

Where a Trout Stream Goes Under the Road: An Introduction to the Virginia Trout Stream Barrier Survey

Thomas R. Benzing, NLC
Representative

Virginia Council of Trout Unlimited



National Aquatic Barrier Inventory & Prioritization Tool

Improve aquatic connectivity by prioritizing aquatic barriers for removal using the best available data.

Aquatic connectivity is essential

Fish and other aquatic organisms depend on high quality, connected river networks. A legacy of human use of river networks have left them fragmented by barriers such as dams and culverts. Fragmentation prevents species from dispersing and accessing habitats required for their persistence through changing conditions.

Barriers

Barrier Removal

Virginia project frees a stream — and trapped trout

<https://www.tu.org/magazine/conservation/barriers/virginia-project-frees-a-stream-and-trapped-trout/>



“Finding 45 brook trout in a single pool in a small creek may sound like a good thing. In the case of a small stream in Virginia’s mountains it was anything but. The fish were trapped in a small plunge...”



A perched culvert on Virginia's Railroad Hollow creek created a pool that trapped 45 brook trout. TU's Virginia team recently replaced the culvert to reconnect the upper and lower stream sections.

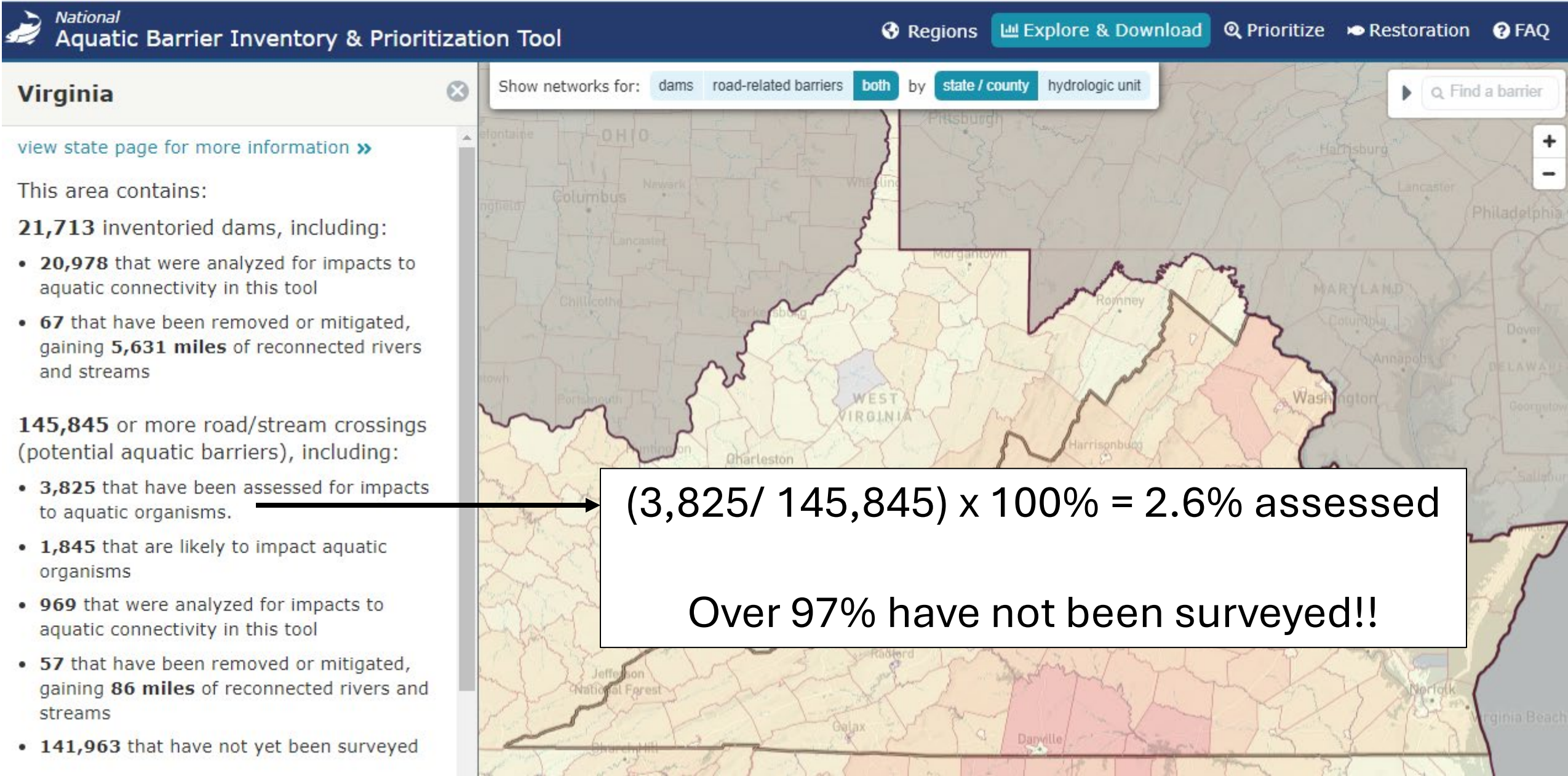


“Funding from the Forest Service, including from the Bipartisan Infrastructure Law, helped pay for the project. The National Fish and Wildlife Foundation’s Chesapeake Bay Stewardship Fund also contributed to the project.”

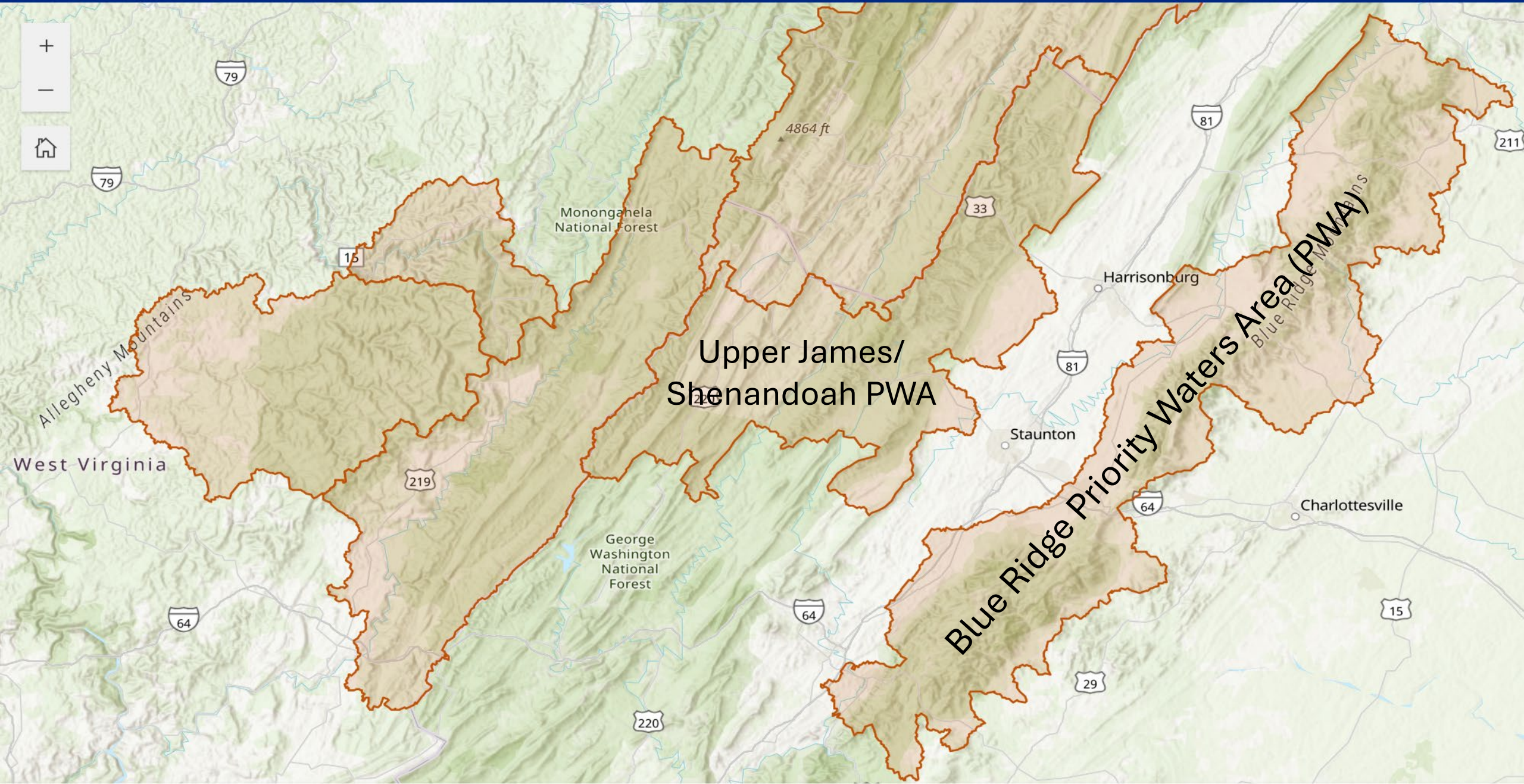
Mark Taylor, TU
Communications

The new crossing structure will allow full aquatic organism passage and also be more resilient to potential road-damaging high-water events.

