



United States Department of Agriculture
Natural Resources Conservation Service

National Water Quality Initiative

Our Focus is Clear



A guide to effective partnerships
with the Natural Resources
Conservation Service

Natural Resources Conservation Service; Who We Are

The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) recognizes that it takes healthy ecosystems to produce quality food and fiber from our agricultural lands. We at NRCS also recognize that water is an equally critical commodity produced from the land and believe the quality of this water directly relates to the health of the land upon which it falls. Our mission at NRCS is to help people help the land by applying conservation management systems that promote healthy ecosystems while maintaining agricultural productivity.

To support our mission, NRCS works hand-in-hand with landowners to protect and improve natural resources on private lands. NRCS provides planning assistance and outreach to all private landowners and land users through local Soil and Water Conservation Districts. With an office presence in nearly every county in the nation, we offer locally-led solutions and science-based research. NRCS works with diverse partners to promote land stewardship, accelerate voluntary adoption of conservation practices, and maintain agricultural productivity. Our guiding principles are service, partnership, and technical excellence.



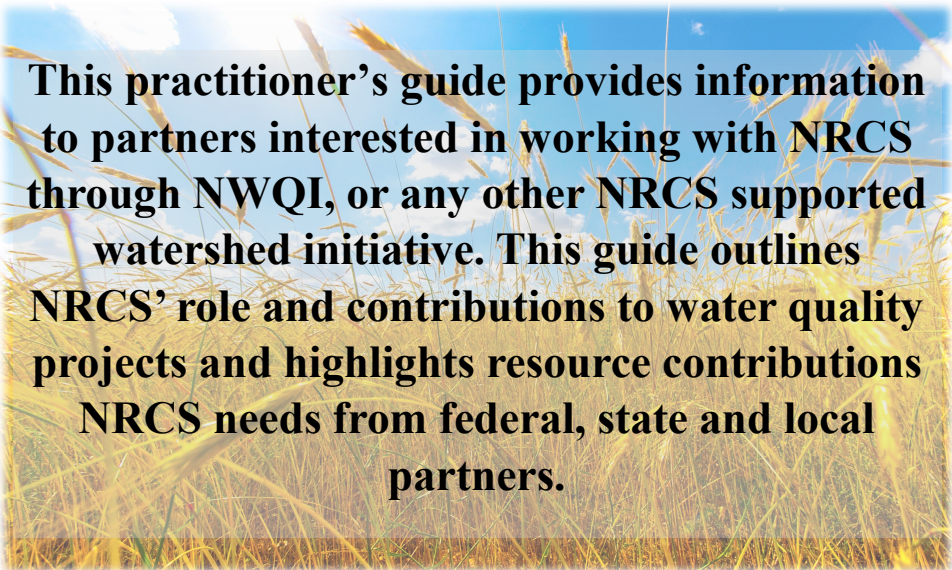
National Water Quality Initiative

A Partnership for Progress

Stewardship of our natural resources is a collective effort. No one person or entity can do it alone. That's what makes partnerships so important, and is why the National Water Quality Initiative (NWQI) is so effective. The NWQI is a partnership between NRCS and other federal, state, and local partners focused on water quality improvement in targeted agricultural watersheds. This partnership-based initiative pools public and private resources to improve water quality and strengthens agricultural productivity. With targeted on-farm investments and watershed assessment resources, NWQI focuses resources on small watersheds that can deliver the greatest benefits for local, regional, and national water quality.

Since 2012, NRCS has worked in partnership with the Environmental Protection Agency (EPA), State Water Quality Agencies (SWQAs), local conservation districts, and other partners to provide over \$165 million in technical and financial assistance and has treated over 825,000 acres in NWQI targeted watersheds across the U.S.

The combined leveraging of federal, state, local, and private resources maximize the impact of implementing conservation that will have a positive benefit to not only water quality, but the environment as a whole. This partnership is a mechanism for incentivizing the conservation and protection of watersheds, stream beds, and other private-land based water sources.



This practitioner's guide provides information to partners interested in working with NRCS through NWQI, or any other NRCS supported watershed initiative. This guide outlines NRCS' role and contributions to water quality projects and highlights resource contributions NRCS needs from federal, state and local partners.

Managing our Water Resources

When rain falls on the landscape it soaks into the ground or runs into small streams that flow into larger bodies of water. The area that drains to a common waterway, such as a stream, lake, estuary, wetland, aquifer or even the ocean is called a watershed. Everyone lives in a watershed, everyone benefits from a healthy watershed, and everyone can contribute to maintaining or improving watershed health.

