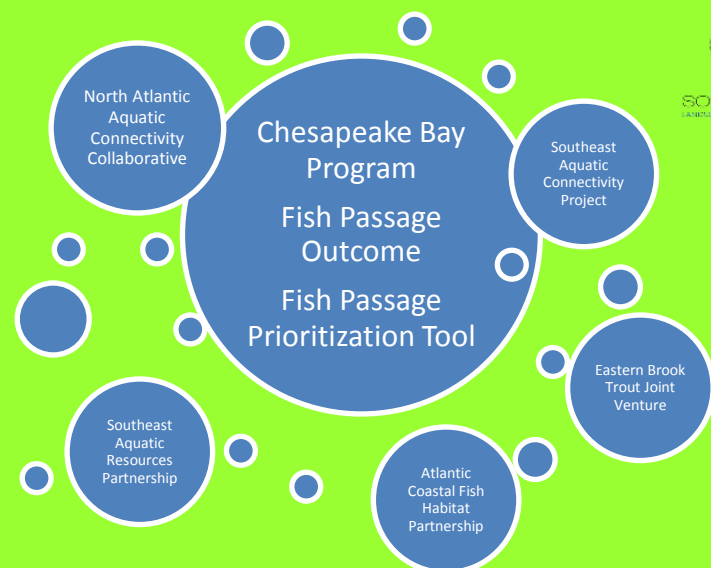


Road-Stream Crossing Assessment in the Susquehanna River and James River Basins

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Northeast Fishery Center
Lamar, PA



Lisa Moss
Virginia Fish and Wildlife Conservation Office
Charles City, VA



- ❖ Provide a baseline assessment of aquatic connectivity for target species.
- ❖ Utilize online tools and populate North Atlantic Aquatic Connectivity Collaborative (NAACC) database and map interface to assist with evaluation then prioritization of stream-road crossings for retrofits and removal.
- ❖ Connect partners to leverage resources to reconnect streams and rivers to support resilient populations and infrastructure.

Scope #2: Culvert Assessments for Fish Passage in Priority Watersheds

- ❖ Prioritize tributaries supporting Eastern Brook Trout, American Shad, and river herring spawning and nursery habitat based on the Chesapeake Bay Fish Passage Prioritization Tool, NAACC Prioritized HUC12 sub watershed results, VDGIF Fish and Wildlife Information Service, historical reports review, and expert knowledge.
- ❖ Conduct road-stream crossing assessments in the Susquehanna River and James River drainages using the North Atlantic Aquatic Connectivity Collaborative protocol during late summer or early fall timeframe.
- ❖ Upload collected field data into the NAACC regional database to contribute to a more comprehensive inventory for establishing target objectives for culverts in priority tributaries. Automatic scoring of database entries will produce the degree of AOP for assessed culverts and serve as an important basis for further prioritization.
- ❖ Transform data into maps indicating location of culverts/road-stream crossings assessed, crossing type, site jurisdiction, and degree of aquatic organism passage (AOP). A summary report of our findings will be produced.

NAACC 2015

Pennsylvania

- ❖ Assessments conducted in HUC12 sub watersheds containing road-stream crossings prioritized as a potential Eastern Brook Trout barrier, at risk for failure, and having impact of failure.
- ❖ Brook Trout are one of 65 species listed as “Species of Greatest Conservation Need” in PA Wildlife Action Plan.
- ❖ 345 sites completed by NEFC and Trout Unlimited in the Susquehanna and entered in the NAACC regional database.