How Many Barriers Are There in Virginia?



Virginia Council Trout Unlimited Map Viewer



These areas contain:

2,225 inventoried dams, including:

- **2,117** that were analyzed for impacts to aquatic connectivity in this tool
- **20** that have been removed or mitigated, gaining **2,018 miles** of reconnected rivers and streams

24,822 or more road/stream crossings (potential aquatic barriers), including:

- **2,281** that have been assessed for impacts to aquatic organisms.
- **971** that are likely to impact aquatic organisms
- **531** that were analyzed for impacts to aquatic connectivity in this tool
- **30** that have been removed or mitigated, gaining **40 miles** of reconnected rivers and streams
- **22,511** that have not yet been surveyed

Selected areas:

Rockingham County County, Virginia

199 dams and 440 assessed road/stream crossings (out of 3,254 total crossings)

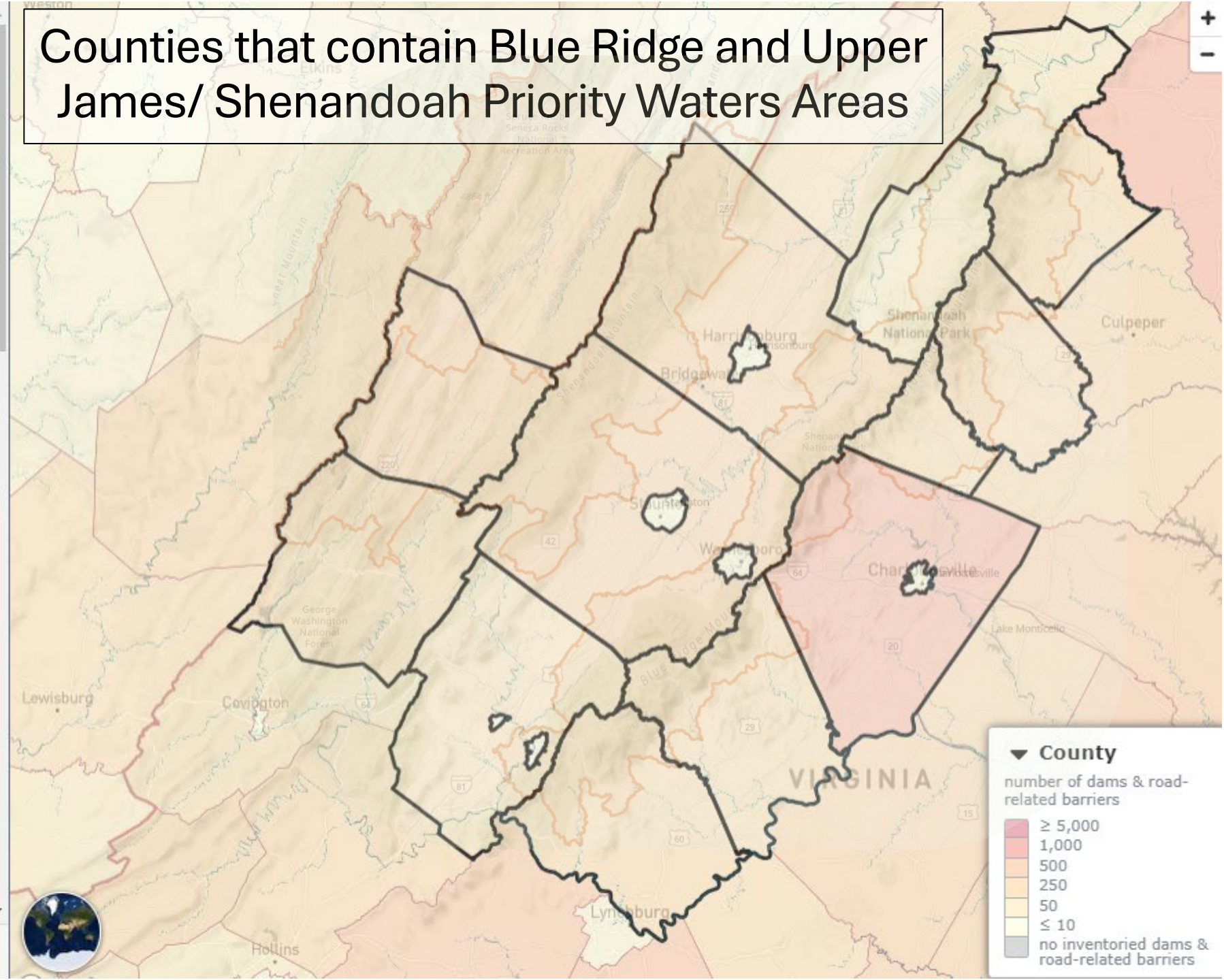
Augusta County County, Virginia

218 dams and 133 assessed road/stream crossings (out of 3,929 total crossings)

