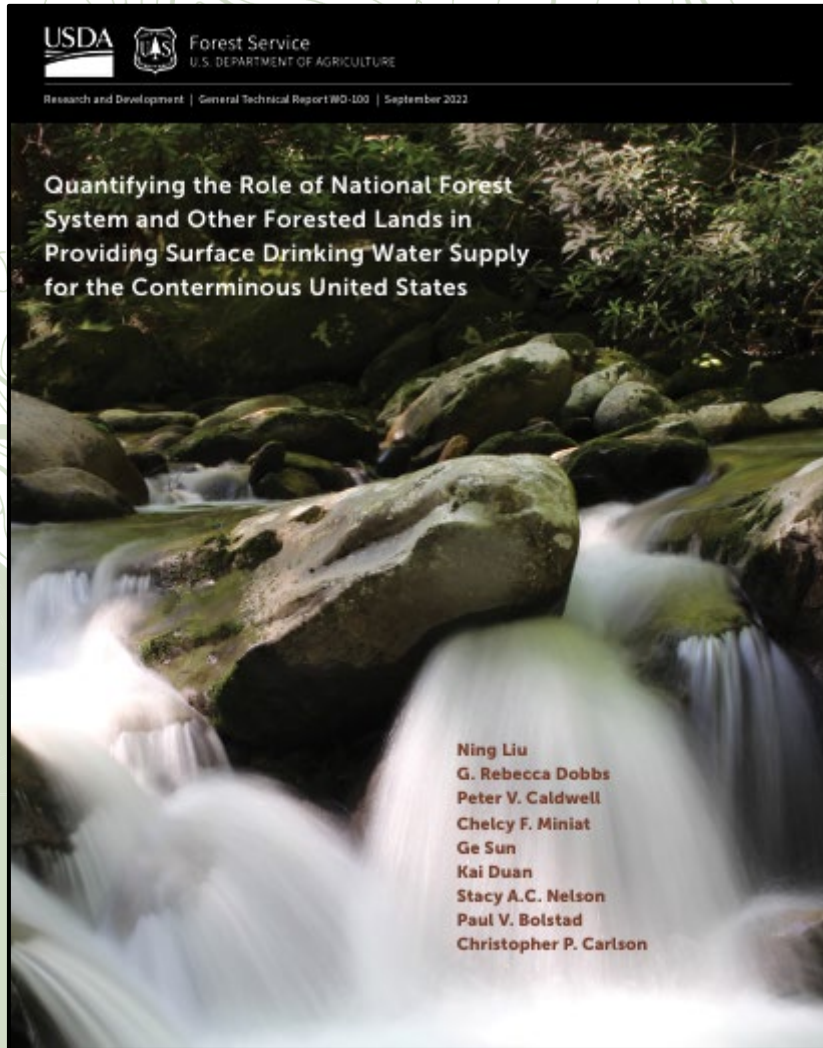




Operationalizing Science and Communicating Need: A Utility Perspective

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<https://research.fs.usda.gov/download/treesearch/64978.pdf>

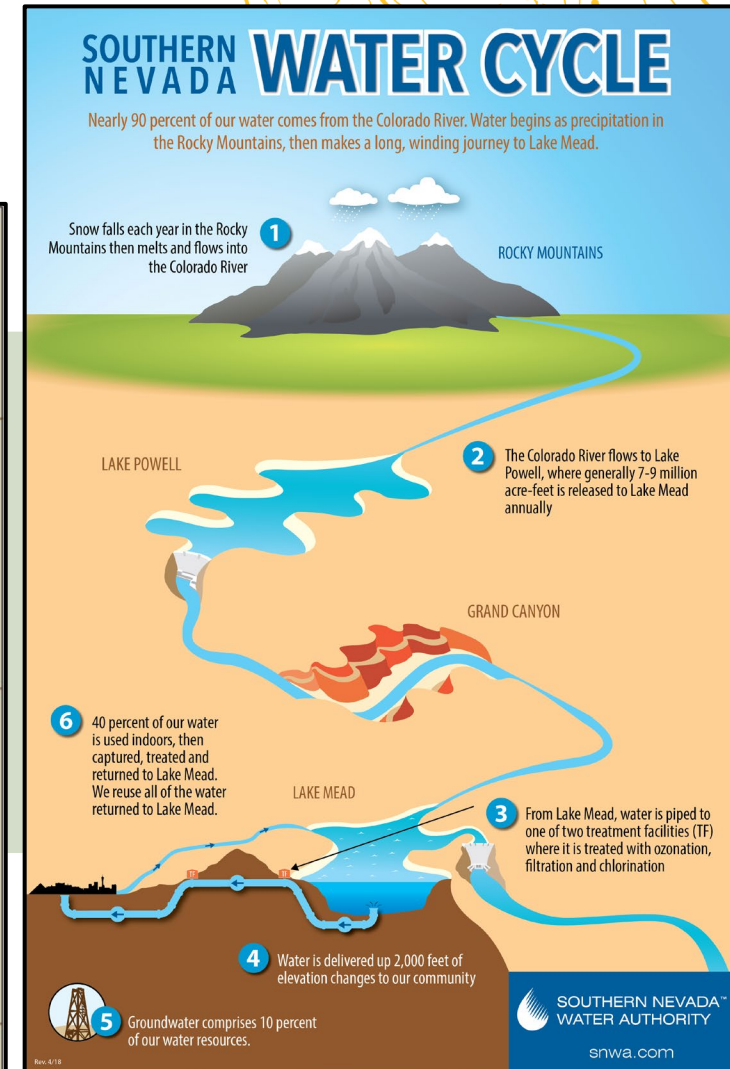
“WATER IS IMPORTANT TO ME – BUT I DON’T KNOW WHERE IT COMES FROM”

