

# In-Depth NONPOINT SOURCE SUCCESS STORY

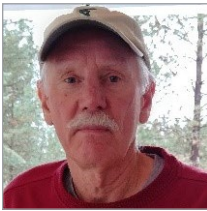
Highlighting the People Behind the Progress

## Efforts to Control Sediment Builds Community and Yields Environmental and Economic Benefits

### NORTH FORK COEUR D'ALENE RIVER SUBBASIN, IDAHO

For decades, stakeholders in the North Fork Coeur d'Alene (NFCDA) River subbasin have worked to reduce sediment pollution and restore coldwater fisheries habitat by reducing erosion from forest roads and by restoring riparian and instream habitats. Water quality in multiple previously impaired segments has improved, thanks to dedicated individuals, available funding sources, and a programmatic approach to implementation and monitoring.

### Partners in Success



#### **Ed Lider, U.S. Forest Service (Retired)**

##### ***Federal Innovator Built Momentum***

Ed introduced new ideas about restoration into timber harvesting procedures and sparked significant change throughout the region.



#### **Wade Jerome, U.S. Forest Service**

##### ***Federal Leader Continues Momentum***

Wade builds on past projects and incorporates new restoration efforts into ongoing Forest Service work.



#### **Kajsa Eagle Van de Riet, Idaho Dept. of Environmental Quality (DEQ)**

##### ***State Contact Fosters Communication***

Kajsa works with various partners to prioritize restoration projects and track progress.



#### **Pat Way, Citizen and Fishing Guide**

##### ***Citizen Supports Action***

Pat supports and promotes restoration efforts while working in the community.



#### **Skip Quade, N. Idaho Fly Casters Club**

##### ***Club Member Shepherds Collaboration***

Skip's love of fly fishing and his wish to make a difference helped his club become an active participant in watershed restoration.

## Success Story *Highlights*

- **Pollutant of concern:** Sediment
- **Practices implemented:** Decommissioning or repairing eroding forest roads, removing or upgrading stream crossings and culverts, restoring riparian areas and wetlands, and adding large woody debris to stream channels
- **Waters restored/improved:** Water quality has improved in many streams, including 168 miles of streams that have been removed from the impaired waters list thanks to on-the-ground restoration efforts
- **Key elements of success:**
  - » Dynamic leaders with long-term vision and determination
  - » Engaged citizen volunteers
  - » Awareness of environmental, recreational and economic benefits from projects that ensured local buy-in
  - » Cooperation between local, state and federal partners

North Fork Coeur d'Alene River Subbasin, ID



## Basin Description

The NFCDA River and its tributaries drain a forested mountainous region in the northeastern panhandle of Idaho. The streams support important coldwater aquatic communities, including native westslope cutthroat trout. The NFCDA subbasin is managed for timber production, mining, recreation, drinking water supply, and various urban and residential uses. The U.S. Forest Service manages most (93.5%) of the 895-square-mile NFCDA subbasin as part of the Idaho Panhandle National Forests—Coeur d’Alene River Ranger District. The remainder is privately owned (4.3%) or is additional public land managed by the Bureau of Land Management (BLM) (0.6%) or the Idaho Department of Lands (1.6%).

## Problem

Intensive timber harvest has occurred throughout much of the subbasin since the early 1900s. Many historical logging roads were built in or along streams and were abandoned with little or no maintenance until restoration activities began in the late 1980s. In the early 1990s, Forest Service stream assessments identified many unstable stream channels and sedimentation problems that impaired cold water aquatic life habitat. DEQ bioassessment sampling confirmed many of these impairments. As a result, numerous waters were added to the Clean Water Act section 303(d) list of impaired waters for sediment.

