

# Conservation Benefits

Putting Value Where it Belongs



October 2010

**TABLE OF CONTENTS**

	Page
<b>Introduction</b> .....	<b>4</b>
<b>Executive Summary</b> .....	<b>4</b>
Drawing a more complete picture of the value of conservation.	
<b>The Current Landscape</b> .....	<b>6</b>
Natural Resources Inventory findings.....	6
Conservation Effects Assessment Project findings.....	7
Getting the Full Picture: Engaging a broader cross-section of society.....	8
New Directions: Taking steps to recognize, define and explain value.....	9
<b>Streams of Value: Making the Case for What We Do</b> .....	<b>11</b>
Ecosystem Services: Source Water.....	12
Ecosystem Services: Wetlands.....	14
Ecosystem Services: Flood Mitigation/Storm Water Management.....	15
Ecosystem Services: Greenhouse Gases.....	16
Ecosystem Services: Conservation Planting Systems.....	17
Ecosystem Services: Farmland Preservation.....	18
Ecosystem Services: Forestry.....	18
Ecosystem Services: Pollination.....	19
Ecosystem Services: Recreation.....	20
Ecosystem Services: On the Way, But Not There.....	20
Local and State Impacts of Conservation Spending.....	21
Value of Conservation Spending: EQIP Example from Maine.....	21
Value of Conservation Spending: Oklahoma Study.....	22
Conservation Spending: Telling the Whole Story of What We Do.....	23
<b>Current Challenges, Future Streams</b> .....	<b>24</b>
Building the case for values using new tools and better communication.....	24
Bundling vs. Stacking an issue to be resolved.....	25
Drivers Needed to Build Markets.....	25
New Streams: Private Sector Drivers Offer Promise.....	25
<b>Challenges and New Streams: The Upshot</b> .....	<b>26</b>
The conservation community can do a better job, and can't afford to wait.	
<b>Case Studies</b> .....	<b>27</b>
Kansas: Urban and Rural Partners in Water Quality.....	28
Ohio River Basin Trading Program Will be Largest.....	28
Conservation Marketplace of Minnesota Partners with Crop Consultants.....	29
New York City Watershed Set the Standard.....	29
Ecosystem Trading Opportunities Advance in Oregon.....	30
North Dakota District Spells Out Cover Crop Values.....	30
Piloting Water Quality Trading on Greater Miami Watershed in Ohio.....	31
Oklahoma Partnership Reduces Environmental Footprint.....	31
<b>Links to Resources for More Information</b> .....	<b>32</b>



## Conservation Benefits: Putting Value Where It Belongs

Efforts to attach economic value to conservation are focusing new attention on the full range of costs and benefits associated with conservation work done across the country. Researchers, government agencies and the private sector are all engaged in various activities designed to tie market values more closely to conservation work. The National Association of Conservation Districts recently released a report on these efforts, “Conservation Benefits: Putting Value Where It Belongs.” The report serves as a survey of efforts to focus on the economic value of conservation practices and systems on America’s private lands. Some key findings emerged from the study. We summarize them here.

### Key Points

- ✓ Many conservation practices and systems produce economic values to the public at large and, in many cases, to landowners. Examples of public values include clean air and water, open spaces and recreational opportunities. Benefits to landowners can include better soil fertility, reduced input costs and better yield return.
- ✓ Public values from conservation can also save human lives, especially in times of severe weather. The importance of coastal wetlands in reducing human deaths from hurricanes, tsunamis and other extreme weather events has been established. Inland, resilient natural systems similarly reduce impacts from floods. One potential impact of climate change is an increase of extreme weather events. Conservation’s role in saving human lives and reducing property loss becomes more important in this scenario.
- ✓ While conservation provides many public values that can be calculated, it can also result in opportunity costs for landowners. Conservation programs can be designed to address opportunity costs by paying landowners for conservation systems and practices that provide public benefits. The Conservation Stewardship Program is an example of this type of program.
- ✓ The “business” of conservation yields many economic benefits that boost local economies. These include multiplier effects from state and federal conservation dollars and salaries paid to conservation staffs. Work done by conservation districts and their partners supports an array of local businesses, which, in turn, provide private-sector employment. Those wages also recirculate in communities.
- ✓ Awareness is building about the economic value of “ecosystem services” – the profits and products provided by natural systems that sustain human lives. New tools are available to

quantify these values for ecosystem services markets. Examples of functioning markets today include wetlands mitigation, source-water protection and water quality trading.