+90% of Westerners polled rank safe and reliable drinking water as a top priority

National Forest’s and grasslands supply drinking water to almost 90% of people served by public water systems in the West

When you think of the USFS, what do you think about first?

THE REGIONAL DISCONNECT



THE LOCAL DISCONNECT



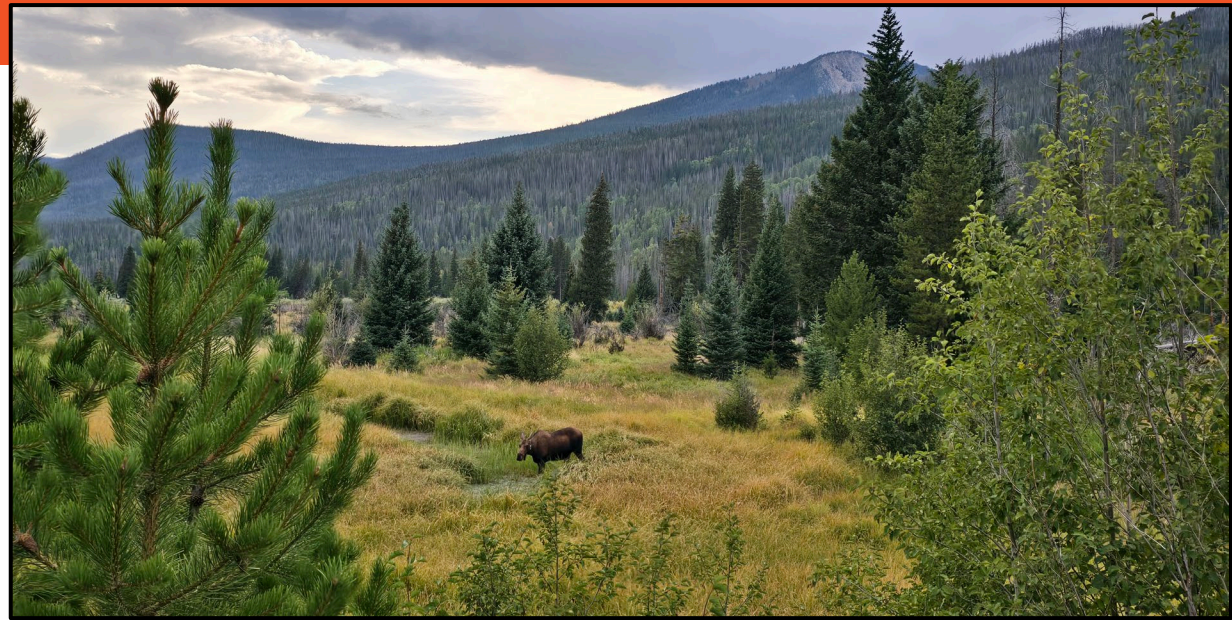
BUT WE CAN CONNECT THE DOTS!

