

Upper James / Shenandoah Rivers Priority Waters Strategic Plan

Priority Water: Upper James / Shenandoah, VA

Five-year Vision Statement: Five years from now, TU's restoration efforts in the Headwaters of the Upper James River watershed and the Shenandoah River watershed will continue to lead the way in Virginia for targeted watershed scale restoration that enhances and restores critical coldwater habitat for native brook trout while also achieving water quality improvements for the Chesapeake Bay watershed. The headwaters of the Upper James and Shenandoah River watersheds contain some of the largest brook trout stronghold patches in Virginia, and over the next 5 years TU will connect high quality headwater brook trout patches within the watersheds to restored stream reaches to re-establish the fluvial life history of brook trout populations in the region. TU will continue its work with state and federal partners to conduct watershed-scale restoration efforts that span both public and private lands to benefit an additional 100 miles of cold-water resources, on top of what has been accomplished since the effort began in 2009.

Five-year Conservation Goals

1. **Sustain**-Maintain and expand funding and partnerships with private sources, state, and federal programs to facilitate long term programmatic presence.
2. **Sustain**-Continue to engage volunteers in restoration and monitoring activities to further develop environmental stewards in the watershed.
3. **Restore** – Further efforts to restore natural hydrologic functions, at a watershed and basin-scale, to increase resilience to climate change.
4. **Restore**- Expand existing efforts to restore instream and riparian buffer habitat to increase carrying capacity and resilience.
5. **Restore** – Expand existing efforts to stabilize eroding streambanks to reduce sedimentation that is detrimental to spawning habitat and water quality.
6. **Restore** – Repatriate brook trout to extirpated streams formerly within their historical range.
7. **Reconnect** - Reconnect headwater sources vital to spawning, rearing and forage by continuing to remove barriers to aquatic organism passage.
8. **Protect**-Facilitate long term protection of stronghold brook trout patches through land protection efforts and conservation easements.
9. **Protect and Sustain**- Continue to secure water quality and habitat protection via state and federal regulations.

Primary Conservation Strategies

- Actively pursue new funding sources and maintain existing funder partnerships by developing competitive and objective driven grant proposals and agreements.
- Solicit assistance from volunteers for riparian buffer plantings, water quality, habitat, and biological monitoring, advocacy activities at the local, state and federal levels, and engaging local college and university students in related fields of study for project development.
- Implement riparian corridor and in-stream habitat restoration through cooperative restoration agreements with the United States Forest Service on public lands, and through United States Department of Agriculture Farm Bill Programs and Virginia Ag Cost Share Program (local Soil and Water Conservation Districts) on private lands.

- Implement best management practices on farms: livestock exclusion, alternative water sources, riparian buffer establishment, streambank stabilization, etc.
- Restore riparian forest buffers, aquatic organism passage, and in-stream habitat (Natural Stream Channel Design, Large Wood Material Techniques, Stream Simulation, and others)
- Monitor and assess brook trout patches and continue to monitor for aquatic endangered species presence for protection and planning efforts.
 - Conduct fisheries surveys.
- Identify additional source populations and candidate streams to re-introduce native strain brook trout within their historic range.
- Fisheries Management-Continue to support and promote actions by state and federal partners to improve brook trout fisheries.
- Assist landowners with the establishment of conservation easements to protect cold-water habitat on private lands.
- Continue to protect and improve water quality through regulatory functions and restoration actions.

Current Partners

- Army Corps of Engineers (regulatory functions)
- Local Soil and Water Conservation Districts (private lands restoration efforts)
- Farm Service Agency (private lands restoration efforts)
- Local TU chapters (private and public lands restoration and monitoring efforts)
- National Fish and Wildlife Foundation (Funding to support public and private lands monitoring, assessment, and restoration efforts)
- Virginia Environmental Endowment (Funding to support private lands restoration efforts)
- Natural Resources Conservation Service (private lands restoration efforts)
- United States Fish and Wildlife Service (private and public lands restoration efforts, regulatory functions)
- Private Landowners (private lands restoration efforts)
- United States Forest Service (public lands- Monitoring, assessment and restoration efforts)
- Virginia Department of Wildlife Resources (public and private lands restoration efforts)
- Virginia Department of Environmental Quality (private lands restoration efforts and regulatory functions)
- Virginia Division of Forestry (private lands restoration efforts)

Potential Partners and Affected Communities

- Local watershed groups such as Friends of the North Fork Shenandoah River
- Virginia Department of Transportation
- Counties of Highland, Bath, Augusta, Rockingham, Shenandoah, Page

Decisionmakers

- Army Corps of Engineers (Regulatory functions for water bodies)

- Private Landowners (Manage private lands)
- United States Fish and Wildlife Service (Regulatory functions regarding Endangered Species and restoration actions)
- United States Forest Service (Manage public lands)
- Virginia Department of Environmental Quality (Water quality regulatory and funding)
- Virginia Department of Transportation (Aquatic Organism Passage barrier prioritization)
- Virginia Department of Wildlife Resources (Fisheries Management and regulatory functions)

The Upper James and Shenandoah River Priority Waters is rich in coldwater habitat and the majority (65%) of the coldwater streams are allopatric brook trout streams. Below is a snapshot of summary statistics for the priority area.

