



# Duck River Planning Partnership

## Conservation and Recreation Subgroup Update

May 4, 2026  
Quarterly meeting

# Subgroup Members

## DRWPP Members:

- **Brian Alford** — Tennessee Wildlife Federation
- **Josh Campbell** — Tennessee Wildlife Resources Agency
- **Dan Elbert** — U.S. Fish & Wildlife Service
- **Justin Murdock** — Tennessee Technological University
- **Grace Stranch** — Harpeth Conservancy
- **Mark Thurman** — The Nature Conservancy

## External Experts:

- **Rob Bullard** — The Nature Conservancy
- **Geoff Call** — BluewaysTN
- **Justine Cucchiara** — TDEC
- **Ryan Jackwood** — Harpeth Conservancy
- **Bridget Jones** — Jones-Bridget Consulting, TWF
- **Roger McCoy** — TDEC
- **Shaun Rinone** — Tennessee State Parks
- **Amanda Rosenberger** — Tennessee Tech Univ
- **Ben West** — Risora Consulting
- **Joey Wisby** — The Nature Conservancy

# Subgroup Approach

Create potential Recommended **Actions**, Information **Needs**, and **Partners** for each Conservation and Recreation objective

Identify existing resources, programs, and activities that align with DRWPP goals to shape recommendations

Focus plan specific to the Duck River Watershed, but make it transferable to other TN watersheds

# Meeting Schedule

- **February 24:** Focused on outlining group goals and established processes
- **March 10:** Focused on Conservation objectives, SWAP maps and other existing data and programs
- **April 7:** Focused Recreation objectives and discussion with BluewaysTN and Risora consulting
- **April 28:** Further defined recommendations
- Continue biweekly schedule of meetings moving forward