Photo credit: James River Association



Photo credit: James River Association

Virginia

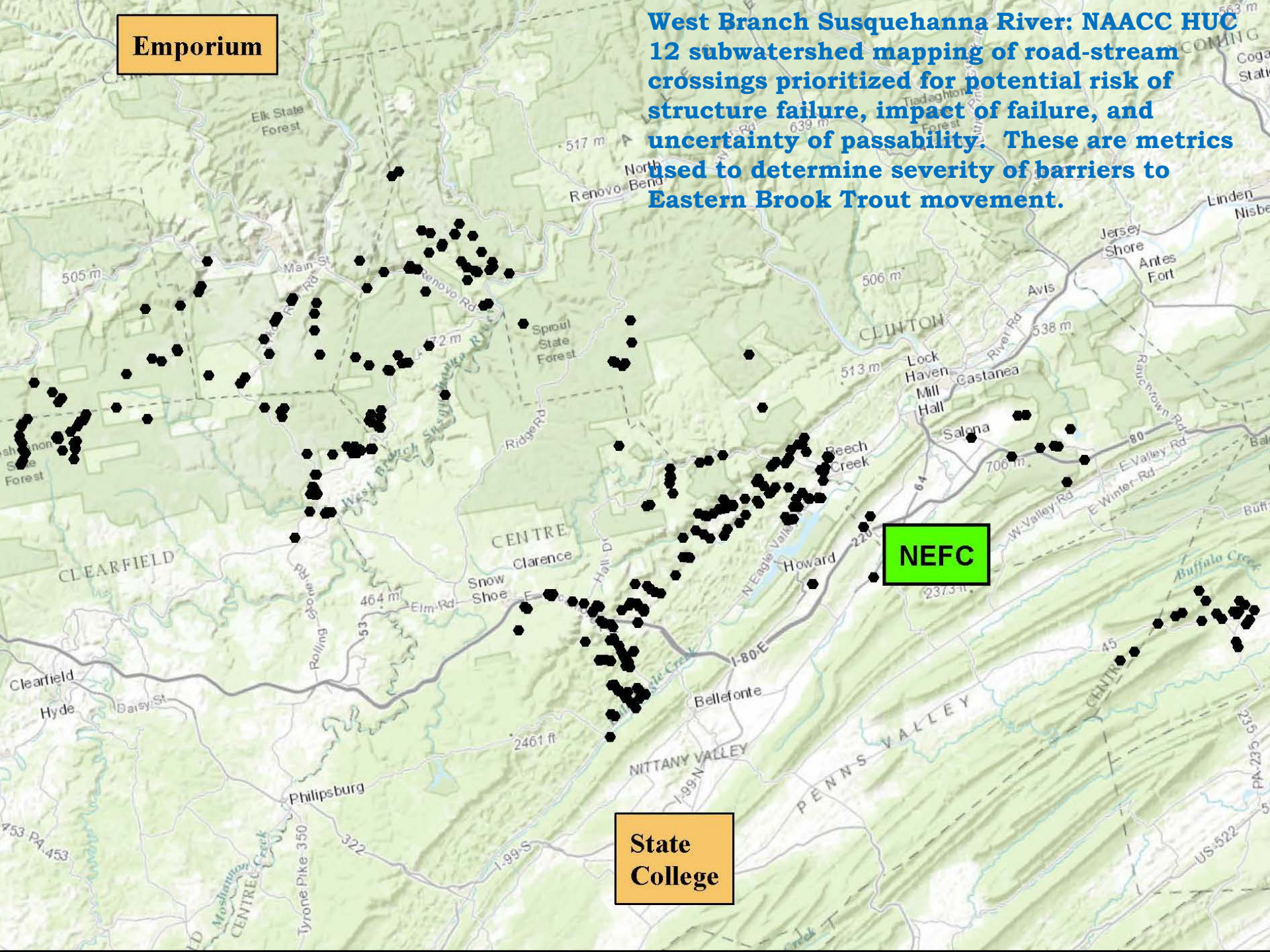
- ❖ Road-stream crossing assessments completed in the Upper James and Rappahannock Rivers regions by FWS Appalachian Partnership Coordination Office, Trout Unlimited, Piedmont Environmental Council, and the James River Association.
- ❖ Habitat surveyed supports Eastern Brook Trout and Endangered James River Spiny mussel.
- ❖ 1,303 sites completed and entered into the NAACC database to date.