Download:



Counties that contain Blue Ridge and Upper James/ Shenandoah Priority Waters Areas



Equipment need to conduct barrier surveys

- Stadia rod
- 100' tape
- Laser distance meter
- Safety vest*
- Waterproof pouch for cell phone*

* To be provided to each volunteer when certified



Characteristics of volunteers

- Capable of traveling to remote areas
- Meticulous; attentive to detail
- Savvy with maps and phone apps
- Able to enter and retrieve data online





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Volunteer Programs

Step 1 of 4: Create an Account

Already have an account? [Click here \(/user/login/?return=%2Fneed\)](/user/login/?return=%2Fneed)

Welcome to the Virginia Department of Wildlife Resources volunteer portal. We are glad you decided to volunteer with us. Behind every successfully organized event there is an extraordinary volunteer team!

To get started on the site, complete the registration track below.

DWR Volunteers





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Volunteer Programs



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TRACK HOURS

VOLUNTEER SCHEDULE

MY FILES

OPPORTUNITY RESPONSES

MY TEAMS

MY USER GROUPS

QUALIFICATIONS

INBOX



Thomas
Benzing

Joined Date: **Mar 31, 2023**

Total Logged Hours: **290**

Tracks

Tracks are different volunteer paths you can take, from working with a particular program to starting a new volunteer role. The table below shows the tracks you've started. To get started on a new path, use the 'Start Track' button below!

TRACK
NAME

REQUIRED
RESPONSES

QUALIFICATIONS

DATE
STARTED

DATE
SUBMITTED



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Flexible

Statewide - Brook Trout Fish


Passage Project Training

DWR Volunteer Program

[VIEW DETAILS](#)

DWR Volunteer Program

[VIEW DETAILS](#)

Event-Shenandoah Springs -
Madison County, VA 

DWR Volunteer Program

[VIEW DETAILS](#)

Fish Stocking Program

[VIEW DETAILS](#)

Programs



ORDER BY

-- SELECT A FILTER --

May 6, 2024

West - Fish Stocking in

on 5/1/24 

Field Training for VTSBS Volunteers



May 13-14, 2024



March 22, 2025

Aquatic Barrier Prioritization Tool

Explore regions

 Summarize

 Prioritize

 Download

Inch Branch-Back Creek

Subwatershed

HUC12: 020700050703

This area contains:

144 or more potential road-related aquatic barriers, including:

- **144** road-related potential barriers (road/stream crossings)
- **3** road-related barriers have been assessed for impacts to aquatic organisms.
- **3** road-related barriers assessed are likely to impact aquatic organisms
- **0** road-related barriers that were analyzed for impacts to aquatic connectivity in this tool

Note: These statistics are based on *inventoried* road-related barriers that have been assessed for impacts

Download:



road-related barriers



road/stream crossings

Show networks for:

dams

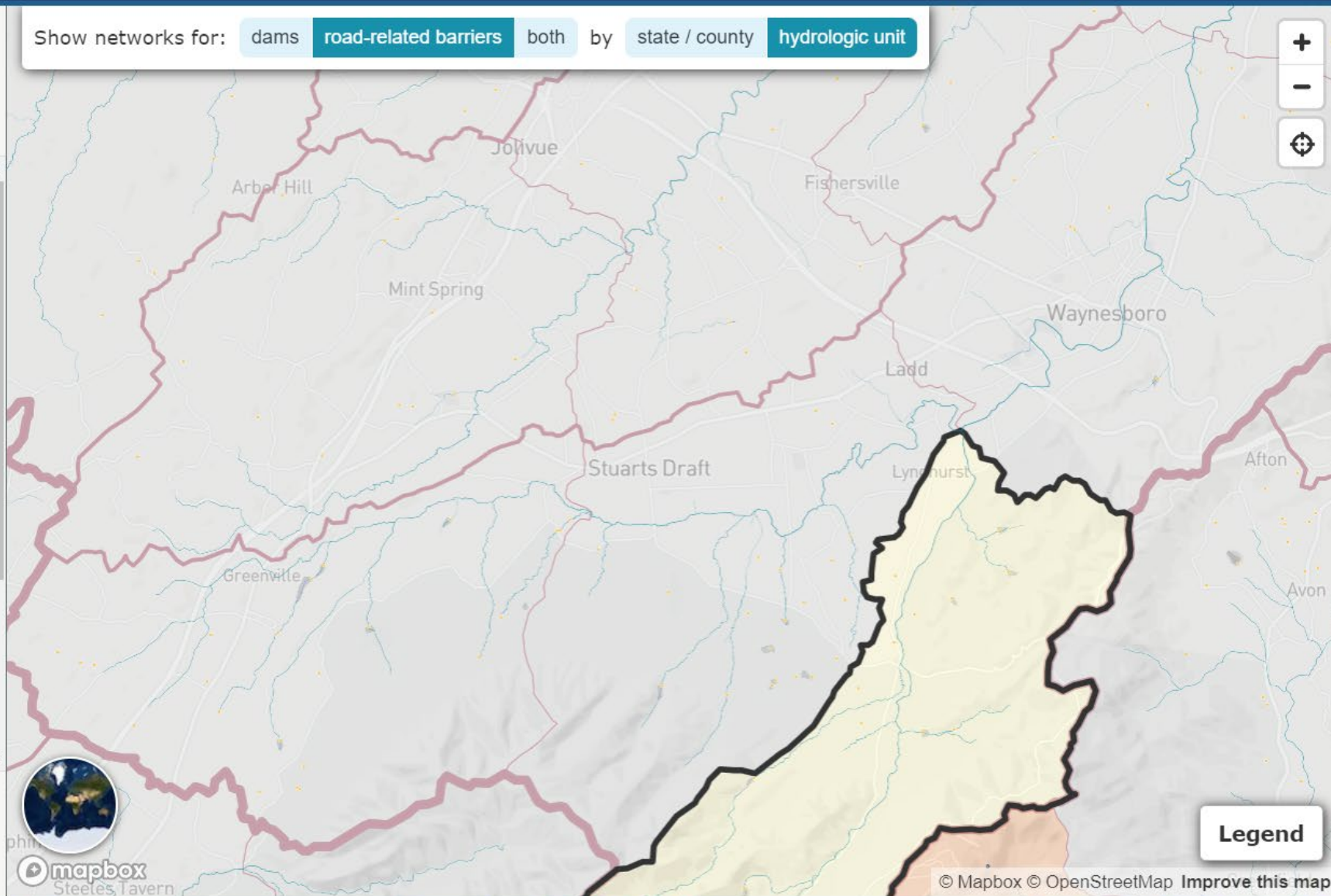
road-related barriers

both

by

state / county

hydrologic unit



mapbox
Steeles Tavern


© Mapbox © OpenStreetMap Improve this map


Legend

Aquatic Barrier Prioritization Tool

Explore regions

 Summarize

 Prioritize

 Download

Canada Run-South River

Subwatershed

HUC12: 020700050702

This area contains:

197 or more potential road-related aquatic barriers, including:

- **197** road-related potential barriers (road/stream crossings)
- **0** road-related barriers have been assessed for impacts to aquatic organisms.
- **0** road-related barriers assessed are likely to impact aquatic organisms
- **0** road-related barriers that were analyzed for impacts to aquatic connectivity in this tool

Note: These statistics are based on *inventoried* road-related barriers that have been assessed for impacts

Download:



road-related barriers



road/stream crossings

Show networks for:

dams

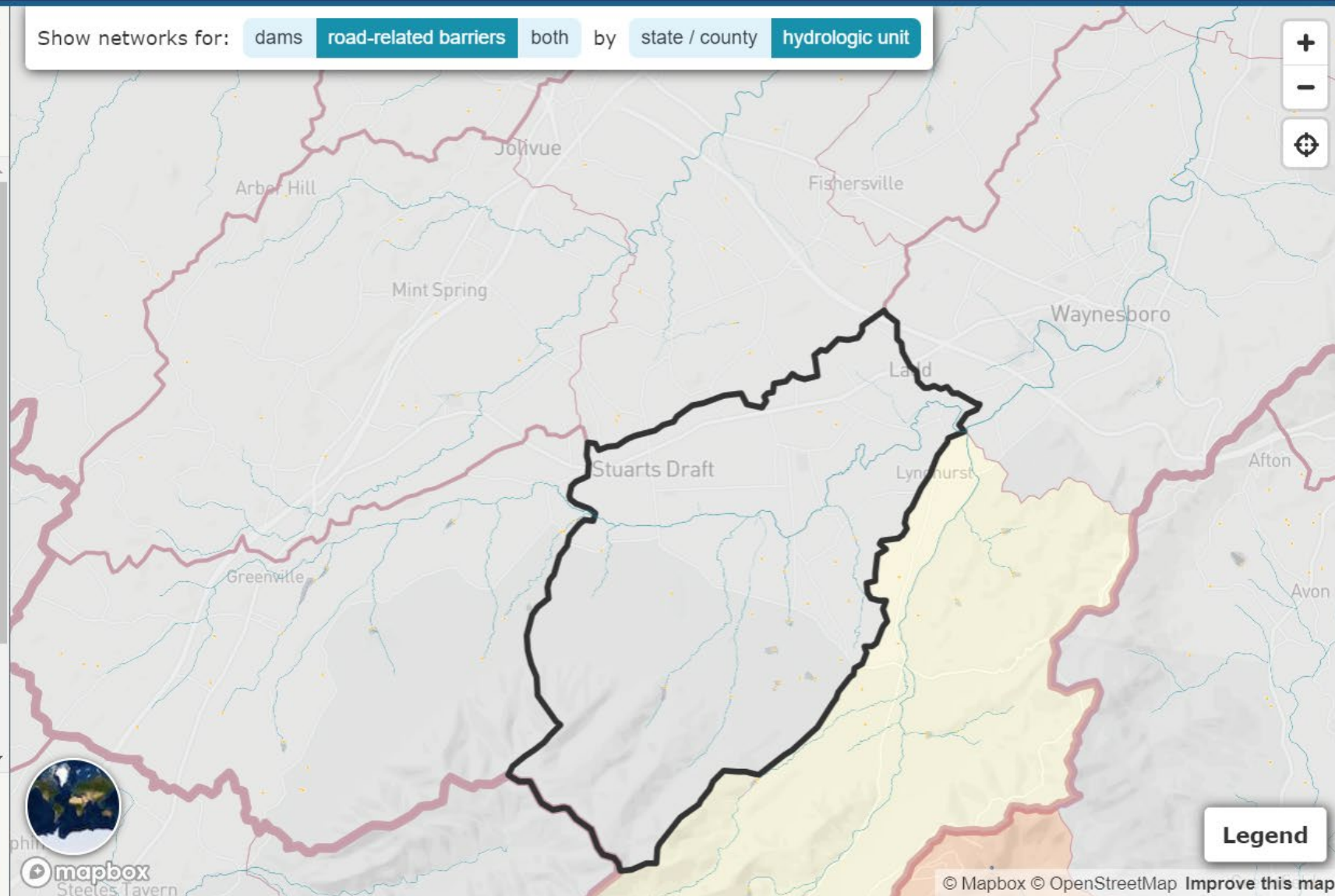
road-related barriers

both

by

state / county

hydrologic unit



Aquatic Barrier Prioritization Tool

Explore regions

 Summarize

 Prioritize

 Download

Stony Run-South River

Subwatershed

HUC12: 020700050701

This area contains:

243 or more potential road-related aquatic barriers, including:

- **243** road-related potential barriers (road/stream crossings)
- **0** road-related barriers have been assessed for impacts to aquatic organisms.
- **0** road-related barriers assessed are likely to impact aquatic organisms
- **0** road-related barriers that were analyzed for impacts to aquatic connectivity in this tool