# Conservation

## Landowner Incentives for conservation

Programs to encourage conservation practices and easements

## Groundwater Recharge and Green Infrastructure

Stormwater management through natural systems

## Wetland Restoration

Rehabilitating critical wetland habitats

## Riparian Buffers

Protecting riparian zones from impacts

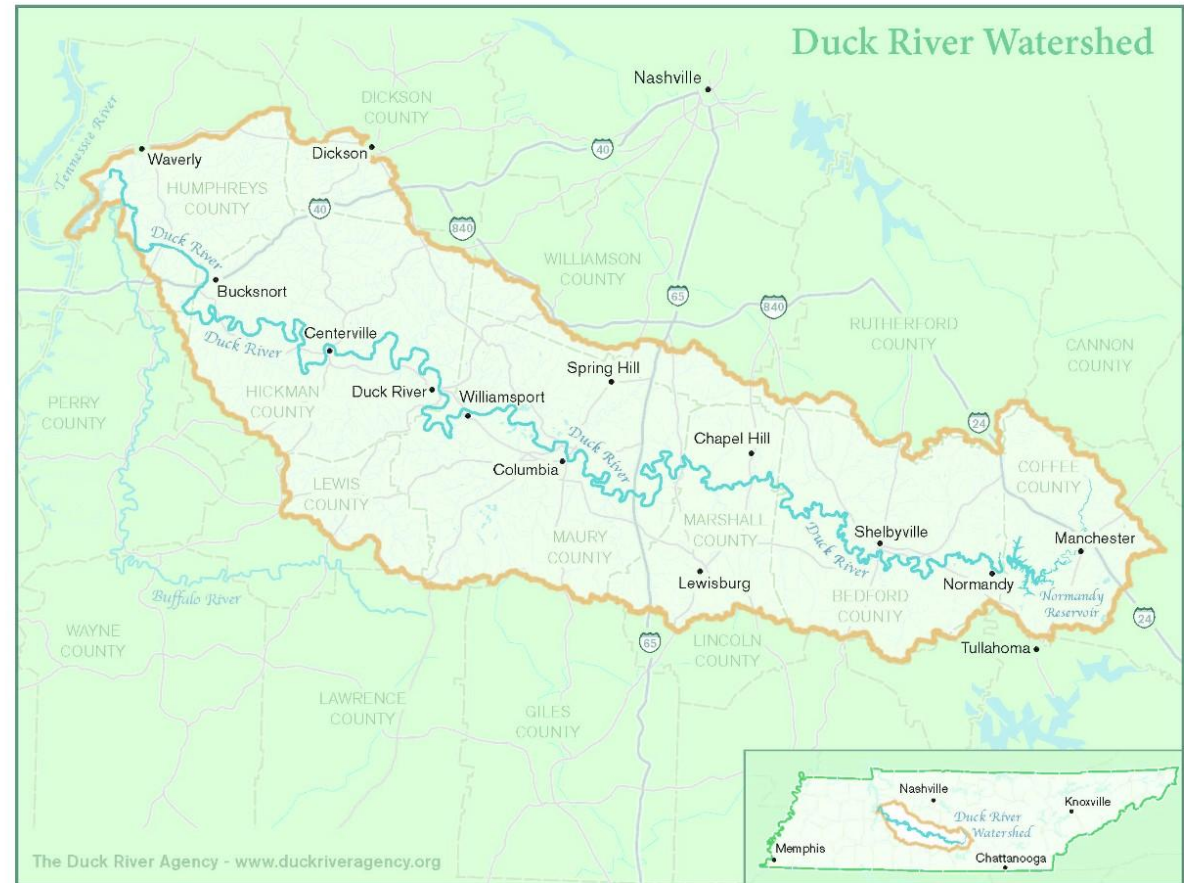
## Stormwater Planning

Coordinated watershed-scale approaches

## HCP Coordination

Aligning habitat conservation efforts

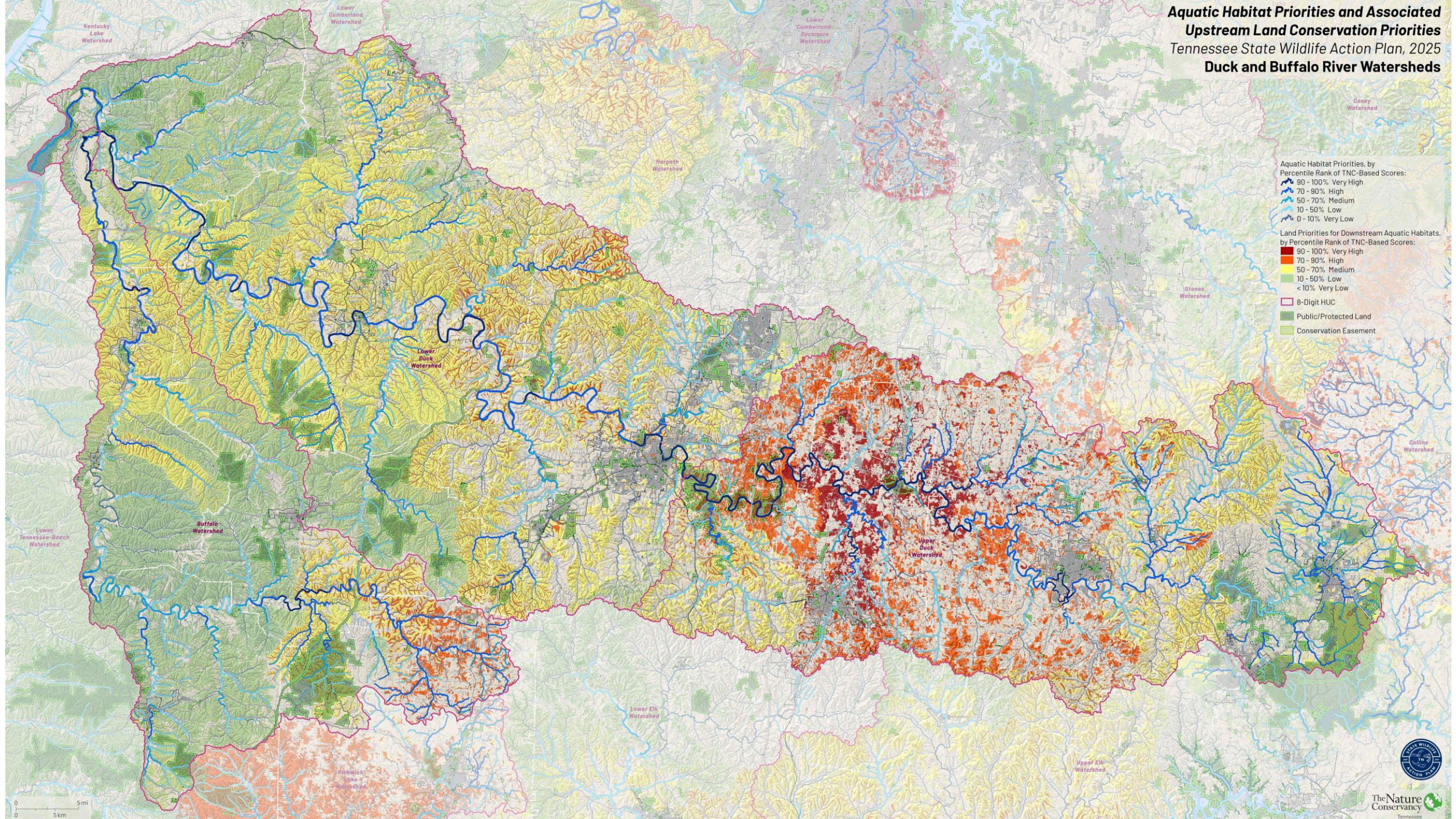
- Six conservation objectives address major watershed protection needs from private lands to regional coordination frameworks
- Each objective includes specific **recommended actions**, critical **information needs**, and strategic **partners** for successful implementation across the Duck River watershed