Emporium

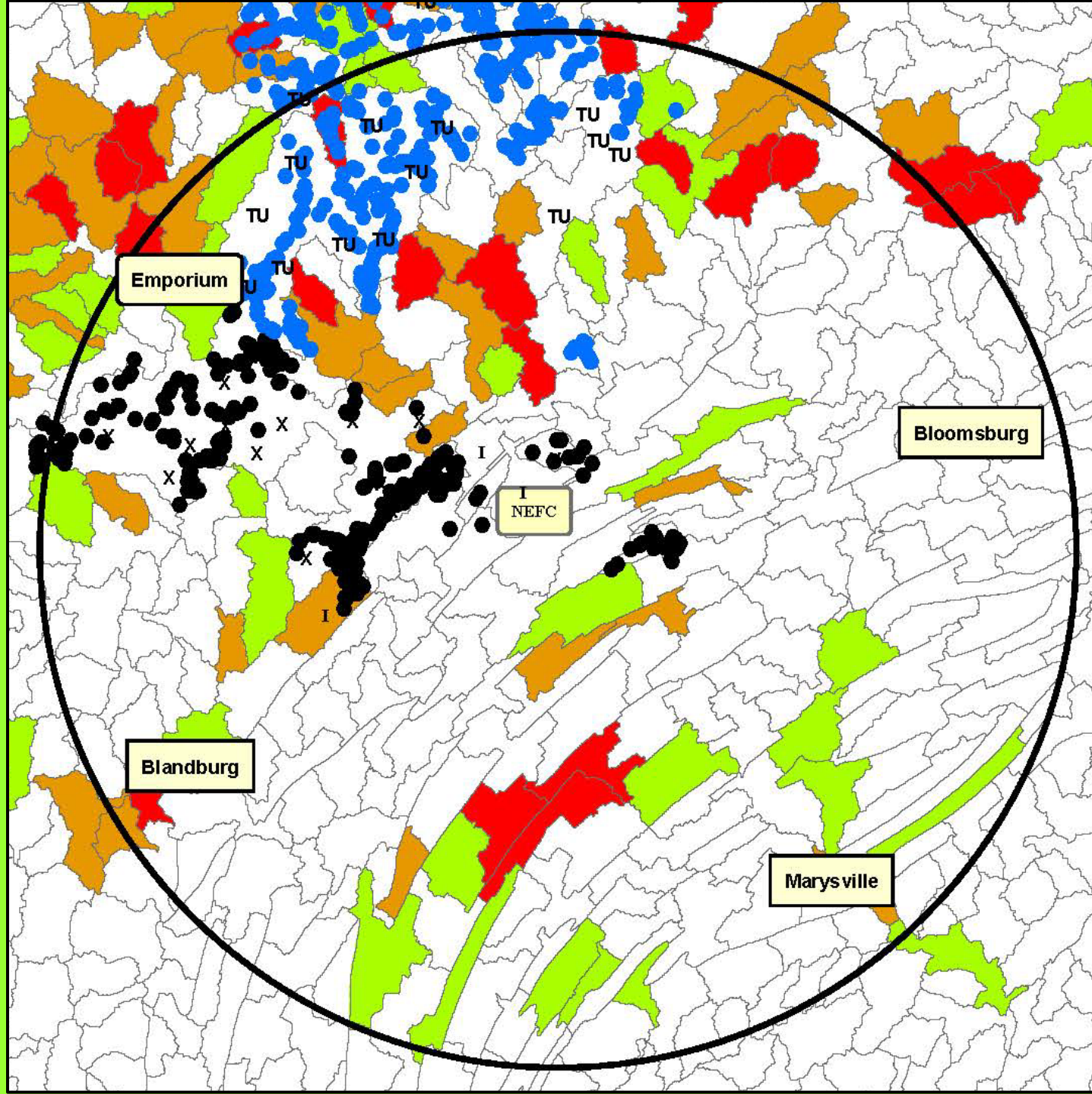
West Branch Susquehanna River: NAACC HUC 12 subwatershed mapping of road-stream crossings prioritized for potential risk of structure failure, impact of failure, and uncertainty of passability. These are metrics used to determine severity of barriers to Eastern Brook Trout movement.

NEFC

**State
College**



Shaded
HUCs are
top three
priority
(Tiers 1-3)
areas
targeted
for
assessment
in 2016.