## Programmatic Approach Creates Structure

Restoration efforts have been underway for almost 40 years. Early stream assessments helped the Forest Service target key areas. In 2001–2002, DEQ developed a sediment total maximum daily load (TMDL) for the NFCDA subbasin, which identified erosion from road encroachment as the largest sediment source. Erosion problems were aggravated by ongoing recreational activities (e.g., vehicle use of forest roads and stream crossings) and occasional wildfires. In 2008, DEQ and the Forest Service initiated a TMDL five-year review that included (1) modeling and geographic information system analysis and (2) field verification monitoring. Since 2008, the Forest Service and DEQ—with input from the NFCDA Watershed Advisory Group (WAG)—have conducted ongoing targeted restoration project implementation and verification monitoring on waters within the subbasin.

## The Number of Restored Waters Continues to Grow

After years of targeted on-the-ground restoration efforts and natural recovery, ongoing monitoring efforts have identified many NFCDA subbasin waters that are either supporting or close to supporting beneficial uses. Of the 33 assessment units originally listed as impaired for sediment, 11 have been removed from the impaired waters list (168 stream miles total). Seven of these have been featured as Nonpoint Source Success Stories (see map on back page). With continued restoration and responsible stewardship, more waters should be removed from the impaired waters list during the next decade.



Photo: Skip Quade

The NFCDA subbasin is home to native westslope cutthroat trout.

## A Legacy of Mine Waste Lingers in the Upper NFCDA

A limited number of NFCDA subbasin waters are also listed as impaired by metals from historic mining operations that occurred in the headwaters in the 1880s–1960s before modern environmental protections. The Restoration Partnership, a state-federal-tribal collaboration, is using funds from settlements with mining companies to restore impacted natural resources in the Coeur d’Alene Basin, which includes the NFCDA subbasin. The Partnership was developed by the Coeur d’Alene Basin Natural Resource Trustees as a way to involve the public in natural resource restoration. Implementation efforts are ongoing.

# THE PEOPLE BEHIND THE PROGRESS

## Ed Lider, U.S. Forest Service (Retired) *Federal Innovator Built Momentum*

Ed worked for the U.S. Forest Service in northern Idaho for 30 years (1980–2010). After his retirement, he worked part-time for the Idaho Department of Fish and Game conducting fish population monitoring. He is a long-time member of the North Idaho Fly Casters Club and has participated in the NFCDA River WAG for many years, first as a Forest Service representative and then as a representative of the North Idaho Fly Casters Club. Beginning in the 1980s, Ed encouraged the Forest Service to use more environmentally sensitive practices in its local approach to timber harvesting, forest road management and post-harvest restoration. Thanks to Ed’s efforts, the Forest Service began tying restoration and road removal directly into timber sale contracts. To address existing sedimentation problems, Ed identified funding for restoration and rallied volunteers to implement restoration projects. Ed’s 30-year quest to restore the NFCDA continues to inspire those around him and has led directly to the improvements seen today.

- **What were the subbasin’s water quality issues?**

**Ed:** Erosion and sedimentation. When I started at the Forest Service in 1980, the agency was focused on cutting trees and building roads, not restoration. I inventoried the roads in the NFCDA River watershed in 1985 and found huge failure rates on the culverts. Modeling showed we could reduce sediment in the streams by removing roads.

- **What was your favorite moment?**

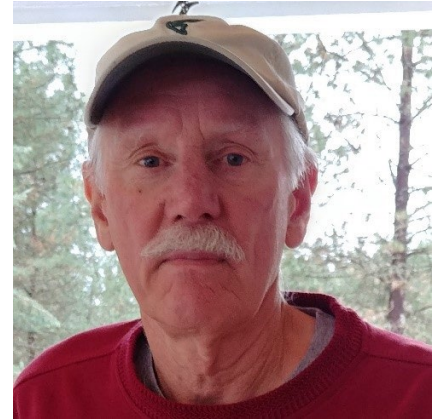
**Ed:** When Forest Service staff began to say, “Instead of building these roads and walking away from them, we must take responsibility for what we’re doing to the watershed.” That was a highlight of my career because that’s when watershed protection became a team effort.

- **How did you involve the watershed community?**

**Ed:** We reached out to local conservation groups like the North Idaho Fly Casters Club and showed them how the streams recovered after road removal. They didn’t like that we tied the work to timber sales, but we explained that the timber dollars were funding the restoration. They became more accepting of the work and spread the word to others.