# Aquatic Habitat Priorities and Associated Upstream Land Conservation Priorities

## Tennessee State Wildlife Action Plan, 2025

### Duck and Buffalo River Watersheds



**Aquatic Habitat Priorities, by Percentile Rank of TNC-Based Scores:**

- 90 - 100% Very High
- 70 - 90% High
- 50 - 70% Medium
- 10 - 50% Low
- 0 - 10% Very Low

**Land Priorities for Downstream Aquatic Habitats, by Percentile Rank of TNC-Based Scores:**

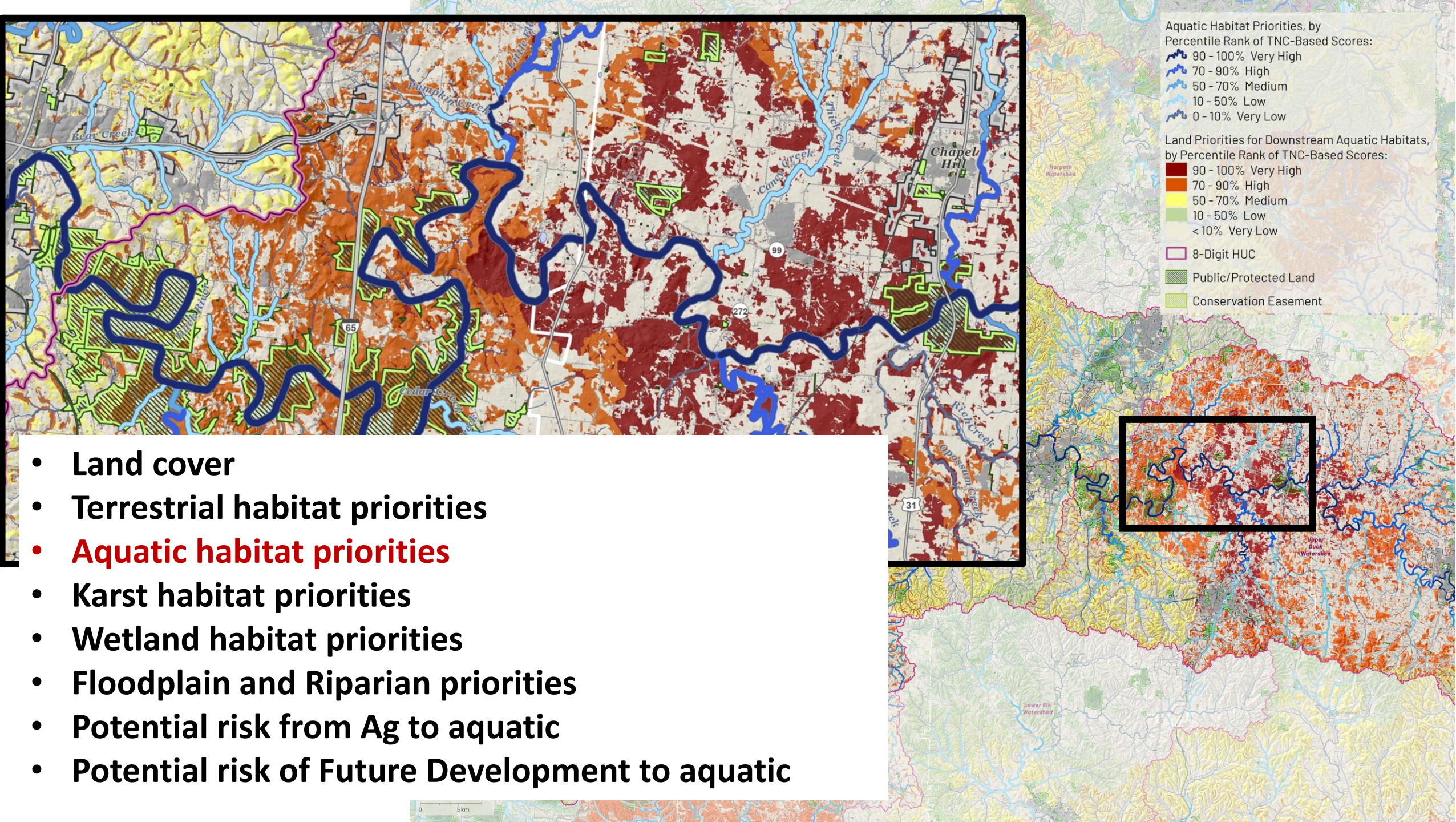
- 90 - 100% Very High
- 70 - 90% High
- 50 - 70% Medium
- 10 - 50% Low
- < 10% Very Low

8-Digit HUC

Public/Protected Land

Conservation Easement





# Conservation: Provide incentives to private landowners who pursue conservation easements and/or practice sustainable agriculture that protects the river's habitat and water quality

## Recommended Actions

- Identify targeted priority areas for incentive programs using
- Use SWAP conservation priority maps and Duck River Watershed Green Infrastructure Plan (SCTDD). Including wetlands, riparian buffers, floodways, karst areas, etc. At parcel-level data
- Identify existing easement programs that could be used in the Duck River Watershed and streamline access to programs
- Develop a strategy to match priority locations with willing landowners
- Identify incentive program funding estimates for the Duck River Watershed
- Make the process easier for participants to access and utilize incentives and technical services.