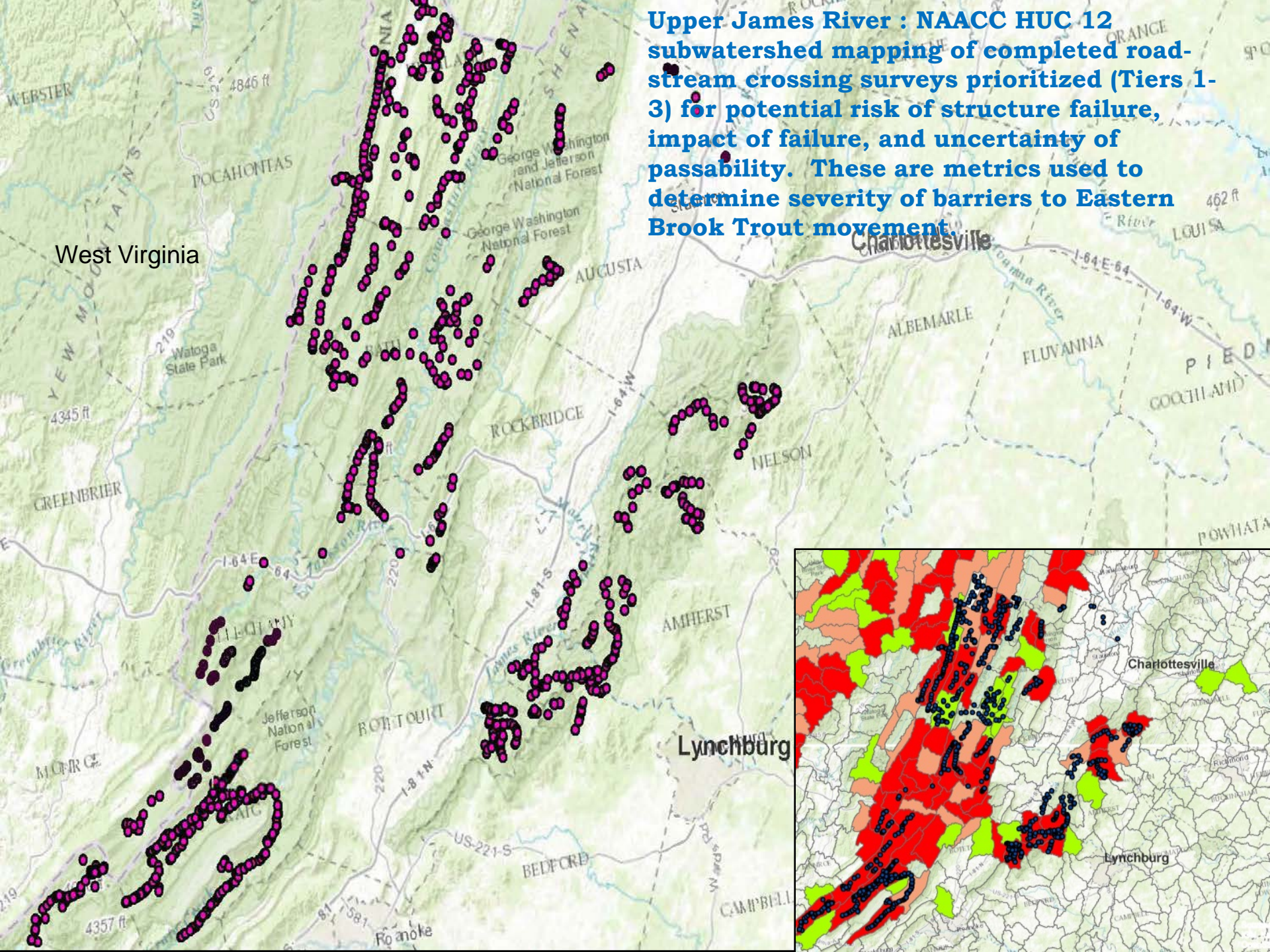


TU=Trout
Unlimited
Completed
surveys



