

Regional Advisory Panel Meeting

Brandywine-Christina Healthy Water Fund

Longwood Gardens, Kennett Square, Pa.

May 30, 2014



AGENDA

BRANDYWINE-CHRISTINA HEALTHY WATER FUND FEASIBILITY STUDY

REGIONAL ADVISORY PANEL MEETING

LONGWOOD GARDENS

KENNETT SQUARE, PA.

MAY 30, 2014

10:30 AM TO 1:00 PM

10:30 AM Welcome, Introductions and Vision

10:45 AM Grant Concept

10:55 AM Review of Case Studies

11:10 AM Next Steps in Study Process

11:20 AM Advisory Panel Discussion

Questions for Panel Discussion:

1. What are your general thoughts on the project and the proposed approach?
2. What is missing?
3. What are the best pathways to success?
4. What are the likely barriers that will be encountered and how might they be overcome?

12:30 PM Luncheon

ADVISORY PANEL AND PROJECT TEAM MEMBERS

ADVISORY PANEL MEMBERS

Jennifer Adkins	Partnership for the Delaware Estuary
Janet Bowers, Alternate: Barbara D'Angelo	Chester County Water Resources Authority
Jon Capacasa	USEPA, Region 3
William Covalleski	Victory Brewing
Kevin Donnelly	New Castle Conservation District
John Goodall	Brandywine Conservancy
Richard Gore, Alternate: Robert Tudor	Delaware River Basin Commission
Michael Leff, Alternate: Sarah Low	USDA/Urban Waters Federal Partnership
Robert Molzahn	Water Resources Association of the Delaware River Basin
Collin O'Mara, Alternate: David Small	Delaware DNREC
Blaine Phillips	The Conservation Fund
Dawn Rittenhouse	DuPont
Domenic Rocco, Alternate: Andrew Zemba	Pennsylvania DEP, Southeast Regional Office
Donna Siter	Western Chester County Chamber of Commerce
Christian Strohmaier	Chester County Conservation District
Bernard Sweeney	Stroud Water Research Center

PROJECT TEAM MEMBERS

Brian Boutin	The Nature Conservancy- Delaware Chapter	bboutin@tnc.org
Maria Dziembowska	The Nature Conservancy- Delaware Chapter	mdziembowska@tnc.org
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Martin Wollaston	University of Delaware - Water Resources Agency	martinw@udel.edu

May 30, 2014

Dear Advisory Panel Member:

We would like to invite you to participate in a process that we think will significantly advance the goal of achieving clean water in the Brandywine-Christina watershed.

Under a grant from the William Penn Foundation, The Nature Conservancy and the University of Delaware are collaborating with researchers, public utilities, agricultural extension agents, government agencies, and other non-profits to design a watershed-based funding strategy for the Brandywine-Christina watershed. Water funds, as these strategies are sometimes called, may be new to this area, but the concept is not new. It has been implemented successfully elsewhere in the United States and other countries. The Brandywine-Christina feasibility study is a year-long process concluding in February 2015 funded by the William Penn Foundation as part of its \$35 million investment in the Delaware River Basin.

As part of the study, we are convening a Regional Advisory Panel. The purpose of the panel is to ensure that the study process is well-informed, transparent, and representative of diverse interests in the watershed. Because of your role in the watershed, we would like you to serve on the advisory panel. Your input will help the team develop a long-term financial mechanism to ensure a lasting and sustainable investment in health of the Brandywine-Christina watershed.

As a panel member, we would ask you to attend two meetings in 2014 and assist us by commenting on our process, methodology and findings. We have scheduled the first meeting for Friday, May 30, 2014 from 10:30 AM to 1:00 PM at Longwood Gardens, Kennett Square, Pa. A luncheon will be provided.

We hope you will join us to help make this process a catalyst for meaningful and long-term change in the Brandywine-Christina watershed.