## Information Needed

Data Sources:

- SWAP conservation priority maps,
- SCTDD DRW Green Infrastructure Plan data,
- TDEC Wetlands Tools
- New data collection
- Stream channel data
- Species distribution data
- BluewaysTN erosion hotspot model and Trutta channel survey
- Updated land-cover / cropland layers and any needed local updates to reflect recent land-use changes
- Economic impact/economic valuation inputs relevant to incentives and outreach

## Recommended Partners

- USDA NRCS;
- Farm Bureau
- County Committees;
- Land Trust for Tennessee;
- TennGreen; Quail Forever;
- Tennessee Farmland Legacy Partnership;
- Duck River Conservancy;
- Duck River Society;
- Friends of the Duck;
- Friends of the Piney;
- Church groups;
- Corporate and local business partners;
- South Central Tennessee Development District.
- Tennessee Wildlife Federation,
- Harpeth Conservancy,
- Partners for Fish and Wildlife,
- The Nature Conservancy,
- Universities and Technical Colleges

# Conservation: Invest in groundwater recharge, green infrastructure, and rainwater harvesting projects

## Recommended Actions

- Break out actions by groundwater recharge, green infrastructure, and rainwater harvesting to improve clarity and implementation pathways.
- Consider both urban and non-urban strategies.
- Define target audiences (private landowners, households, communities) and tailor outreach/implementation approaches accordingly.
- Identify appropriate implementation scales, economic feasibility, and effectiveness of different practices.
- Align investments with mitigating impacts from development and altered hydrology from impervious surface expansion
- Pair engineering approaches with social and behavioral outreach.

## Information Needed

- Groundwater recharge areas, SWAP karst maps.
- Effectiveness and feasibility data for recharge, green infrastructure, and rainwater harvesting across different scales.
- Economic analyses to support justification and prioritization of practices (long-term benefits and feasibility).

## Recommended Partners

- Universities
- Local governments
- Planning commissions
- Water systems utilities
- Development districts
- Conservation organizations
- Engineering/geological consulting firms

# Conservation: Create a wetland restoration fund to restore and expand wetlands in the Duck River watershed

## Recommended Actions

- Build on existing programs by increasing resources for Duck River projects (TDEC's Stream and Wetland Restoration Grant, NRCS WREP)
- DRA or TDEC administration and management
- Assess wetland mitigation groups and wetland easement programs to develop prioritization and implementation practices
- Identify priority restoration sites
- Use SWAP maps, TDEC Wetland Tool, and Duck River Watershed Green Infrastructure Plan as primary tools
- Aligning selections with state priorities
- Develop a process for both agricultural and non-agricultural wetland restoration opportunities
- Incorporate results from the Earth Economics study
- Collect new regional wetland functional data

## Information Needed

- Summaries of current wetland restoration prioritization methods used by agencies (including TDEC and NRCS) and how to build on those methods for the Duck River.
- Economic valuation outputs referenced by the group (Earth Economics study) to support prioritization and funding justification.
- Data on effectiveness of potential wetland restoration
- Data on location effects on effectiveness to prioritize fund allocation

## Recommended Partners

- USDA NRCS
- Earth Economics
- Tennessee Wildlife Federation
- The Nature Conservancy
- Universities
- Conservation Organizations

# Conservation: Encourage local governments to consider adopting overlays creating permanent development buffer zones on each riverbank

## Recommended Actions

- Develop model overlay language and focus outreach on municipal and county governments with
- Involve municipal and county planning/zoning authorities and existing model overlay language suitable for adoption.
- Implementation:
  - Use SWAP, BluewaysTN, and Trutta data to identify priority buffer locations
- Pathways of encouragement:
  - Tax incentives
  - Zoning policies
- Education and outreach:
  - Education of city managers. Develop educational materials for municipal leaders
  - Prioritize outreach and model ordinance/overlay adoption with municipal governments that have more robust planning/zoning frameworks

## Information Needed

- SWAP conservation priority maps
- SCTDD Duck River Watershed Green Infrastructure Plan maps
- Model ordinances and regulatory frameworks.
- Riparian and channel Data: Blueways TN and Trutta channel survey

## Recommended Partners

- Municipal and County governments
- Planning commissions
- Development Districts

# Conservation: Develop a watershed-wide stormwater and impervious surface growth plan

## Recommended Actions

- Coordinate watershed-wide planning with municipal and county governments, utilities, planning commissions and development districts, emphasizing scalable, transferable frameworks.
- Explore municipal and county-level stormwater management approaches. Address both MS4 and non-MS4 jurisdictions.
- Produce coordinated, watershed-wide guidance that local governments can adopt/adapt (including non-MS4 mechanisms).
- Develop improved impervious surface/growth projection inputs where existing datasets may underestimate local growth pressure; include stormwater impacts and hydrologic implications.