- Some utilities directly manage their watersheds
- Climate change + unnatural wildfire/floods bring attention
- Greater emphasis on holistic water management (“One Water”)
- Quality is a growing concern in the West, not just quantity
- AWWA Source Water Protection Week

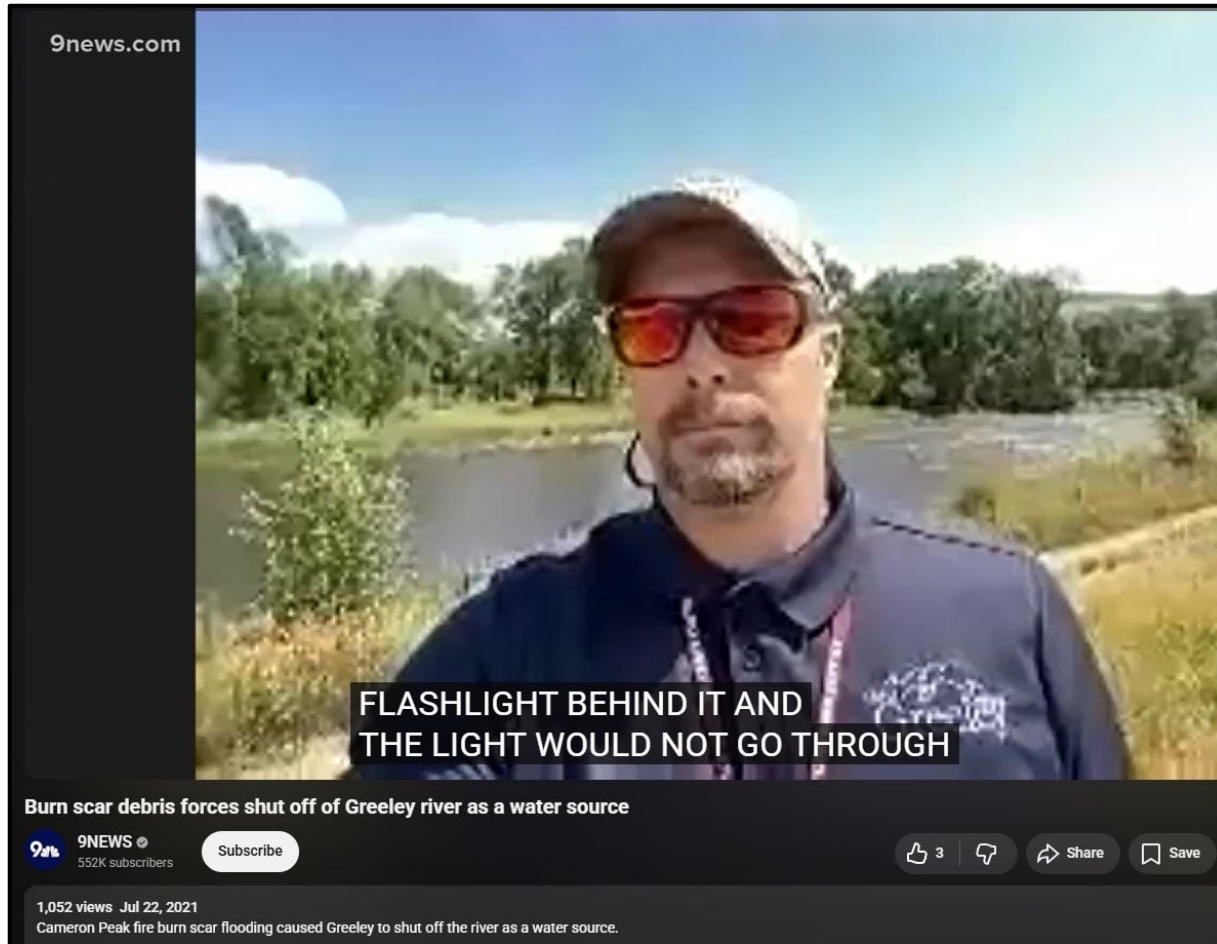
...wait, what is source water?



SOURCE WATER



- EPA & the [Safe Drinking Water Act](#)
- “...refers to sources of water (such as rivers, streams, lakes, reservoirs, springs, and groundwater) that provide water to public drinking water supplies and private wells.”
- Source Water Protection is integrating environmental programs to safeguard, maintain, and/or improve the quality/quantity of drinking water sources
- Headwaters a subset/type of source water



WHY SOURCE WATER?