- **What element surprised you the most?**

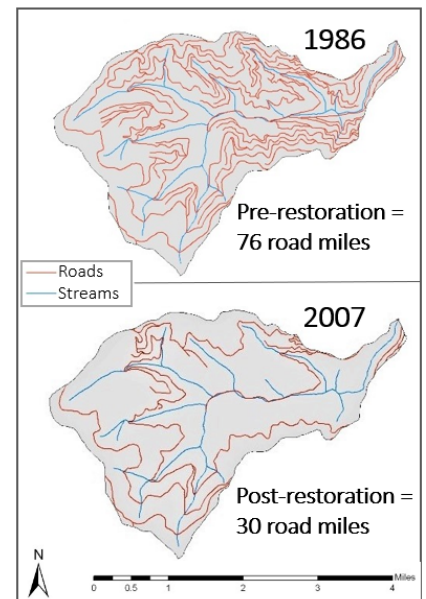
**Ed:** How quickly systems stabilized and fish populations rebounded after we removed sediment sources and added wood to the streams. The many little projects we’ve completed have been collectively beneficial to the recovery of the larger watershed system.



*“The many little projects have been collectively beneficial to the recovery of the larger watershed system.”*

Ed Lider

Yellowdog Creek Watershed:  
Road Density Over Time



Yellowdog Creek is an excellent example of how removing roads can add buffers to streams and protect water quality.



*“Improvement takes time and patience.”*

Wade Jerome

## The Forest Service: Managing Multiple Public Resources

The Forest Service manages its public land for multiple uses, including timber production, mineral resources, recreation, natural resources protection, invasive species control and wildfire prevention.

In the NFCDA subbasin, the Forest Service’s restoration approach is guided by the Idaho Panhandle National Forests Land Management Plan, which incorporates the 1995 Inland Native Fish Strategy (INFISH). INFISH provides management direction to protect habitat and populations of resident native fishes. The direction includes riparian goals, riparian management objectives, and standards and guidelines (e.g., requiring a 300-foot buffer around fish-bearing streams).

## Wade Jerome, U.S. Forest Service *Federal Leader Continues Momentum*

Wade has lived in Idaho his entire life. He’s a biological technician and Contracting Officer’s Representative for the Idaho Panhandle National Forests Coeur d’Alene River Ranger District. He worked closely with Ed Lider for 17 years and has led the ranger district’s hillslope and riparian restoration efforts since Ed retired.

- ***How have the Forest Service’s efforts evolved?***

**Wade:** Our funding sources and mechanisms are constantly changing, so we no longer have guaranteed funding sources for hillslope and riparian restoration. We try to combine hillslope and riparian restoration with upland vegetative management as much as possible. When opportunities arise, I utilize a service contract to maximize existing funds for restoration efforts. This is one way I’ve been able to keep restoration moving.

- ***What has contributed to your ongoing success?***

**Wade:** Including restoration opportunities in our project planning and decisions is key. There are so many factors involved in getting a project up and running that it sometimes takes decades. We must also seize unique opportunities to complete projects or connect two projects. These connections begin to make a difference in water quality. Improvement takes time and patience.

- ***What has impressed you about the restoration effort?***

**Wade:** The perseverance of individuals to take every opportunity to plan, implement and complete projects whenever funding, personnel and time are available. I’ve worked with a team of dedicated, innovative people who can adapt to change and are committed to continuing the work that started well over 25 years ago.

- ***How do you spread the word about your work?***

**Wade:** I’ve conducted presentations for professional societies, local fishing clubs, colleges, and led countless field reviews of projects with professionals from within and outside the agency. DEQ’s Kajsa [Van de Riet] has brought unique attention to the NFCDA restoration effort. Not only is she telling the story, but she’s also brought recognition to the work by proposing the removal of impaired waters for sediment. She’s able to work directly with private landowners and across agency boundaries, which allows her to reach a broad audience.