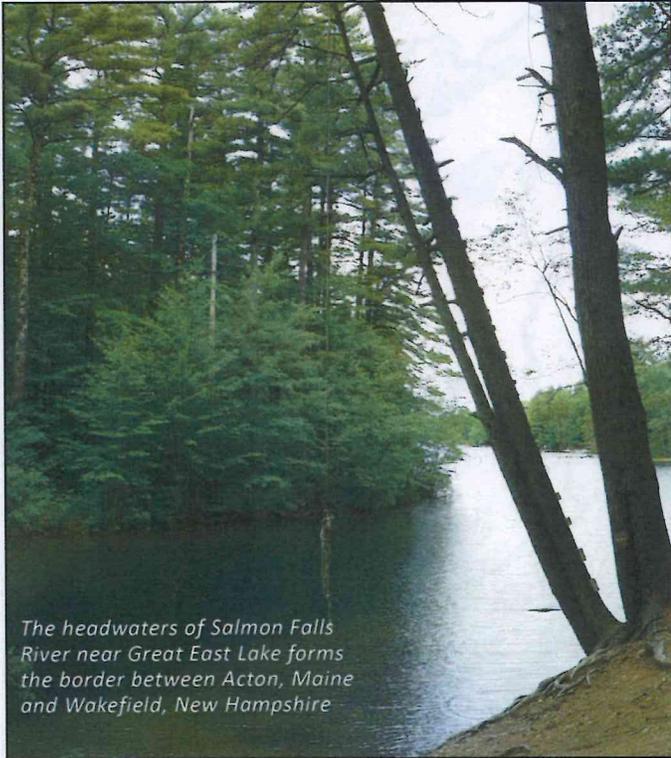
- ✓ Targeting conservation spending to achieve landscape-scale results maximizes ecological benefits and provides better opportunities to attach market value to those efforts if they are accompanied by reliable measuring and verification.
- ✓ While progress is noted in several areas, attaching economic values to conservation work is far from complete. Most experts acknowledge that economists haven't been sufficiently engaged in efforts to identify the value of conservation.

### **Key Needs**

- ✓ The conservation community needs to do a better job describing the full range of values that stems from its work. Communication about the economic and ecological values of conservation is needed to educate the general public and policy-makers. NRCS, for instance, has the capability to show the economic value of programs such as the Environmental Quality Incentives Program on local economies. Telling the whole story is especially important in a challenging economy as decision-makers struggle with funding discretionary programs.
- ✓ Models for quantifying the value of ecosystem services, such as those developed by the Natural Capital Project, are in place. While they need further refinement, many experts agree they are sufficiently developed to be used in valuing ecosystem services.
- ✓ Source-water protection is clearly one of the best current opportunities for the conservation partnership to tie ecosystem services to economic values. Established programs and pilot programs across the country are showing this, as noted in the full report. The conservation partnership is in an excellent position to lead and/or facilitate these programs, working with both public and private entities.
- ✓ Measuring and verification are essential to the success of systems that tie economic values to ecosystem services. USDA is currently focusing on developing tools that accomplish this.
- ✓ Allowing for ecosystem service payments to be stacked will benefit landowners who are managing their lands for multiple ecosystem service benefits. By stacking payments, landowners could be rewarded for a variety of services, such as protecting water quality, sequestering carbon and enhancing wildlife habitat.
- ✓ Conservation programs that reward landowners for protecting or enhancing ecosystem services are an effective way to address the "winners vs. losers" syndrome, in which public benefits sometimes come at the cost of landowners asked to practice good conservation.