- [Safe Drinking Water Act](#) 1996 Amendments
 - Required all states to create a Source Water Assessment Program (SWAP)
- Drinking water integrity & security
- Macro challenges
 - Sediment & reservoirs/gray infrastructure
- Micro challenges
 - Quality (TDS, contaminants, etc.)
- Safeguard supplies *before* treatment facilities
 - Saves \$\$\$

HOW CAN WE MAKE A DIFFERENCE

- “Multi-barrier approach”
 - Selecting the best available drinking water source
 - Protecting the drinking water source from contamination
 - Using effective water treatment
 - Preventing quality deterioration in distribution system
- Source Water Protection program
 - Primarily voluntary actions and partnerships
 - Huge strides, more work to be done
- BOR grants, EPA Drinking Water State Revolving Fund capitalization grant

3 WAYS to Protect Your Drinking Water

State data* collected in water quality assessment reports reveals just how many surface drinking water sources (lakes, reservoirs, rivers, and streams) are impaired by pollution and environmental factors.



Lakes and Reservoirs –
over 1.2 million impaired acres.
That's almost the size of Delaware!



Rivers and streams –
over 111,000 impaired miles.
That's almost 4.5 laps around the Earth!

Think of all that water!

Many water utilities and organizations work tirelessly to protect water sources and provide safe drinking water, but there are many ways you can help too.



IN YOUR HOME

Limit pesticides and fertilizers used for lawn and yard care. When it rains, or if you overwater your lawn, these substances can travel through runoff and into your water source. Do not flush medications; doing so will bring them into the wastewater system and into the environment.



IN NEARBY HABITATS

Be mindful not to disturb vegetation or degrade the habitats surrounding waterways. They host many types of plants, trees, and other organisms that are critical to protecting and maintaining water quality.



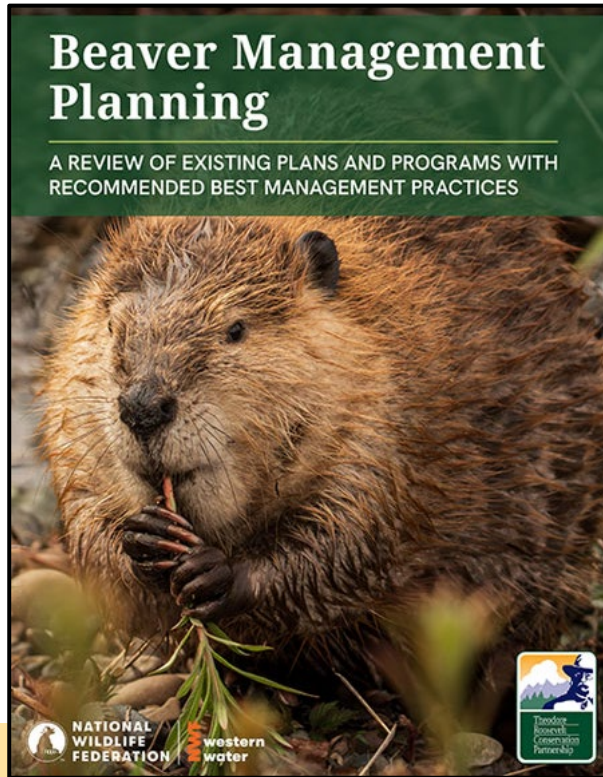
AT A WATER SOURCE

Be aware of posted restrictions limiting swimming or recreational use, as they serve to protect your water quality. Pick up pet waste and throw away your trash to avoid potential water contamination.

Learn More Ways to Protect Drinking Water Sources



*<https://mywaterway.epa.gov>



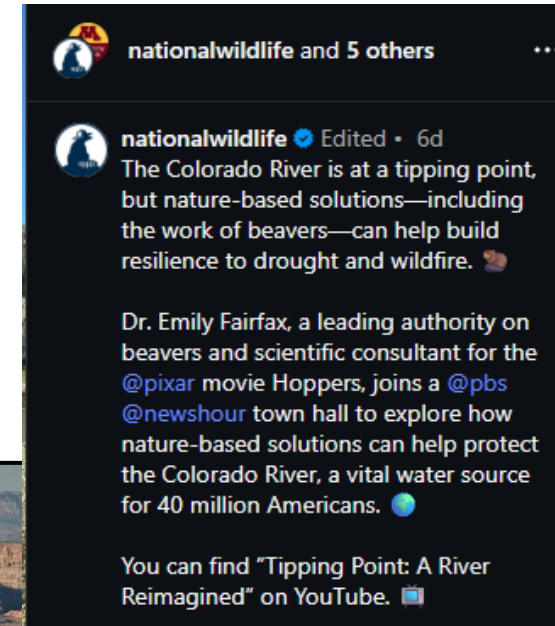
<https://www.nwf.org/Educational-Resources/Reports/2025/Beaver-Management-Planning>

BEAVERS...?!