## Information Needed

- SWAP maps and data
- SCTDD Duck River Watershed Green Infrastructure Plan maps and data
- Impervious surface projections
- Watershed management framework
- Watershed characteristics for stormwater modeling

## Recommended Partners

- Municipal and county governments; planning commissions; utilities; development districts.
- SCTDD, municipal and county governments, utilities; additional local planning entities that can implement or enforce stormwater measures.

# Conservation: Coordination of the DRWPP conservation priorities with the Habitat Conservation Plan

## Recommended Actions

- Reference the Habitat Conservation Plan as it progresses
- Ensure DRWPP species conservation data outputs are in a relevant context and usable format for inclusion/reference in HCP development.
- Align DRPP recommendations with HCP conservation priorities and State Wildlife Action Plan Conservation Opportunity Areas
- Develop a recommendation framework to ensure conservation actions support endangered species protection and recovery while allowing lawful activities.
- Ensure the DRWPP recommendations framework addresses regulatory pathways (including permitting/take considerations) while advancing conservation and recovery of endangered species.
- Key Audiences: Landowners; city and county governments; planners and developers; conservation groups.

## Information Needed

- SWAP maps and data
- HCP timeline
- Duck River species-specific conservation needs (habitat and hydrology)
- BluewaysTN and Trutta data
- Species distribution data
- Water quality and habitat data
- HEC-RAS model hydrology data
- HCP development status and timeline (discussed as not complete yet) and how interim DRWPP outputs can be made usable for HCP development.

## Recommended Partners

- TDEC
- TWRA
- USFWS

# Recreation

- Four recreation objectives recognize the Duck River as a regional asset for paddling, fishing, wildlife viewing, and environmental education opportunities
- Strategic recreation planning minimizes user conflicts, protects sensitive habitats, and ensures equitable access for diverse communities throughout the watershed
- Recreation infrastructure investments generate economic benefits for gateway communities while fostering watershed stewardship ethic among residents and visitors

## River Access

Developing safe public entry points

## Responsible Recreation

Promoting low-impact use practices

## Interpretive Centers

Educational facilities connecting people to watershed

## Community Science

Educational



# BluewaysTN Will Launch With These 15 Rivers



BluewaysTN represents a bold, statewide initiative to **enhance, protect, and celebrate** Tennessee's incredible rivers for generations to come. This initiative seeks to balance recreation, conservation, and economic growth, through a connected network of recreational river corridors across all of Tennessee.

# **Recreation: Improve River Access Points: Enhance existing river access points and add new sites in strategic areas to minimize overuse, support responsible outdoor recreation activities, and protect ecological resources, including state and federally listed species.**

## **Recommended Actions**

- Upgrade and standardize existing access points
- Add new access points in targeted gap locations
- Distribute use across the river system
- Integrate resource protection into access siting and design
- Establish a Duck River Blueway Council to coordinate access development and management with landowners and public entities, working across communities.

## **Information Needed**

- Spatial analysis of access gaps and float distances
- Mapping of sensitive ecological and cultural resource areas
- Inventory and condition assessment of existing access sites
- Identification of public vs. private ownership along priority reaches
- Data on use levels by reach and access point
- Database of relevant funding opportunities for conservation, recreation, and healthy communities.
- Species impact analyses for sensitive areas (especially mussel beds) and identification of where additional studies are needed.

## **Recommended Partners**

- Tennessee Wildlife Resources Agency – access management, fisheries considerations, State Wildlife Action Plan
- Tennessee Valley Authority – riverfront land ownership and access coordination
- Tennessee Department of Environment and Conservation – BluewaysTN program, Water Resources, Natural Areas, Division of Archaeology
- South Central Tennessee Development District - planning, coordination, and funding
- Local governments (counties, municipalities) – site ownership, maintenance, EMS coordination
- Private landowners along priority reaches – access agreements and conflict avoidance
- Regional conservation organizations (e.g., land trusts) – land protection and access partnerships