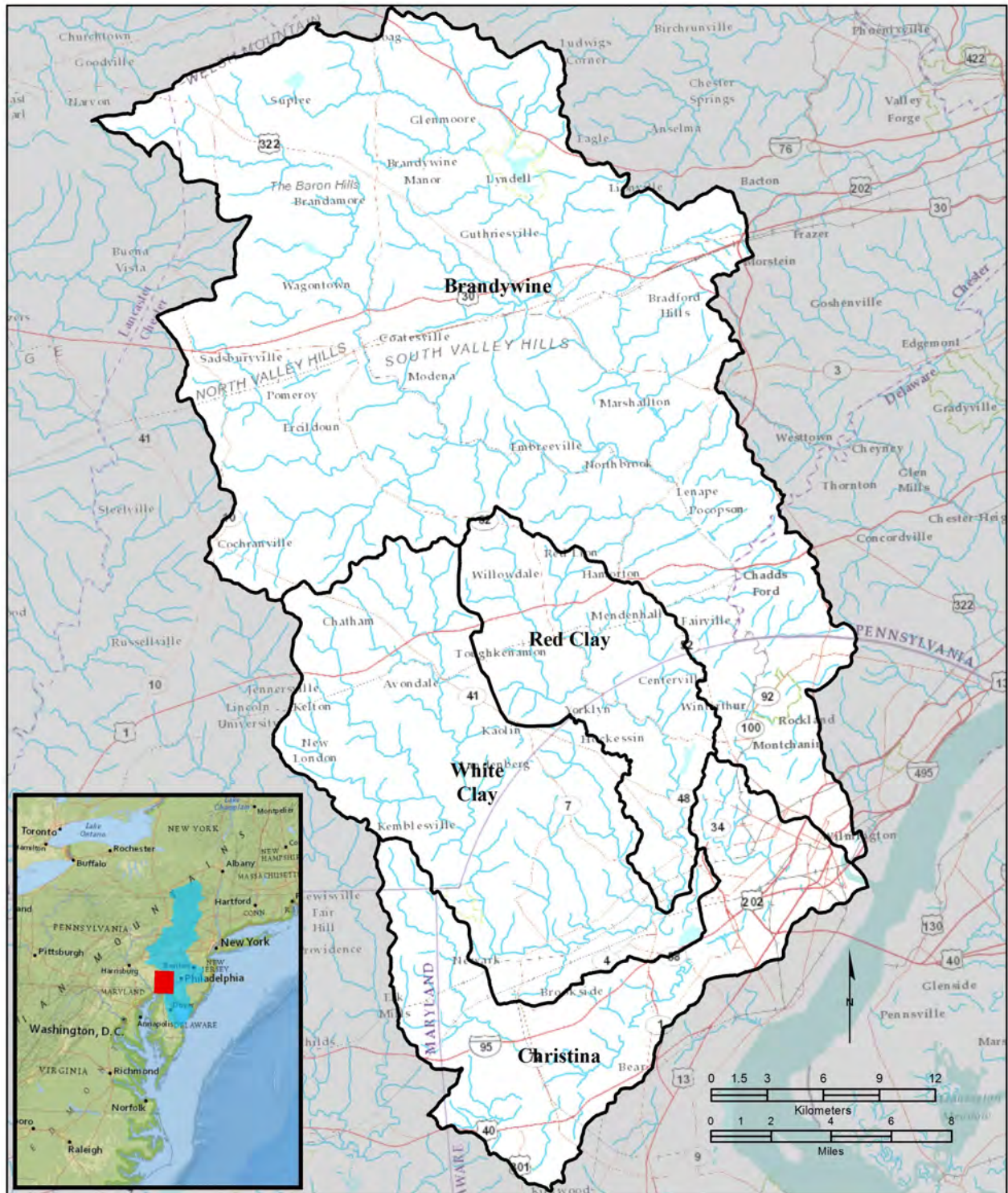
Sincerely,



Richard Jones, Jr.
State Director
The Nature Conservancy—Delaware Chapter



Gerald J. Kauffman
Director
University of Delaware—Water Resources Agency



The Brandywine-Christina Watershed

About the watershed

The Brandywine-Christina watershed is the second largest watershed in the Delaware Estuary, and is one of only two watersheds in the 13,000 square mile Delaware Basin that crosses state boundaries. The watershed supplies 100 million gallons per day of drinking water to over half a million people in both states including over 60% of Delaware’s drinking water. However, legacy pollutants, excess nutrients, failing septic systems, and urban runoff have rendered over half of the streams, rivers, and lakes in the watershed unsafe for swimming and fishing.