Foundation for America's Public Lands grant *Reducing Wildfire Risk Through Aquatic Restoration in the Colorado River Basin*, a partnership including the Fairfax Beaver Lab



Dr. Emily Fairfax featured on PBS *Tipping Point: A River Reimagined* <https://www.youtube.com/watch?v=i-J-eyPH8ec>





Policy



**Communications
& Collaboration**

Science



HEALTHY HEADWATERS ALLIANCE

Healthy Headwaters Alliance envisions resilient public watersheds throughout the western U.S. that provide safe and reliable water supplies for all downstream users while supporting healthy, functioning forested ecosystems.

HHA members are innovators – we connect water utilities, federal agencies, NGOs, scientists, community leaders, and conservation professionals.



**Forests and Water:
Opportunities for protecting critical forests
and improving forest health to ensure safe and reliable
water for people and nature**

*A collaborative project of the National Wildlife Federation and the
Water Foundation*

Executive Summary

Summary: With the support from and close cooperation with the Water Foundation, the National Wildlife Federation engaged in an interactive process between December, 2022 and May, 2023 to identify and describe opportunities for protecting critical forests and improving forest health to ensure safe and reliable water for people and nature. The assessment outlines challenges and opportunities, highlights elements of successful strategies, and proposes goals and metrics for measuring success—all focused on the role of philanthropy in leveraging public and private funding and supporting diverse collaborative partners for maximum impact. This summary outlines the key points of the full assessment but does not replicate its analysis, examples and illustrations, or resources for learning more.

Problem Statement: Western forests and the watersheds they support face unprecedented challenges. For decades, forest managers have grappled with the legacy of past and present management practices (timber harvest and associated infrastructure, livestock grazing, fire suppression, beaver eradication, and mineral/energy development)

