

Grayson Highlands Priority Waters Strategic Plan

Priority Water: Grayson Highlands, VA

Five-year Vision Statement: Five years from now, TU's will have established a restoration program in the Grayson Highlands area of southwest Virginia for targeted watershed scale restoration that enhances and restores critical coldwater habitat for native brook trout while also achieving water quality improvements and habitat enhancements for other native aquatic species such as eastern hellbender, and native freshwater mussels. This southwest region of Virginia is ripe with opportunity for conservation activities centered around coldwater ecosystems and the outdoor recreation opportunities that accompany intact watersheds. Portions of the Grayson Highlands Priority Waters contain southern strain brook trout and there are abundant coldwater habitat on public and private lands in the region. Initial efforts in the Grayson Highlands will focus on developing partnerships, securing early successes, identifying funding opportunities, and establishing staff in the area.

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**-Engage volunteers in restoration, monitoring, and assessment activities to further develop environmental stewards in the watershed and develop watershed specific action plans.
3. **Restore** – Restore natural hydrologic functions, at a watershed and basin-scale, to increase resilience to climate change.
4. **Restore**- Establish to restore instream and riparian buffer habitat to increase carrying capacity and resilience.
5. **Restore** – 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**- Secure water quality and habitat protection via state and federal regulations.

Primary Conservation Strategies

- Actively pursue new funding sources and 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 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)
- 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
- Virginia Department of Transportation
- Counties of Smyth, Wythe, Grayson, Washington.

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 Grayson Highlands Priority Waters is rich in coldwater habitat but few (13%) of the coldwater streams are allopatric brook trout streams. There is ample opportunity for re-introduction and repatriation of brook trout to historically occupied streams through management of non-native trout species and habitat restoration. Below is a snapshot of summary statistics for the priority area.

Grayson Highlands Priority Waters

Total Area (sq miles)	745
total coldwater streams (mile)	468
brook trout streams (allopatric and sympatric) (mile)	200
allopatric brook trout streams (mile)	60
Class I or Class II (mile)	247
% of public lands	<50%
allopatric brook trout streams/sq mile of area	0.08

Grayson Highlands Priority Waters



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Coldwater Streams