Economic value of the watershed

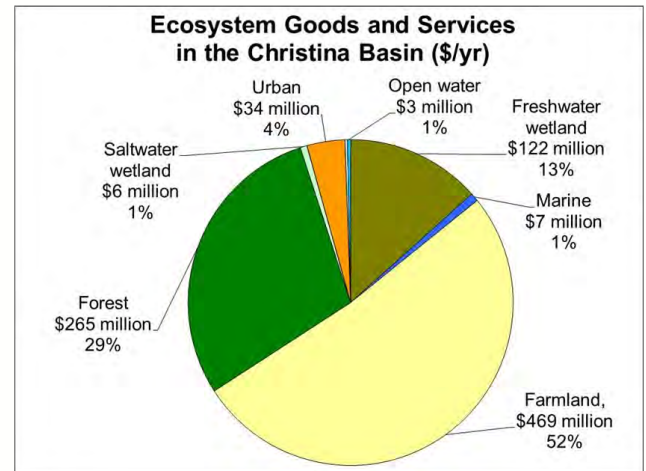
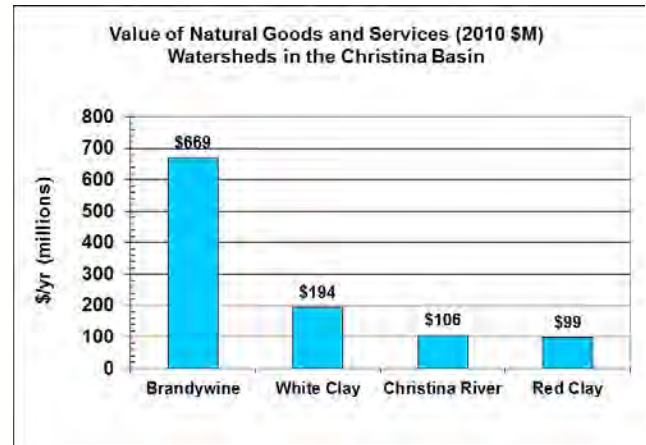
The Brandywine-Christina watershed is an economic engine for the region. Keeping the water clean and the watershed healthy ensures that the resources and character sustaining this value remain viable in the long-term.

The watershed provides:

\$1.5 billion in direct economic activity
(e.g., water supply, fish and wildlife, recreation, agriculture, etc.)

\$900 million in ecosystem goods and services (e.g. the value of habitat such as wetlands and forest), representing a net present value of \$29.5 billion over 100 years

90,000 jobs, directly and indirectly, accounting for \$3 billion in annual wages



Sector	Direct Jobs	Direct Wages (x\$1000)	Indirect Jobs	Indirect Wages (x\$1000)
Brandywine	23,208	1,205,450	27,850	964,360
Red Clay Creek	4,361	216,525	5,233	173,220
White Clay Creek	11,399	548,742	13,679	438,994
Christina River	15,728	732,533	18,873	586,026
CHRISTINA BASIN	54,696	2,703,250	65,636	2,162,600

WATER FUNDS—AN OVERVIEW

Investing in Nature and Clean Water

Water Funds are financial tools that provide a sustainable method for conservation of watersheds. The funds make proactive investments in watersheds to help businesses and governments lower treatment costs, address stormwater regulations, and reduce the effects of flooding and drought. Funding sources can include large water users (e.g. water utilities and industries), regulated municipalities, conservation organizations, and private investors. Revenue from funds can finance a variety of projects, such as land protection, riparian buffer restoration, and livestock management.

Water Funds invest in conservation to:

- Improve or maintain water quality
- Maintain regular stream flows
- Foster ecosystem diversity
- Enhance human well-being and quality of life

The Water Fund model promotes investment in watersheds by those who benefit from their goods and services. Funding mechanisms can vary widely, and can include corporate contributions, user fees, polluter fees, and government funding, among others (see table on right).