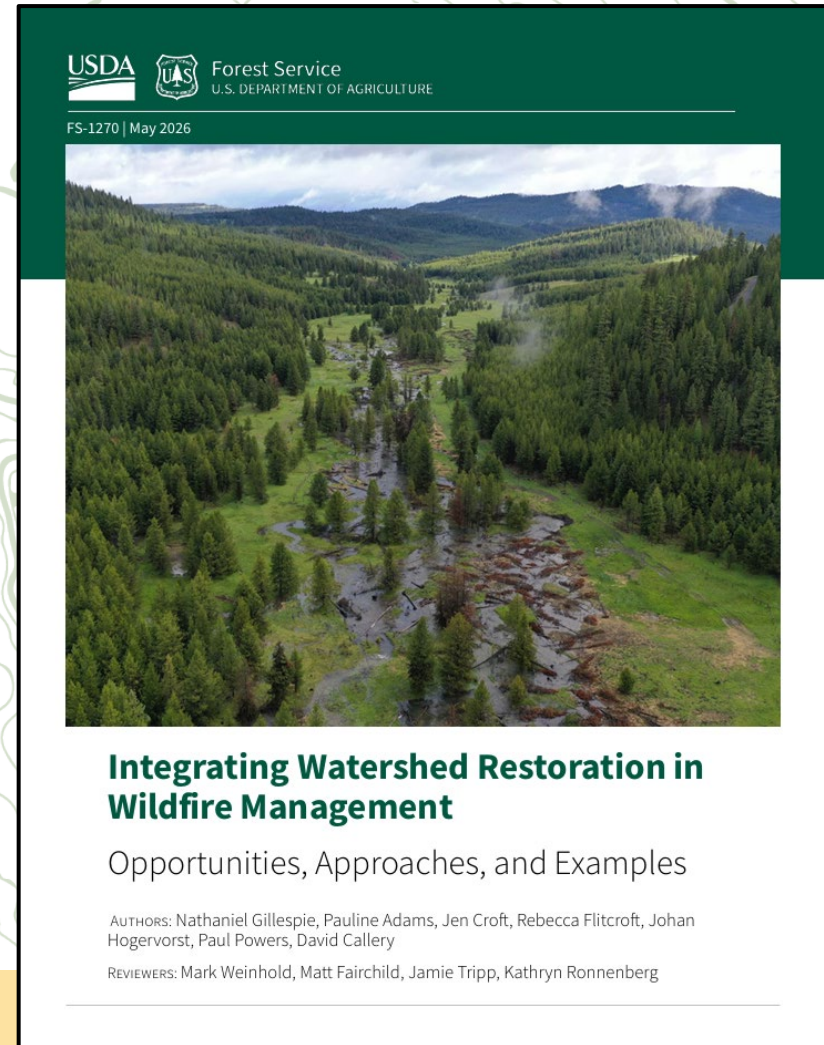
A PATHWAY FORWARD

- May 2023, heavily informed by HHA members
- Challenges: funding and financing, market forces, and management policies
- Opportunities: wildfire/water nexus, cultural resources and traditional practices (holistic management), info sharing
- Focus on watershed integrity and function
- “the scale and complexity of these challenges demand robust collaboration”

<https://www.nwf.org/-/media/Documents/PDFs/NWF-Reports/2024/Forests-and-Water.pdf>

POLICY

- Many organizations are uncomfortable or inexperienced in this space
- Spotlighting key issues
 - Currently less than 10 USFS water rights staff in the West
 - Aquatic programs historically underfunded and under resourced
 - “Watersheds improved” removed as key performance indicator (KPI)
 - Appropriations
- Lift-up work – we often know what to do, we lack resources/support



https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/watershed-restoration-in-wildfire.pdf

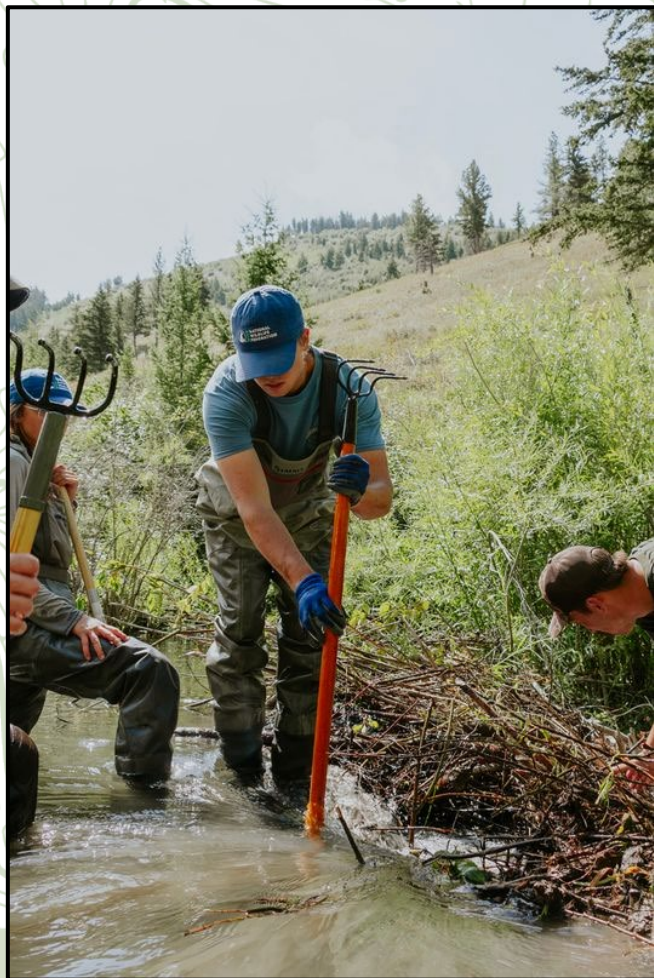


Photo credit Tanner Saul, National Wildlife Federation

SCIENCE

- Data-driven solutions
- Restoration at scale (NWF report) + leveraging work
- Partnering across ownership boundaries
- Operationalizing data and reaching internal and external audiences
- Multiple uses for existing research
 - We don't know what we don't know
- Independent of policy work

COMMUNICATION & COLLABORATION

- Little funding/focus on communication
 - It is a profession! Translating solutions
- Internal and external stakeholders
- Gut checking messages + harmonizing language on shared goals
- Cross pollinating
 - Forestry + utility conferences (AWWA)
 - 4-hour Focus Group at AWWA's WaterSmart Innovations Conference Oct. 21-23, 2026 in Portland, Oregon + social hour

...uplifting the work of HHA members and connecting partners!



Photo credit Tanner Saul, National Wildlife Federation

QUESTIONS?

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