Watersheds sustain life in more ways than one. The EPA estimates \$450 billion in foods, fiber, manufactured goods, and tourism depend on clean, healthy watersheds. That is why proper watershed management is necessary for all. Where the raindrops fall in a watershed make a difference in how the rain is managed and has impacts on water near and far.

Working lands account for about half of our nation's land base and provide substantial economic, environmental, and recreational resources that benefit the entire nation. Effective management and conservation of natural resources in America's working lands is critical for our future water and food stability.



Meet a Program Participant



Gary and Sue Price are ranchers in Navarro County, Texas. The Price's ranch falls under the "working lands" category. They raise cattle that help feed America and also provide another crop: drinking water for the city of

Fort Worth, TX. Their ranch lies in the Richland-Chambers Lake watershed, which is part of the Tarrant Regional Water District's (TRWD) system that provides water for over 1.8 million Fort Worth residents. Private farm and ranchland management in the Trinity River watershed impacts the quality and quantity of water that arrives at TRWD's municipal water treatment centers. In

2012, the Prices entered into a NWQI contract implementing fencing, grass seeding, and streambank stabilization conservation practices to help remove and trap sediment during rain events on their property. These practices benefit the Price's ranch and contribute to cleaner water for TRWD and Fort Worth, TX.

Private Land Conservation Efforts

NWQI promotes a suite of conservation practices that focus on soil health, reduced erosion, and optimal use of agricultural inputs. Landowners participating in these efforts are working with local NRCS staff and partners to develop management practices that maintain agricultural production while helping to keep our water clean and available. Some of those practices include:

Cover crops and no-till farming: helps prevent soil erosion, sequesters carbon, and increases organic matter and moisture in the soil.

Restoring and protecting riparian areas: reduces nutrient runoff to water by as much as 90%, in addition to improving wildlife habitat.

Improved range and pasture management: makes grazing more sustainable, improves wildlife habitat, protects water quality, and sequesters additional carbon in the soil.

Other conservation practices: help reduce soil erosion, improve water quality, and reduce non-point source pollution.

Over time, these conservation practices will produce healthy soil, improve productive lands, and also benefit wildlife through improved habitat – upland animals like deer, turkey, and quail, as well as wetland animals such as ducks, fish, and other aquatic species. This voluntary, incentive based program keeps agriculture as a cornerstone of our economy and also protects the health of our rivers, lakes, and streams.

NWQI Watershed Site Selection

In consultation with SWQA and other partners, NRCS selects new NWQI watersheds based on shared NRCS and state priorities as well as the following criteria:

A watershed must be documented as impaired, threatened, or critical. A 303(d) list documents impaired waterbodies in each state and grants access to funding from Section 319 of the Clean Water Act. A Total Maximum Daily Load (TMDL) is a document developed for waterbodies on 303(d) lists that identifies impairments and is a starting point for restoration.

Impaired watersheds: documented in a TMDL or on a 303(d) list.

Threatened watersheds: documented as impaired, but does not have a TMDL and are not on a 303(d) list.

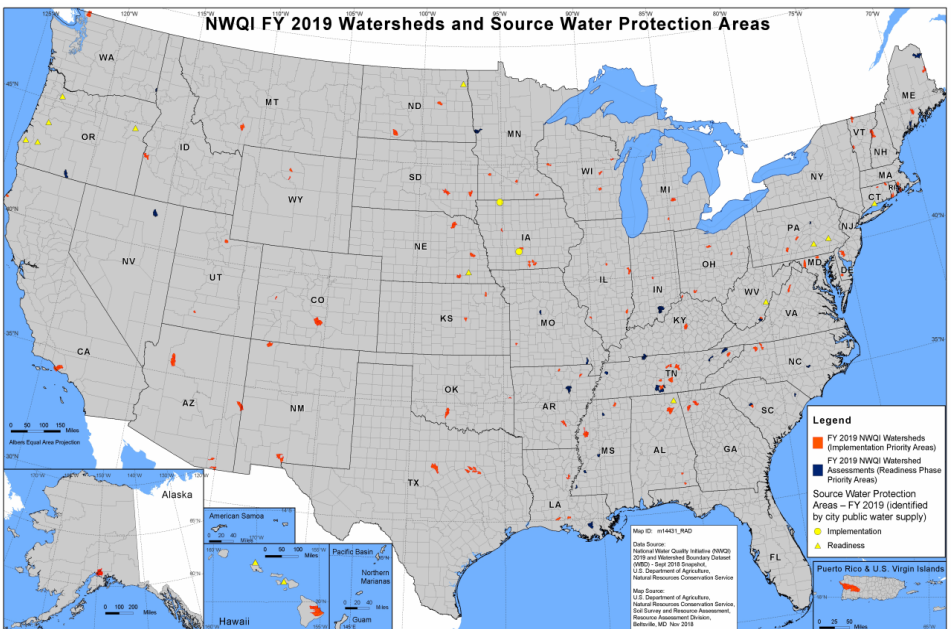
Critical watersheds: documented as a contributing source to downstream impairments.