The full report, "Conservation Benefits: Putting Value Where It Belongs," is available on the "Reports" section of the National Association of Conservation Districts' web site, [www.nacdnet.org](http://www.nacdnet.org). The 35-page report includes as a survey of the current landscape, case studies and appendices listing sources for more information.

# THE SALMON FALLS WATERSHED COLLABORATIVE



*The headwaters of Salmon Falls River near Great East Lake forms the border between Acton, Maine and Wakefield, New Hampshire*

The Salmon Falls River is fed by an ecologically diverse land area shared by the states of Maine and New Hampshire, and drains into the Great Bay Estuary, a coastal ecosystem of national importance. Approximately 28,000 people (including the population centers of Berwick, Maine and Somersworth, NH) currently rely on either groundwater or surface water in the Salmon Falls watershed to provide clean drinking water. The watershed is threatened by increases in polluted runoff resulting from rapid population growth and conversion of forested land to developed areas.

The Salmon Falls Watershed Collaborative (SFWC) is an action-oriented partnership among local, state and federal partners working to protect and sustain high quality drinking water in the Salmon Falls River watershed. SFWC is not a new organization, but rather a network of professionals and citizens committed to clean drinking water for the benefit of current and future generations. The Piscataqua Region Estuaries Partnership (PREP) acts as a lead convening organization for the Collaborative, as PREP's guiding Management Plan for environmental protection, restoration, and monitoring encompasses the entire Salmon Falls watershed in addition to the entire New Hampshire coastal zone.

The Wells National Estuarine Research Reserve has led the facilitation of the group, the planning of the group's highly successful October 2010 workshop, and the development of a drinking water protection action plan for the Salmon Falls (in progress).

The Salmon Falls Watershed Collaborative is committed to addressing threats to water quality via the following integrated actions:

- Land Conservation and the Protection of Working Farms and Forests
- Improved Land Use Planning Practices and Policies
- Best Management Practices
- Education, Training, and Technical Assistance

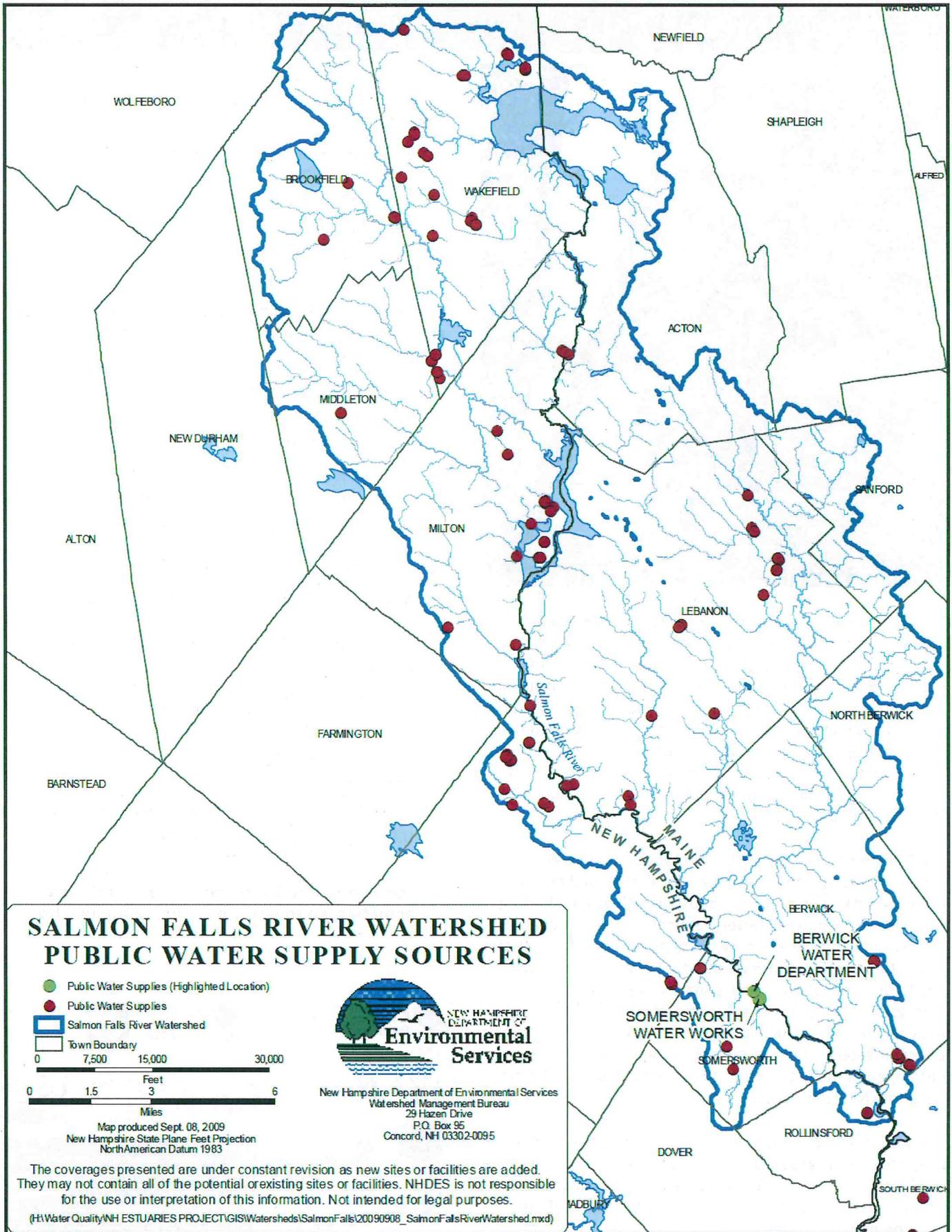
In addition to PREP and the Wells Reserve, the following groups are currently active participants in the Collaborative's Steering Committee:

- Acton Wakefield Watersheds Alliance
- Berwick Water District
- City of Somersworth
- Granite State Rural Water Association
- Maine Center for Disease Control and Prevention
- Maine Non-point Education for Municipal Officials (NEMO)
- Maine Rural Water Association
- New Hampshire DES Drinking Water Source Protection Program
- New Hampshire DES Watershed Assistance Section
- Salter-Mitchell
- South Berwick Water District
- Strafford Regional Planning Commission
- USDA - Forest Service
- USDA – Farm Service Agency
- USDA – Natural Resources Conservation Service
- U.S. Environmental Protection Agency

**For a complete list of participants and current activities, go to [www.prep.unh.edu/sfwc.htm](http://www.prep.unh.edu/sfwc.htm)**



For more information about the Collaborative, or to get involved please contact Derek Sowers, PREP Conservation Program Manager at 603-862-2641 or [Derek.sowers@unh.edu](mailto:Derek.sowers@unh.edu)



## SALMON FALLS RIVER WATERSHED PUBLIC WATER SUPPLY SOURCES

- Public Water Supplies (Highlighted Location)
  - Public Water Supplies
  - Salmon Falls River Watershed
  - Town Boundary
- 0 7,500 15,000 30,000  
 0 1.5 3 6  
 Feet  
 Miles



New Hampshire Department of Environmental Services  
 Watershed Management Bureau  
 29 Hazen Drive  
 P.O. Box 95  
 Concord, NH 03302-0095

Map produced Sept. 08, 2009  
 New Hampshire State Plane Feet Projection  
 North American Datum 1983

The coverages presented are under constant revision as new sites or facilities are added. They may not contain all of the potential or existing sites or facilities. NHDES is not responsible for the use or interpretation of this information. Not intended for legal purposes.

(H:\Water Quality\NH ESTUARIES PROJECT\GIS\Watersheds\Salmon Falls\20090908\_Salmon Falls River Watershed.mxd)



# another perspective

## The Source Water Collaborative (SWC)

There's no more essential factor in our health and the economic vitality of our communities than safe drinking water. However, one of our collective, 21st century challenges is keeping water safe. Modern drinking water treatment plants do an impressive job, but it's an increasingly tough challenge for many communities. Contaminated sources of drinking water put the onus on water treatment plants and increase the expense of removal. Many contaminants can also pass through untreated.