- ***What’s your biggest restoration goal?***

**Wade:** At one point our ranger district was one of the most heavily roaded forests in the nation. By the time I retire, I’d like to have all the major tributaries to the NFCDA River delisted for sediment through our hillslope and riparian restoration efforts. We have fewer to delist now, and I continue to restore hillslopes and tributaries whenever possible.



## Kajsa Eagle Van de Riet, Idaho Department of Environmental Quality

### *State Contact Fosters Communication*

Kajsa has lived in Idaho for most of her life. She currently serves as the DEQ's Coeur d'Alene Basin Restoration Plan Coordinator and Water Quality Analyst. For the past 13 years, she's been DEQ's facilitator for the NFCDA WAG, a group of citizens that represent the interests and industries affected by management of the watershed. WAG members provide Kajsa with local public input and guidance regarding the NFCDA during the entire TMDL process.

- ***What was one key element of the success in the subbasin?***

**Kajsa:** The emphasis on large-scale, long-term restoration. The Forest Service identified restoration needs, found funding opportunities, and implemented projects whenever they've had the chance...over and over again. Ed Lider started the process, and others have kept it going after his retirement. Plus, we've had pre- and post-project monitoring, which has allowed us to make these delistings happen.

- ***How has the approach changed over time?***

**Kajsa:** We've learned about the science of restoration and what works. We've adjusted the practices and approaches as needed. It's been rewarding to see science and adaptive management in action!

- ***What role does the NFCDA WAG play?***

**Kajsa:** Idaho's statutes require that DEQ must work with a WAG when we develop a TMDL. NFCDA WAG members have participated every step of the way through the process. Their efforts range from writing letters of support for grant applications to recommending upcoming seasonal water quality monitoring sites.

- ***What contributes to the NFCDA WAG's ongoing dedication?***

**Kajsa:** Persistence and a willingness to listen to each other. We have ground rules about respect, and we don't take things personally. Plus, they love seeing the success stories published – it keeps everyone motivated!

- ***What advice would you give to others working with diverse groups?***

**Kajsa:** Sometimes getting started is the hardest thing. We've had a lot of turnover at the different agencies, but we've been able to maintain momentum. Even though we have many folks involved who wouldn't consider themselves environmentalists, everyone ends up being motivated towards the same goals, so it works.



*“I love working for the people of Idaho and taking care of these incredible natural resources.”*

Kajsa Van de Riet



Kajsa conducts field work in the NFCDA subbasin.

Photo: Idaho DEQ



## Pat Way, Citizen, Fishing Guide and Timber Company Employee

### *Citizen Supports Action*

Pat moved to Idaho as a child and began fishing on the NFCDA river in 1990. He was a corporate member of the North Idaho Fly Casters Club and has been a NFCDA restoration volunteer for over 20 years. He worked as a professional fishing guide in 1998–2016 and was part-owner of Northwest Outfitters. In 2018 he took a job as a sales manager with Idaho Forest Group (IFG), a sustainable timber company. He also helps with company-led watershed restoration efforts. IFG recently purchased nearly 2,000 acres in the Prichard Creek watershed in the NFCDA headwaters and hopes to improve fish habitat and water quality in this mining-impaired area using grant funding from the Restoration Partnership. IFG wants to secure a conservation easement and open the property to the public for day use.

*“The entire community cares about the river, and it shows.”*

Pat Way

- ***What’s special about the NFCDA River?***

**Pat:** It’s a premier fishery. There aren’t many places like this where you can catch native westslope cutthroat trout. More people are using the river these days, but the fishing is better than ever. Thanks to education efforts, our anglers know how to handle, photograph and safely release the fish.

- ***What do you love about the local community?***

**Pat:** The entire community cares about the river, and it shows. Local businesses and groups support environmental protection by providing funding and volunteers for restoration and cleanup projects. I’m impressed by the way citizens, agencies and organizations respect the resource and come together for the common good.

- ***How has restoration affected you as an angler and outfitter?***

**Pat:** Cleaner water benefits everyone. I enjoy working on restoration projects and seeing the fishery rebound afterwards. The projects provide economic benefits to outfitters and fishing guides like me because the fishing keeps improving. My clients have good experiences and often return year after year.