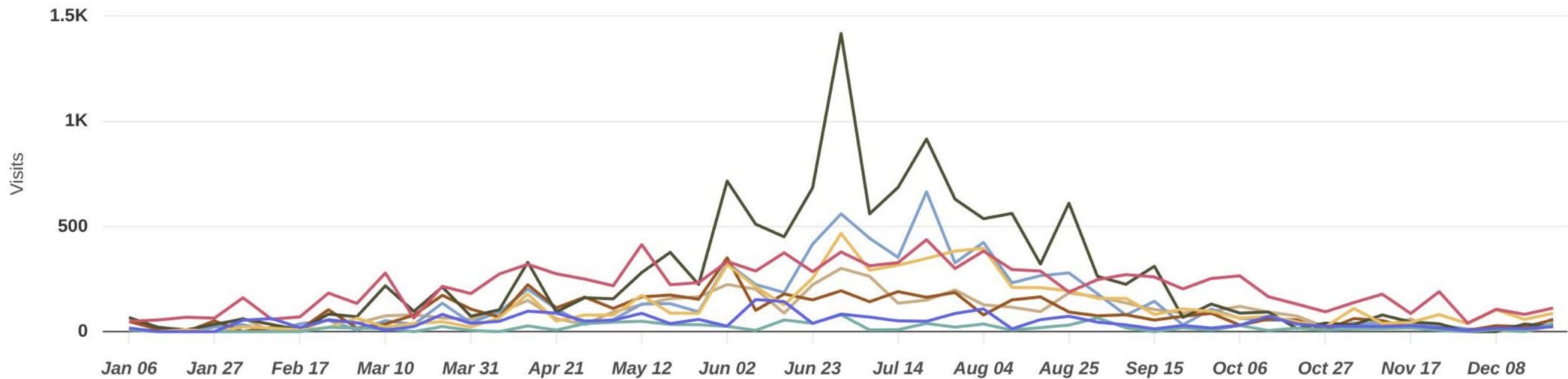


# 2025 Property Visits

Jan 1 - Dec 31, 2025

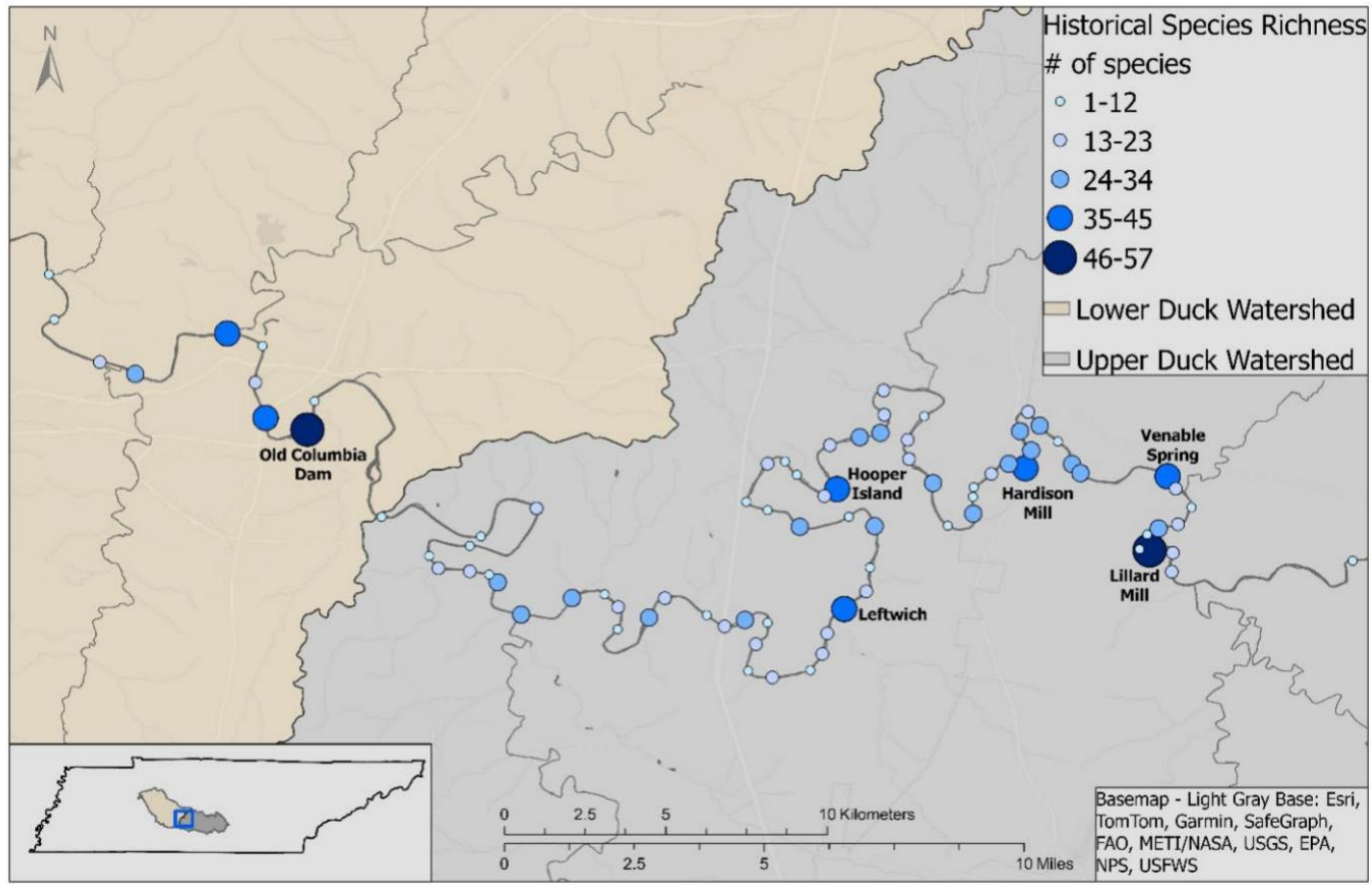
## Visits Trend

- Carpenter Bridge**  
Carpenter Bridge Road, TN
- Iron Bridge**  
Iron Bridge Road, TN
- Riverside**  
Mason Street, Columbia, TN
- Howard Bridge**  
Fred White Road, Philadelphia, TN
- Lillards Mill**  
Milltown, TN
- Fountain Creek**  
Blue Springs Road, TN
- Sowell Mill**  
Sowell Mill Pike, Leftwich, TN
- Henry Horton**  
North Park Road, Wilhoite Mills, TN