A watershed must also demonstrate:

Technical capacity - The ability to achieve project goals with NRCS and/or watershed partners.

Partner network - An established network of partners working to meet project goals (i.e., technical assistance, monitoring, outreach).

Producer interest - Producers who show interest in participating in NWQI and contributing to project goals.





NWQI Phases

Once selected as a targeted watershed, NWQI includes two phases:

Readiness Phase: Prior to receiving targeted technical and financial assistance, the Readiness Phase provides funding for watersheds to develop a watershed assessment, expand on-farm planning and outreach, and increase support for local staff.

Implementation Phase: In the Implementation Phase, NRCS provides technical and financial assistance for producers to implement conservation practices that address resource concerns identified in the watershed assessment, developed in the Readiness Phase.

Each phase has separate objectives and requires support from both NRCS and other federal, state, and local partners.

NRCS Contributions

In the Readiness and Implementation Phases, NRCS provides the following resources to local resource managers, partners, and landowners in selected NWQI watersheds:

Watershed-level assessment and planning resources (Readiness Phase)

NRCS provides specialized funding to support staff time or partner agreements to develop a watershed assessment at the sub-watershed level. This assessment describes resource concerns, identifies goals, and establishes metrics to track project progress.

On-farm conservation planning (Implementation Phase)

NRCS provides one-on-one technical assistance to help landowners develop a conservation plan to address resource concerns on their property. This plan creates a roadmap to implement conservation practices that meet the landowner's goals for their property while addressing resource concerns identified in the watershed assessment.

Targeted funding for practice implementation (Implementation Phase)

NRCS provides technical and financial assistance to producers in NWQI watersheds. This targeted assistance is meant to accelerate voluntary adoption of conservation practices that address resource concerns identified in the watershed assessment, as well as on-farm resource concerns.

Partnership Opportunities

Partnerships are an important part of a successful watershed improvement project. Diverse partners bring unique experiences and skill sets to the project. This diversity of expertise benefits watershed projects and increases the likelihood of achieving partners' shared watershed goals.

Site Selection

To contribute resources in collaborative projects, it is important for partners to share goals and objectives for targeted watershed improvement efforts. The site selection phase is an opportunity for NRCS and potential partners to develop shared goals and identify watersheds that meet their shared site selection criteria. Potential partners are encouraged to get involved with the NWQI selection process at both the state and local levels.

Watershed Assessment and Outreach Strategies

Watersheds in the Readiness Phase focus on the development of a watershed assessment as well as outreach and education strategies in target watersheds. NRCS seeks partners to assist in the development of both watershed assessments and outreach plans.

Implementation Resources and Technical Expertise

Watersheds in the Implementation Phase focus on putting conservation practices on the ground, monitoring water quality to measure impacts of conservation practices, and evaluating project successes. Partners can contribute by providing in-stream water quality monitoring resources, technical assistance, other metrics for progress tracking as well as outreach and education on available resources to landowners in targeted watersheds.





Leveraging Resources to Maximize Impact

The combined leveraging of multi-stakeholder activities and resources can maximize the impact of implementing conservation. These collaborations have a positive benefit to not only water quality, but the environment as a whole. NRCS depends on federal, state, and local partners to accomplish shared watershed objectives.

EPA

The EPA helps facilitate partnerships between NRCS and SWQAs, supports state use of section 319 funds, and provides guidance to partners on in-stream monitoring and watershed planning efforts.

SWQA

SWQAs coordinate with NRCS on watershed site selection and conduct in-stream water quality monitoring of NWQI watersheds. They use Section 319 funds to support activities in targeted watersheds, such as supporting a watershed coordinator or using state funds for practice implementation.

Conservation Districts

Conservation districts are valuable local partners in watershed initiatives due to their established relationships with producers and landowners in targeted watersheds. Strong local partnerships increase producer participation and can establish additional community support.

Federal Agencies

Federal agency partners can provide financial support and guidance in the development of watershed assessments and in-stream water quality monitoring in NWQI watersheds.