Protecting Sources of Drinking Water: A more effective and cheaper strategy is to protect drinking water sources. But, it's a multi-faceted problem. No Federal, state, or local government has all of the authorities and resources needed to address sources of pollution. This simple realization was the basis for the formation of the Source Water Collaborative – a group of 23 Federal, state, and local organizations who have banded together to synergistically share strategies, ideas, and best practices for protecting ground and surface sources of drinking water.

**The Role of Conservation Districts:** This is where you come in! You possess the know-how and experience to help us convey this message and take the necessary steps. This is not a new concept to NACD members – you're already doing it. Rather, it's about working together even more effectively. NACD members, together with Collaborative members and our local affiliates, can underscore the importance of focusing our efforts on protecting

the source and providing you with the information and tools needed to help make that job even more effective.

Here's a Great Example: A community in Minnesota faced elevated nitrate levels in their groundwater. They formed a nitrogen management team to provide technical assistance and finances. The team included staff from the Natural Resource Conservation Service, the local conservation district, the Minnesota Departments of Agriculture and Health, and the Minnesota Rural Water Association. They replaced aging sewer lines around the public supply well. The team developed a nitrogen management plan and secured city and grant funding to drill a monitoring well up gradient from the study field to monitor levels entering the field. Existing wells were used to set up a monitoring network to determine the source of the nitrates. The study is ongoing, but they've made a great start.

Thank you for the important work you do every day and for partnering with us on this important challenge. Please go to [www.protectdrinkingwater.org](http://www.protectdrinkingwater.org) for additional background information and contacts.

This article was jointly developed by three members of the SWC: the Association of State Drinking Water Administrators; Ground Water Protection Council; and the National Rural Water Association.





# SOURCE WATER COLLABORATIVE

## A Model for Collaboration – Aligning 23 Diverse Members to Protect Sources of Drinking Water

The Source Water Collaborative (SWC) was originally formed in 2006 with 13 groups to combine the strengths and tools of a diverse set of member organizations to act now, to protect drinking water sources for generations to come.

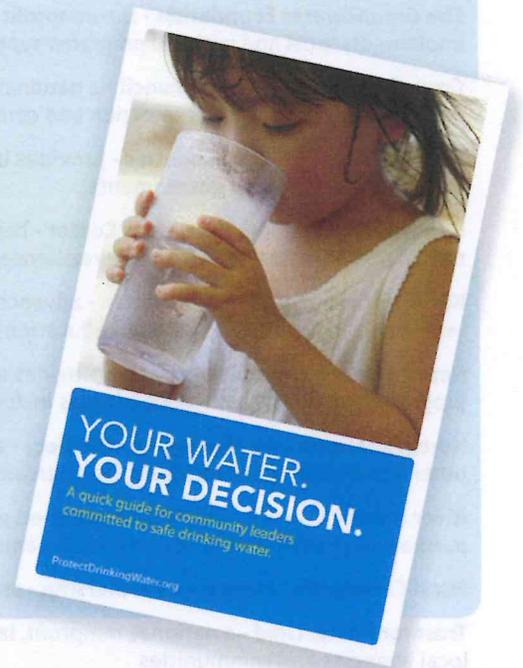
Comprised of federal, state, and local partners, the SWC has come together to further the goals of protecting sources of drinking water - recognizing that resources are extremely limited, authorities are split, and the actors who can actually protect source waters are diffuse. Each Collaborative member recognizes the synergy of coordinated actions and the need for leveraging resources in order to increase the chances for success over each entity going it alone.

For more information about the Source Water Collaborative go to [www.ProtectDrinkingWater.org](http://www.ProtectDrinkingWater.org)

### Start a Conversation with Your Water. Your Decision.

Create a customized brochure with this online tool to talk with local officials about source water in your community. Visit [YourWaterYourDecision.org](http://YourWaterYourDecision.org) to get started.