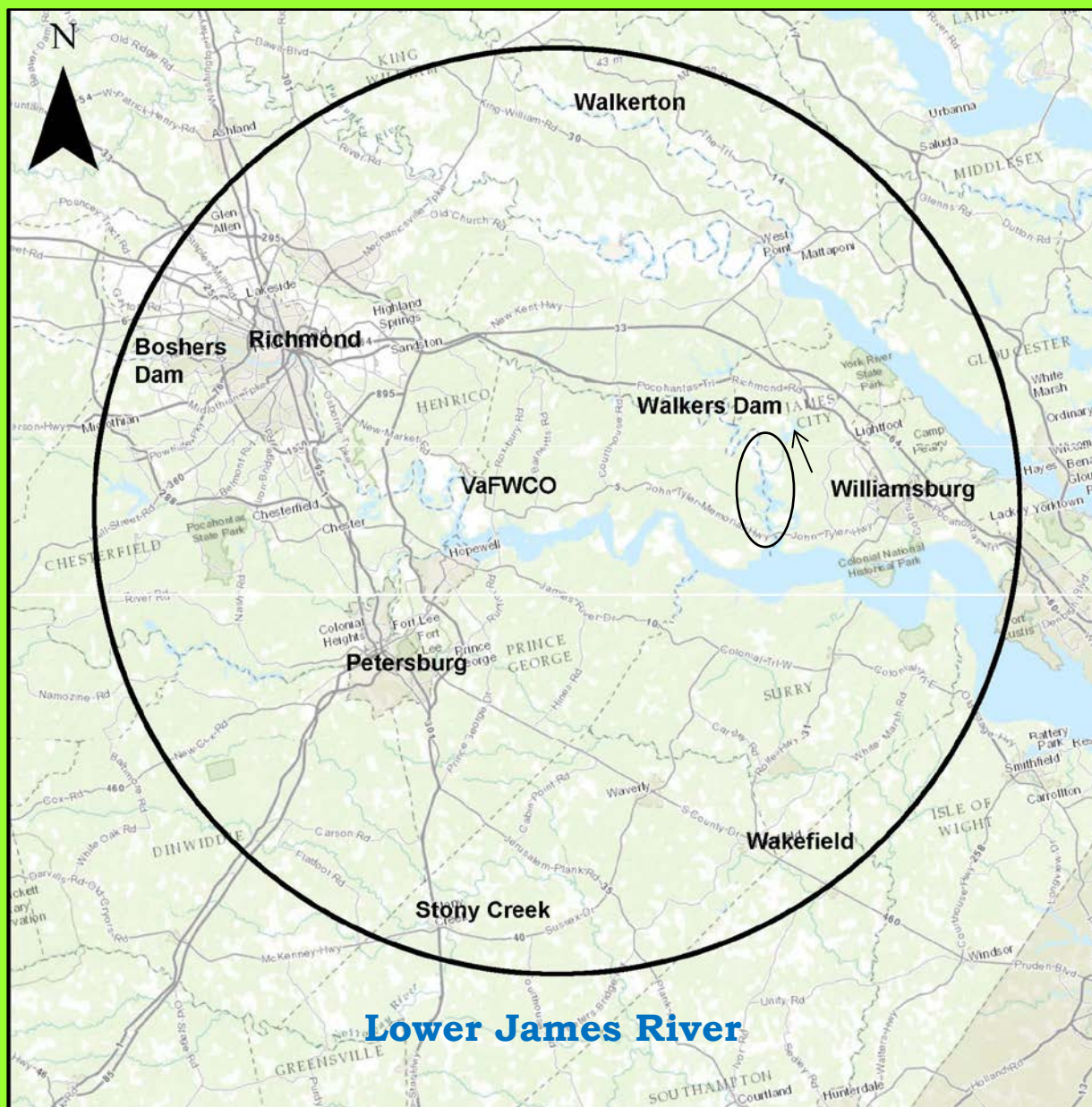
NEFC
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surveys