Weekly | Visits | Jan 1st, 2025 - Dec 31st, 2025  
Data provided by Placer Labs Inc. ([www.placer.ai](http://www.placer.ai))





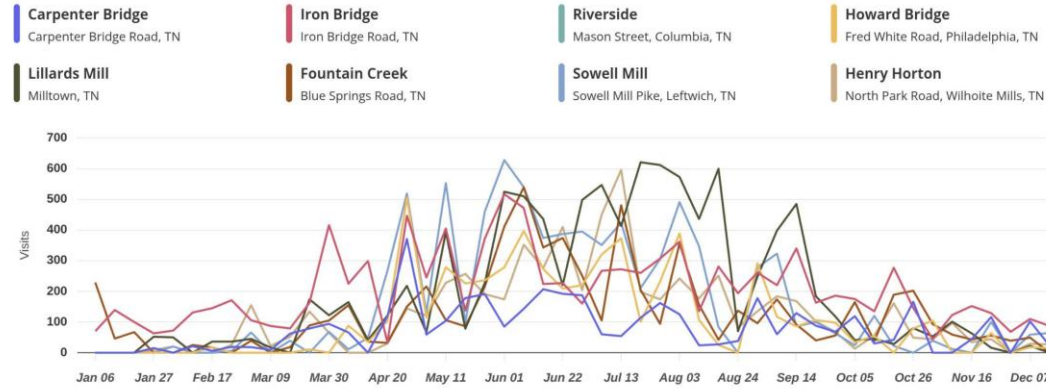
**Figure 3.** The core area of historical freshwater mussel species richness documented in the Duck River.



## 2020 Property Visits

Jan 1 - Dec 31, 2020

### Visits Trend



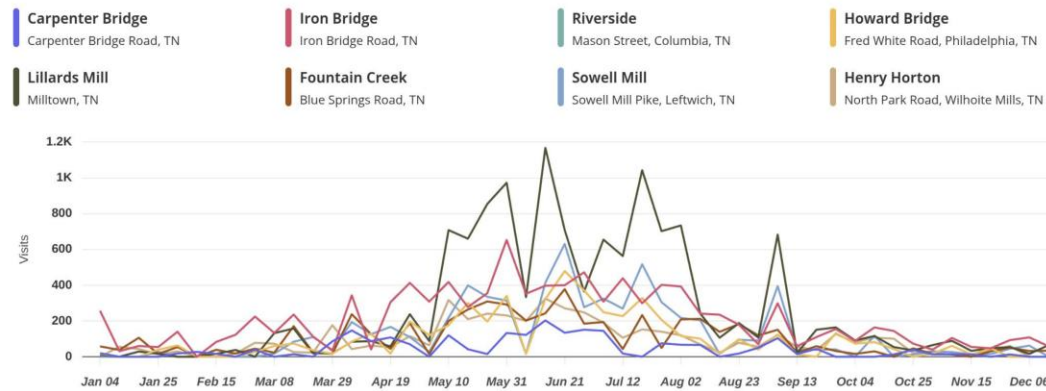
Weekly | Visits | Jan 1st, 2020 - Dec 31st, 2020  
Data provided by Placer Labs Inc. (www.placer.ai)