- Online tool is free and easy to use
- Enables you to include trusted local, state and federal sources relevant to your issues
- Let's you add your logo, contact information, pictures and more
- Offers tips on ways to use the brochure in your community



### Find Allies in Your Area

Visit [www.ProtectDrinkingWater.org](http://www.ProtectDrinkingWater.org) and click on your state under the Find Allies tab to locate and connect with source water professionals in your area.



## Our National Members

**American Planning Association** - assists in the development and planning of land use and water issue projects

**American Water Works Association** - serves as a resource for knowledge, information, and advocacy to improve the quality and supply of water

**Association of Metropolitan Water Agencies** - is the nation's policy-making organization for metropolitan drinking water suppliers; works with Congress and the federal agencies to ensure safe and cost-effective federal drinking water laws and regulations that protect public health

**Association of State Drinking Water Administrators** - is the professional Association serving state drinking water programs; represents Safe Drinking Water Act implementation issues, informs Congress on issues related to drinking water, and disseminates information on federal and state activities

**Association of State and Interstate Water Pollution Control Administrators** - is comprised of officials who are responsible for the implementation of surface water protection programs throughout the nation; serves as a liaison between officials, facilitates communication with the Federal government and promotes public education

**Association of State and Territorial Health Officials** - is the national nonprofit organization representing the state and territorial public health agencies of the United States, the U.S. Territories, and the District of Columbia; members are dedicated to formulating and influencing sound public health policy, and to assuring excellence in state-based public health practice

**Clean Water Fund** - assists organizations and coalitions to campaign for cleaner and safer water, cleaner air, and protection from toxic pollution in our homes, neighborhoods, and workplaces

**Environmental Finance Center Network** - provides state and local officials and small businesses with advisory services including education, publications and training; technical assistance; and analyses on financing alternatives for environmental facilities and services

**The Groundwater Foundation** - is a nonprofit organization that focuses efforts around groundwater education. The foundation implements local and national programs supporting groundwater protection initiatives

**Ground Water Protection Council** - a national association of state ground water and underground injection control agencies whose mission is to promote the protection and conservation of ground water resources for all beneficial uses

**National Association of Counties** - provides legislative research, technical and public affairs assistance, as well as enterprise services to its members, county governments

**National Environmental Services Center** - helps small and rural communities with their drinking water, wastewater, environmental training, solid waste, infrastructure resilience, and utility management needs and to help them find solutions to problems they face

**National Ground Water Association** - advances the expertise of all ground water professionals and furthering ground water awareness and protection through education and outreach

**National Rural Water Association** - provides support services to rural water and wastewater system members; offers training programs and onsite assistance in areas including operation, maintenance, finance, and governance

**North American Lake Management Society** - a non-profit organization focusing on lake management by addressing land use and other watershed issues including land, streams, wetland, and estuaries

**River Network** - works with local watershed protection groups, state river conservation organizations and other conservation partners to protect and restore rivers, streams, lakes, wetlands, and estuaries

**Rural Community Assistance Partnership** - assists rural Americans to improve the quality of life in their communities

**Trust for Public Land** - a national, nonprofit, land conservation organization that provides conservation services to national, state, and local agencies and communities

**USDA Farm Service Agency** - centers on protecting "water" recharge areas; implements drinking water protection measures and the National Water-Quality Assessment Program

**USDA Forest Service** - works with State forestry agencies and many other partners to influence the wise management, protection, and sustainable use of urban and rural natural resources to sustain forests, air and water quality, and people's relationship with nature

**U.S. Environmental Protection Agency** - works to protect human health and the environment; develops and enforces regulations, offers financial assistance, performs environmental research, and sponsors voluntary partnerships and programs

**U.S. Geological Survey** - serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life

**Water Systems Council** - the only national, nonprofit organization solely focused on household wells and small water well systems

For more information about our members go to [http://protectdrinkingwater.org/get\\_help.html](http://protectdrinkingwater.org/get_help.html).