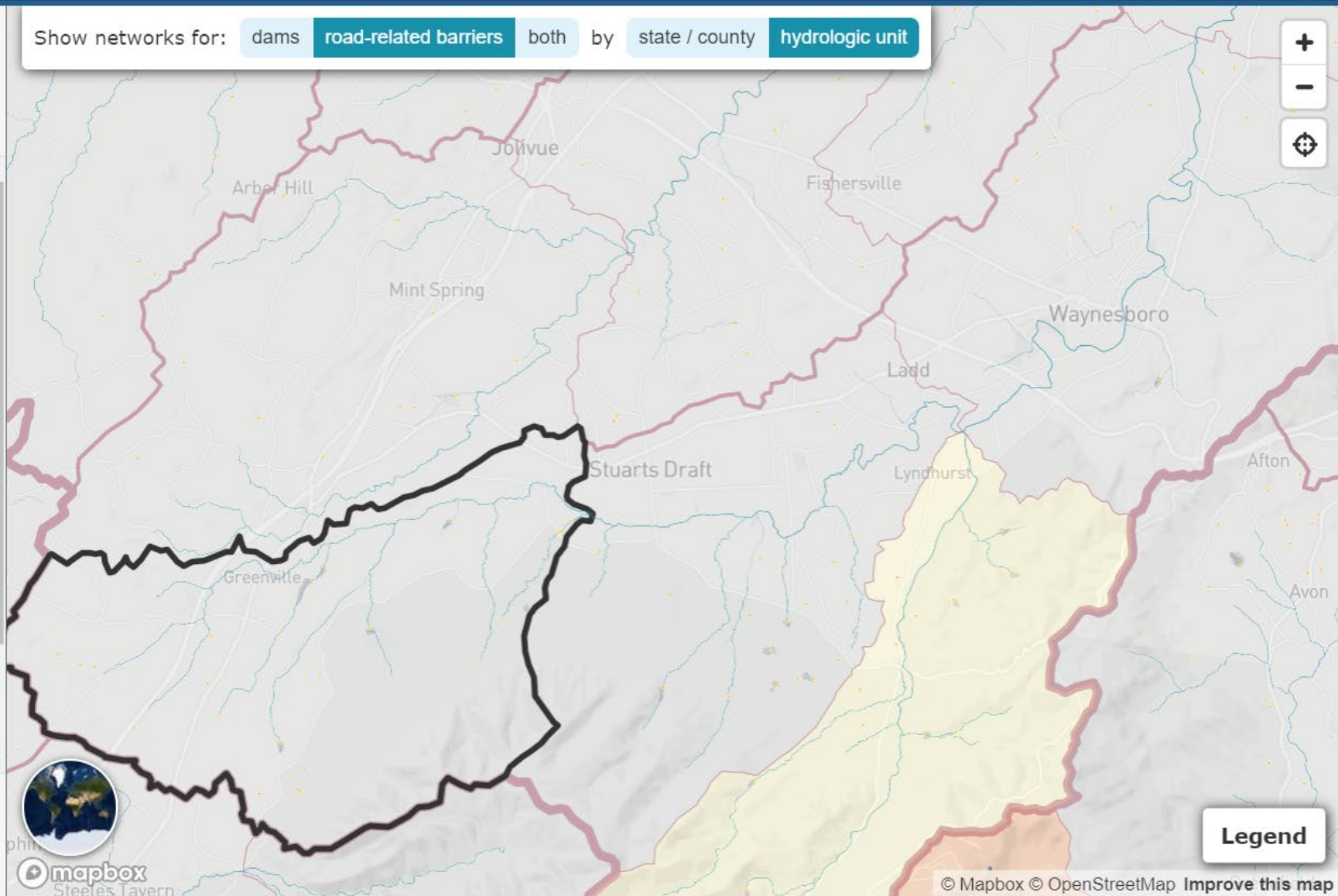
Note: These statistics are based on *inventoried* road-related barriers that have been assessed for impacts

Download:

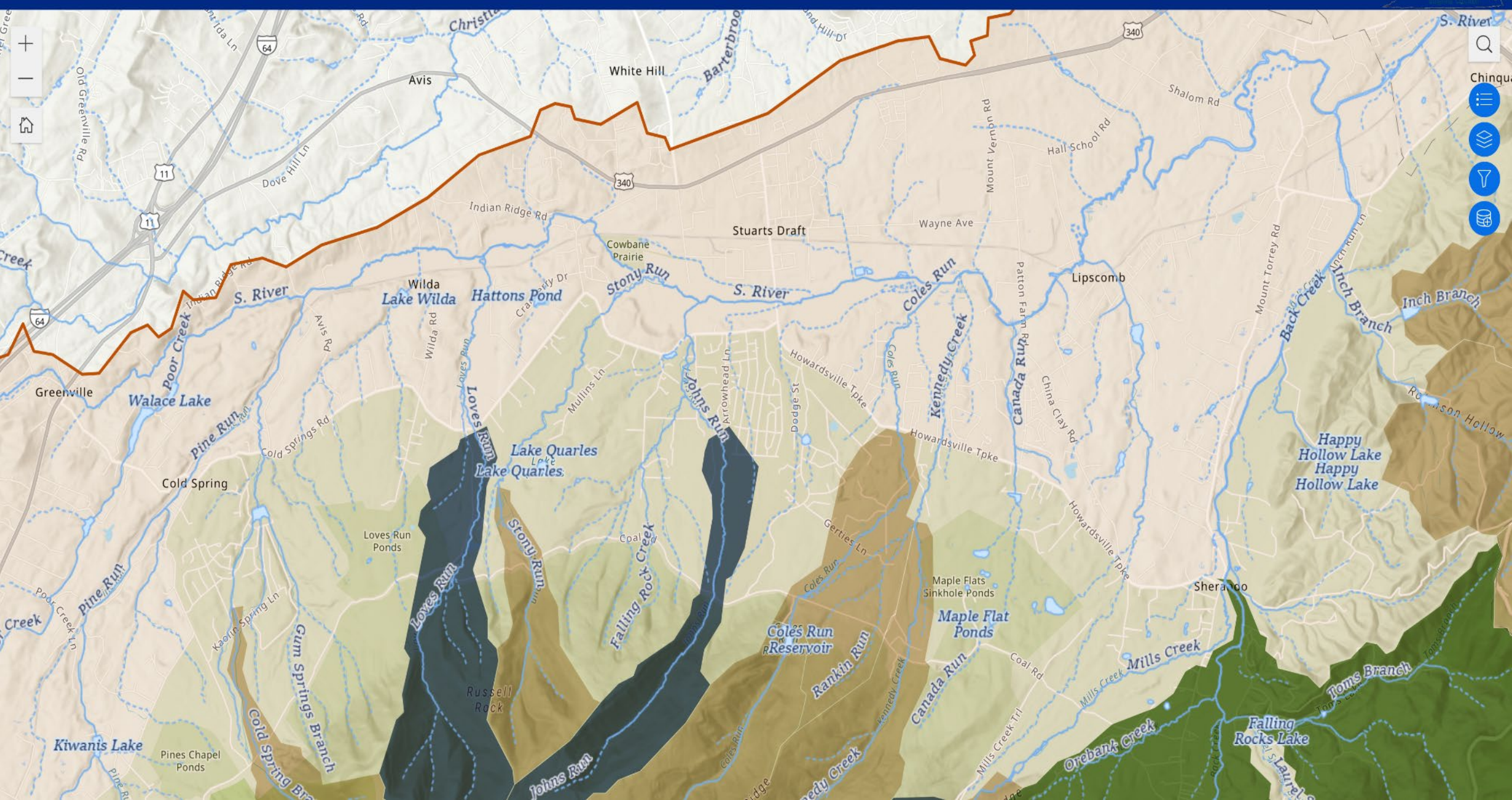
 road-related barriers

 road/stream crossings

Show networks for: by



Virginia Council Trout Unlimited Map Viewer



Questions?

Tom Benzing, NLC Representative
Virginia Council of Trout Unlimited

virginiatu.org/

Additional resources

Virginia Council of Trout Unlimited websites:

<http://virginiatu.org/priority-waters> - Virginia's Priority Waters Areas

[Virginia Council TU Map Viewer](#) – mapping tool to explore PWAs

Southeast Aquatic Resources Partnership (SARP) websites:

<https://aquaticbarriers.org/regions/southeast/> - mapping tool to explore and prioritize barriers (dams and road-stream crossings)

Virginia DWR websites:

<https://dwr.virginia.gov/fishing/trout/wild-trout-management-plan/> -

Virginia Wild Trout Management Plan

<https://virginia.galaxydigital.com/user/login/> - DWR Volunteer Program



Statewide - Brook Trout Fish Passage Project Training

[RESPOND](#)

Until Jan 1, 2025

Skills



Program



DWR Volunteer Program

Description

DWR and Trout Unlimited are partnering together on a Citizen Science Project to assess barriers to fish passage (e.g. culverts).The "classroom" training is covered by the below video and is required for you to view to participate in this project. Additional hands on training may be required once details are established.

<https://drive.google.com/file/d/1Xz5UKXrU8KGx0UqLxxQvqrHl2NgcLlks/view?usp=sharing>



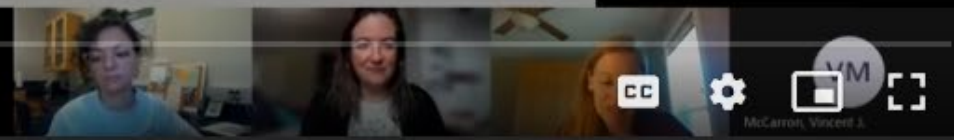


SARP Standardized Culvert Assessment Protocol

Adapted from North Atlantic Aquatic Connectivity Collaborative



0:12 / 1:58:49





DASHBOARD



OPPORTUNITIES



PROGRAMS



COLLAPSE MENU

USER GROUP

DATE CREATED

Certified - Trout Stream Barrier Survey Volunteers

May 16, 2024

Region 4 East

Sep 18, 2023

Region 4 East - Certified Fish Stockers

Sep 21, 2023

USER GROUP

DATE CREATED

ASSIGNED OPPORTUNITIES

REPORTING

OPTIONS

Certified - Trout Stream Barrier Survey Volunteers

May 16, 2024

VIEW OPPORTUNITIES

Region 4 East

Sep 18, 2023

VIEW OPPORTUNITIES

Region 4 East - Certified Fish Stockers

Sep 21, 2023

VIEW OPPORTUNITIES

VIEW RESUME