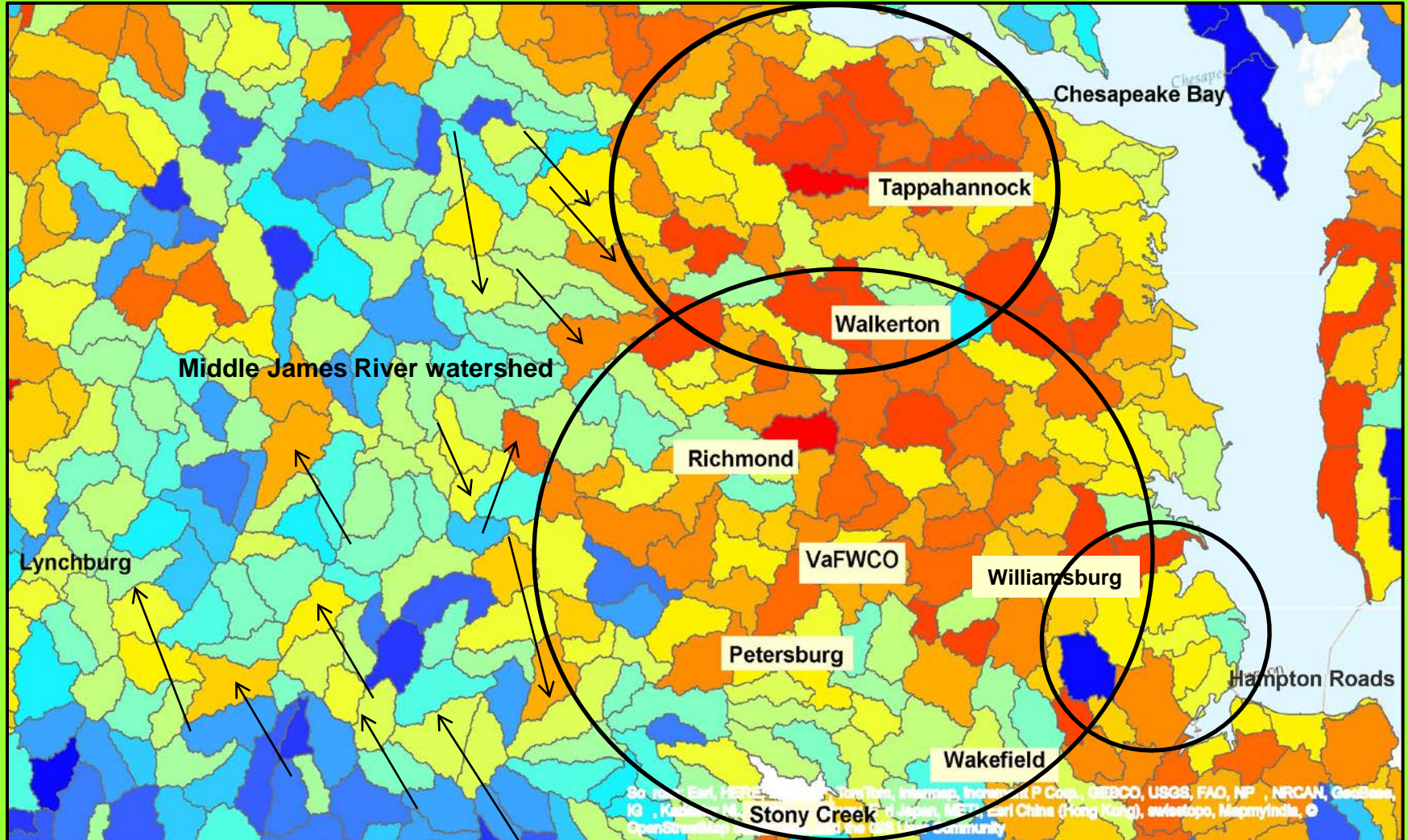


Upper James River : NAACC HUC 12 subwatershed mapping of completed road-stream crossing surveys prioritized (Tiers 1-3) for potential risk of structure failure, impact of failure, and uncertainty of passability. These are metrics used to determine severity of barriers to Eastern Brook Trout movement

Site Selection for Road-Stream Crossing Assessments in 2016



Site Selection for Road-Stream Crossing Assessments in 2016



Future Projects

Northeast Fishery Center

- ❖ Provide partners, including American Rivers, Trout Unlimited, and the PA Fish and Boat Commission, with Critical Linkages analyses of assessed road-stream crossings. Critical Linkages is a landscape-based model that evaluates restoration potential of culvert replacement for crossings.



Photo credit: Maryland DNR



Photo credit: Michael Odom

VA Fish and Wildlife Conservation Office

- ❖ Conduct road-stream crossing assessments in Tier 1-3 HUCs in the middle James River.
- ❖ Support existing efforts to improve aquatic connectivity in the Rappahannock River by conducting road-stream crossing assessments in the lower watershed.
- ❖ Create road-stream crossing inventory for the York River drainage.