## 2021 Property Visits

Jan 1 - Dec 31, 2021

### Visits Trend



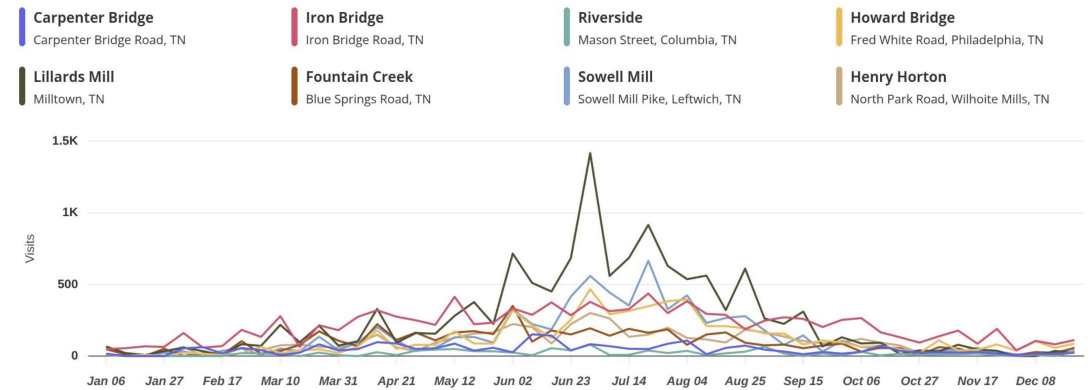
Weekly | Visits | Jan 1st, 2021 - Dec 31st, 2021  
Data provided by Placer Labs Inc. (www.placer.ai)



## 2025 Property Visits

Jan 1 - Dec 31, 2025

### Visits Trend



Weekly | Visits | Jan 1st, 2025 - Dec 31st, 2025  
Data provided by Placer Labs Inc. (www.placer.ai)



# Recreation: Promote Responsible Recreation and River Safety: Develop outreach, education, and communication efforts to encourage responsible outdoor recreation and river safety.

## Recommended Actions

- Implement consistent, river-wide signage at access points
  - Include safety, trip planning, conservation rules, and property guidance (with bilingual content where appropriate) using standards in BluewaysTN Access Design Manual.
- Develop a comprehensive trip planning and safety information system
  - Provide access information, distances, float times, hazards, and flow guidance.
- Launch a river ethics and stewardship campaign
  - Address littering, trespassing, alcohol misuse, and respect for landowners.
- Clarify and communicate river use laws and property rights
  - Reduce conflict stemming from widespread misunderstanding.
- Promote conservation awareness tied to recreation
  - Highlight biodiversity and encourage low-impact activities.

## Information Needed

- Reach-specific data on hazards, float times, and difficulty levels
- Clear, vetted guidance on river use laws and property rights
- Identification of priority messaging topics
- Understanding of user behavior patterns and safety incidents
- Input on effective communication methods and materials

## Recommended Partners

- Tennessee Wildlife Resources Agency – safety messaging, enforcement coordination
- Tennessee Department of Environment and Conservation – State Parks, BluewaysTN, statewide messaging on river recreation and conservation
- Tennessee Aquarium Conservation Institute – biodiversity education and outreach
- Local emergency services (EMS, fire departments) – safety response insight and messaging
- Local outfitters and guides – direct communication with river users on conservation and safety issues
- Conservation nonprofits and watershed groups – stewardship campaigns and volunteer engagement
- Community organizations and tourism partners – outreach distribution and public engagement



# Recreation: Collaborate with Tennessee State Parks: Design and install river interpretive centers in state parks within priority watersheds to educate communities about major rivers and watersheds to promote and advance their protection.

## Recommended Actions

- Catalog current interpretive efforts related to watershed protection in Tennessee and identify additional needs/opportunities.
- Coordinate interpretive content and outreach with existing county Duck River Education Day events and other established programs.
- Continue Henry Horton Programs. Henry Horton as a model program focused on river recreation, conservation.
- County Duck River education Days. Have been doing this decades. DRA

## Information Needed

- Identify Priority sites; interpretive themes.

## Recommended Partners

- Tennessee State Parks
- BluewaysTN
- Outdoor recreation and design partners



# Recreation: Integrate Water Quality Monitoring Community Science Programs: Engage communities in water quality monitoring to support broader data collection and promote awareness of watershed health.

## Recommended Actions

- Identify organizations already conducting water quality outreach/monitoring on the Duck River and recommend promoting/supporting (and potentially expanding) those efforts rather than creating a new program from scratch.
- Coordinate with Tennessee State Parks (noted as having outreach/interpretation capacity) to support community-facing monitoring/education components.
- Recommendation: center this objective on partnering with and scaling existing community monitoring/outreach efforts.

## Information Needed

- Monitoring protocols; data integration requirements.

## Recommended Partners

- Watershed organizations
- Universities
- Local Schools
- Community partners
- Agencies

## Next Steps

- Continue biweekly meetings
- Continue to go through each objective
- Reach out to new experts (both outside and within the partnership)
- Determine connections with other subgroups