- ***What ongoing challenges have you seen on the river?***

**Pat:** Pollution from expanding residential development and poorly managed seasonal camping sites, as well as pollution and erosion from mining areas.

- ***How will your work with IFG make a difference?***

**Pat:** It’s rewarding to work for a company willing to put funds and energy into restoration. I’ll likely help coordinate community volunteers for IFG’s Prichard Creek project. As one of the coldest tributaries in the NFCDA drainage, it should serve as a cold water refuge during summer months—but habitat is poor and there’s not much of a resident fish population. We hope to turn that around.

Photo: Pat Way



A happy client documents her catch on a guided fishing trip with Way.



## Skip Quade, North Idaho Fly Casters Club Club Member Shepherds Collaboration

Skip has lived in northern Idaho for more than 40 years and is an avid fly fisherman and advocate for stream protection. Now retired from the trucking industry, he owns a cabin along the Coeur d'Alene River. As a past president and an active member of the North Idaho Fly Casters Club, he worked with the Forest Service to apply for restoration grants and to engage club members in project implementation.

- **Why was the fishing community concerned about the river?**

**Skip:** We wanted to increase the amount of native fish habitat because we were finding long stretches of clear, but essentially dead, water. Our river had few fish but lots of potential.

- **How did the North Idaho Fly Casters Club become involved?**

**Skip:** In the 1980s, Ed Lider from the Forest Service asked for help. Much of our club's work came about because Ed could find money, motivate people and ask for what he needed. He had the ideas. I helped write grant proposals, spread the word and found volunteers to do the work. Ed often found resources to double or triple the grant money to further support the projects. We made a great team!

- **What surprised you during the restoration effort?**

**Skip:** Our club helped the Forest Service measure the width and depth of the river at project sites before and after projects were completed. I was surprised by how much the river constantly shifts and moves bedload. What was a pool one year might be totally gone the next!

- **What influenced public interest in river protection?**

**Skip:** In 1992 the movie *A River Runs Through It* came out, and it changed fly fishing forever. Suddenly everyone wanted to be involved in fly fishing and habitat restoration. Our club began receiving more money to do multiple projects, and the number of people fishing on the river tripled.

- **What's been your favorite part of the restoration effort?**

**Skip:** Getting a group together in support of a common cause. We work hard at projects, and it's rewarding to return the next spring to see a bunch of cut-throat trout just below a log dam we built. We love to see our work paying off!

- **What should people know about the fishing community?**

**Skip:** We share a common goal. People gladly volunteer on projects that don't directly benefit their favorite fly fishing spots, such as cleaning up the river-side or building docks to allow wheelchair access for disabled anglers.



*"Our river had few fish but lots of potential."*

Skip Quade



Volunteers capture fish to transfer them to the restored section of Tepee Creek in 2000.

Photo: Forest Service



Fly Casters Club members help with a stream restoration project in 1995.