**Upper James and Shenandoah
Priority Waters**

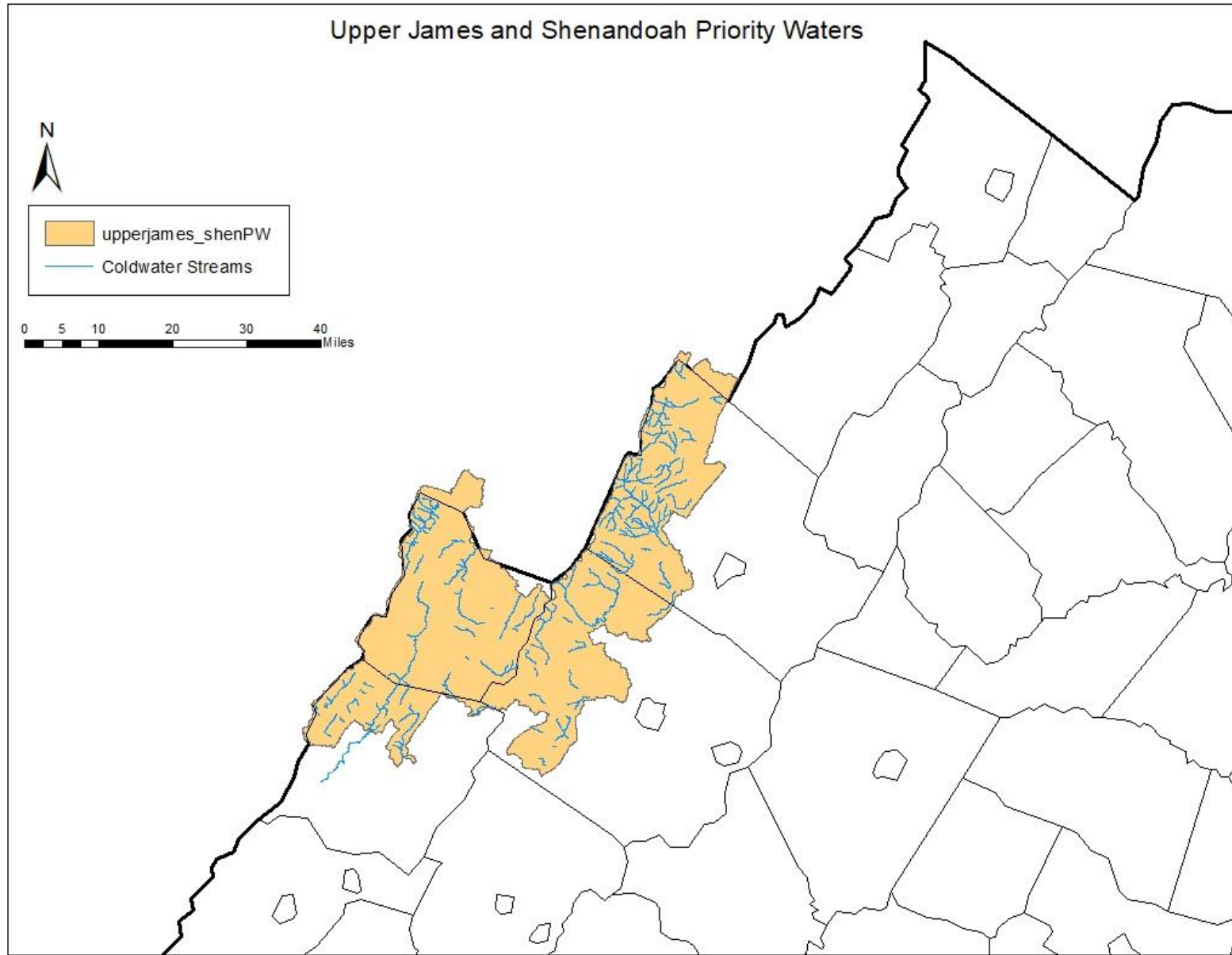
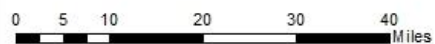
Total area (sq miles)	1213
total coldwater streams (mile)	508
brook trout streams (allopatric and sympatric) (mile)	352
allopatric brook trout streams (mile)	330
Class I or Class II (mile)	141
% of public lands	>50%
allopatric brook trout streams/sq mile of area	0.27

Upper James and Shenandoah Priority Waters



Legend:

- upperjames_shenPW
- Coldwater Streams



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