State Agencies

State agencies beyond SWQAs can contribute various state funds, resources, and expertise to targeted watersheds.

Community Partners

Community partners, such as local water districts and county commissioners, can assist in outreach efforts to increase community-wide support of watershed improvement projects.

University Extension

University Extension staff can play an important role in outreach, education, and promoting available resources in targeted watersheds. Extension can also assist with innovative approaches and technologies for assessment and on-ground conservation.

Private Partners

Agricultural, environmental, and other private organizations can contribute technical expertise, financial resources, and play a key role in the outreach and education components of a watershed improvement project.

A Clear Picture of Success

Here are a few examples of how NWQI can contribute to ongoing conservation efforts. Both of these success stories had conservation efforts underway prior to their selection as an NWQI watershed. NWQI's targeted technical and financial assistance can accelerate adoption by providing extra resources to accomplish watershed improvement goals.



Piscola Creek, Georgia

In 2000, 25 miles of Piscola Creek was added to the Clean Water Act section 303(d) list of impaired waters, due to low levels of dissolved oxygen.

NRCS partnered with EPA and Georgia Environmental Protection Division (GAEPD) in 2012 to designate Piscola Creek as an NWQI watershed. This designation provided technical and financial assistance to farmers, ranchers, and forest landowners for voluntarily adoption of conservation practices to improve water quality in Piscola Creek. Additionally, this partnership enabled GAEPD to collect in-stream water quality data to measure the impacts of conservation practices implemented in the Piscola Creek watershed.

After an NRCS contribution of \$1.6 million in technical and financial assistance as well as in-stream water quality monitoring by GAEPD, 3-miles of Piscola Creek had increased levels of dissolved oxygen and exceeded water quality standards. This collaborative effort resulted in a GAEPD recommendation to remove the 13-mile segment of Piscola Creek from Georgia's 303(d) list of impaired waterbodies in 2016.



Deep Creek, Montana

Due to excess sediment and habitat degradation, Montana Department of Environmental Quality (MDEQ) added Deep Creek to Montana's 303(d) list of impaired waterbodies in 1998. Between 1990 and 2003, multiple restoration projects focused on erosion reduction on public and private lands in the watershed.

After a damaging flood in 2011, partners developed the Deep Creek Watershed Restoration Plan that recommended restoration and focused on in-stream benefits as well as benefits to landowners and water uses. In 2014, Deep Creek was selected as an NWQI watershed and MDEQ granted the Broadwater Conservation District (BCD) a three year award to implement recommendations.

As a result of partnerships between private landowners, BCD, Montana Department of Fish, Wildlife and Parks, Montana Department of Natural Resource and Conservation, MDEQ, and NRCS the sediment impairment was removed from Deep Creek in 2016. Although other impairments remain, this restoration effort resulted in measurable improvements of in-stream flow and riparian habitat in the Deep Creek watershed.

Public Benefit

Improving water quality is an endeavor that benefits all members of society. Society benefits from higher quality food, fiber, and water as well as an overall improvement in the health of the land and wildlife habitat. Additional benefits include:

Reducing soil erosion to prevent sediment from building up in the bottom of lakes and reservoirs. This helps municipal water suppliers maintain their water system infrastructure and storage capacity for future generations.

Minimizing erosion into water systems reduces the need for costly removal of the sediment in reservoirs.

Municipal water treatment costs are reduced and consumer's bills are lowered when landowners upstream apply soil and water conservation measures that improve the quality of water that flows into rivers and aquifers.

Restoring native grasslands in critical watershed areas can increase the amount of rainfall that runs off into rivers or lakes and can recharge underground aquifers. This can make more water available for municipal water supplies, recreation, and environmental flows that benefit wildlife.

Reducing storm water runoff by planting natural vegetation in upland areas, stream banks and waterways can improve water quality as well as lessen erosion and reduce flooding and sedimentation in reservoirs.

Open space and agricultural lands managed in a conservation plan supports wildlife habitat and an over \$400 billion outdoor recreation industry annually in the U.S.



This guide highlights the important role conservation partnerships play in positive environmental change through the success of watershed improvement projects. Although this guide is specific to NWQI, the opportunities for partnerships outlined in this document can be applied to other NRCS and USDA supported watershed improvement projects.



For more information on NRCS supported watershed improvement and soil health initiatives, please visit www.nrcs.usda.gov.



This guide was developed in partnership by Purdue University, Conservation Technology Information Center and USDA-NRCS

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