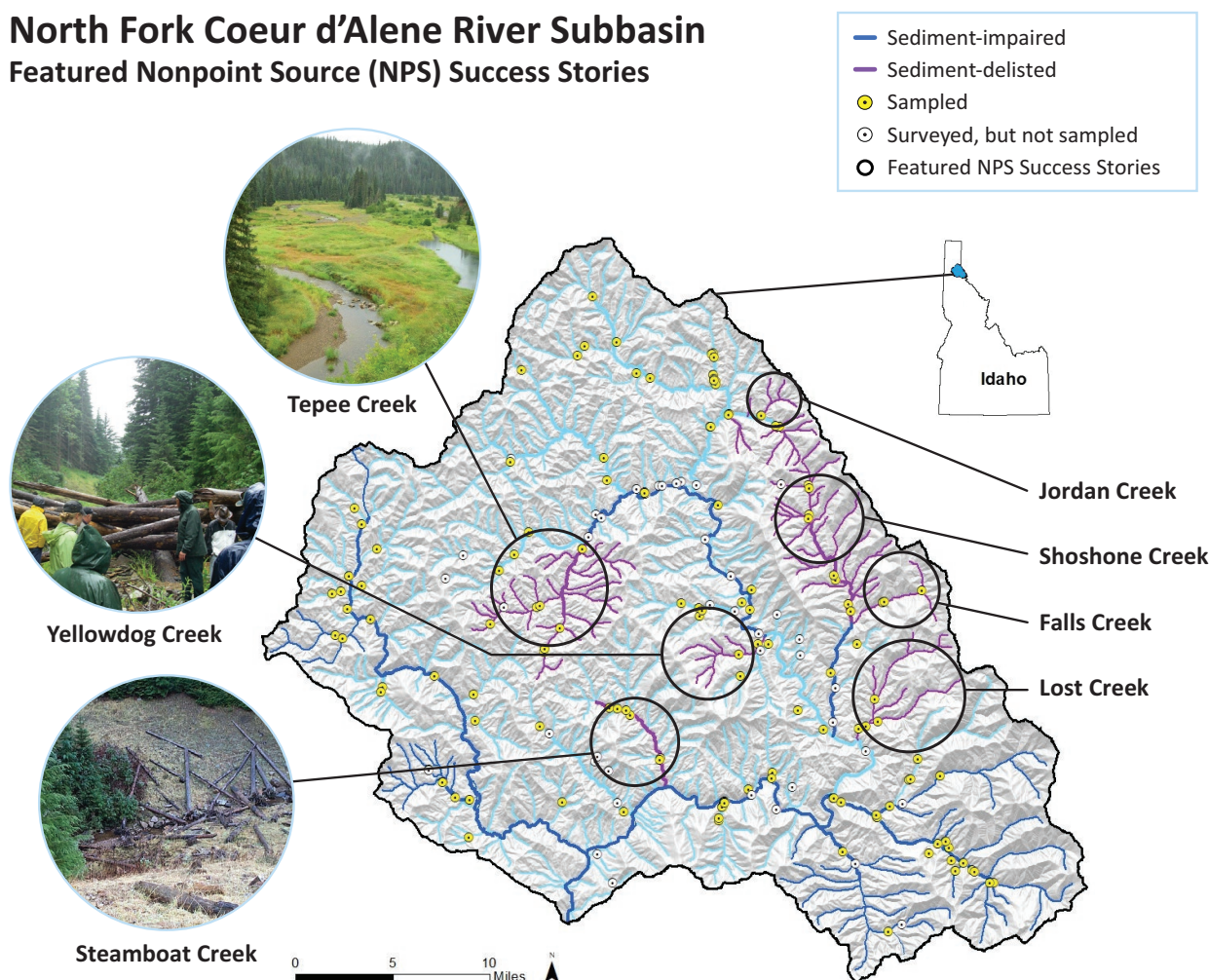
Photo: Skip Quade

## Multiple Benefits Help to Maintain Community's Motivation

NFCDA restoration projects provide natural resource benefits, increased recreational opportunities and an influx of money into the local economy—all of which continue to play motivating roles in the community. As projects are completed, water quality improves and fish populations increase in number and diversity, which draws local, national and international anglers to the area. An increased presence of the native westslope cutthroat trout has been aided by catch-and-release requirements enacted by the Idaho Department of Fish and Game in 2008. Restoration efforts also introduce money into the local economy through awards of service and construction contracts to local businesses, employment for local residents who work on projects, rentals of local construction and other equipment, and increased tourism dollars for fishing and recreational pursuits.

Restoration efforts throughout the NFCDA subbasin have been supported by diverse federal, state and local partners. These partners have contributed funding or helped to secure outside grant funding, provided thousands of volunteer hours, helped with planning, provided monitoring support, and contributed to communitywide education and engagement. The story of the NFCDA subbasin shows that an ongoing, thriving timber industry can co-exist with high-quality watersheds.

### North Fork Coeur d'Alene River Subbasin Featured Nonpoint Source (NPS) Success Stories



Targeted implementation efforts by the Forest Service and its partners have reduced sediment levels in numerous headwater streams within the NFCDA Subbasin, including many that have been featured as Nonpoint Source Success Stories (circled above).



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