How It Works

Water Funds use a multi-institutional governing board that administers a financial structure to establish a long-term, sustainable source of funding to protect and restore watersheds. Public and private partnerships are established early in the process to ensure the needs and desires of a broad range of stakeholders are well represented. The governing board, generally com-

KEY FEATURES OF A WATER FUND

- Ecosystem services basis
- Sustainable funding mechanisms
- Transparent financial management
- Multi-stakeholder partnerships

posed of entities that contribute to the fund or are influential in the watershed, guide funding to maximize return—environmental, economic and social—on investment in the watershed. Water Funds represent a partnership to promote sustained and meaningful watershed health.

WATER FUND BENEFITS

Nature
Effective habitat conservation
Increase connectivity
Reduce stressor load
Increase resiliency
Community
Sense of stewardship
Spiritual value
Reduce disaster risk
Alternative income sources
Government
Regulation compliance
Reduce infrastructure costs
Stakeholder support
Reduce budgetary commitments
Business
Increase job opportunities
Improve agricultural productivity
Reduce operating costs
Greater public support

POTENTIAL FUNDING MECHANISMS

Voluntary check-off (utility bill or taxes)
Watershed services marketplace/auction
Lottery proceeds
Incentive funding for priority sites
Water use charge
Discharger user charge
Surcharge on water withdrawals
Budget allocation (utility, municipal authority, local government)
Watershed protection fee (utility bill or tax bill)
Corporate sponsorships
Private, socially responsible investments
Sales tax
Nutrient trading
Federal cost sharing

BRANDYWINE-CHRISTINA HEALTHY WATER FUND

The Vision: To maintain and improve the health of the Brandywine-Christina watershed for the benefit of people who rely on it and plants and animals who live in the watershed.

The Strategy: To implement a funding mechanism and science-based investment protocol to restore the Brandywine-Christina watershed to fishable, swimmable, and potable status by 2025.

The Project: Under a grant from the William Penn Foundation, The Nature Conservancy in Delaware (TNC) and the University of Delaware (UD) are conducting a feasibility study on the implementation of a “water fund” for the Brandywine-Christina watershed. At its most basic level, a water fund is a mechanism for downstream beneficiaries to invest in upstream conservation measures designed to secure freshwater resources – both quality and quantity – for man and nature far into the future.

The Target Watershed: The Brandywine-Christina is an integral part of the larger Delaware River Basin, and is 565 sq. mi. with $\frac{2}{3}$ of the watershed in Pennsylvania. The watershed spans three states, five counties and over 60 townships, boroughs, and cities and includes the Brandywine, Red Clay, and White Clay Creeks, and the Christina River watersheds. It provides many ecological and natural functions and provides over 100 mgd of drinking water for over half a million people. The Pennsylvania portion of the watershed is characterized by open space, including agricultural land and forests, while the more urban, southerly portion in Delaware tends to have more developed land. Only a very small piece of the watershed lies in Maryland.

The Brandywine-Christina Water Fund: Legacy pollutants, nutrient overloads, failing septic systems and urban runoff have rendered the great majority of the streams, rivers and lakes in this watershed unsafe for swimming and fishing, let alone drinking.

In recent years, the Christina Basin Clean Water Partnership has funded projects to restore the waters of the watershed by piecing together grants. Lack of consistent and stable financing hampers progress in restoring the watershed. UD and TNC propose to develop a new business model to restore the waters of the watershed. A dependable funding stream will allow for strategic budgeting of restoration projects and financing for conservation needs in the watershed to meet the water quality goals by 2025.

TNC and UD are working together to assess the feasibility of a watershed-based funding strategy in the Brandywine-Christina watershed. The study is a year-long process concluding in February 2015 and includes a literature review, technical analysis, a designated advisory panel, stakeholder input, and a final report with detailed recommendations. The next steps include developing a long-term financial mechanism to ensure a lasting and sustainable watershed-based investment mechanism in the Brandywine-Christina watershed.

Summary of Select Case Studies

Program Name	Location	Acres Enrolled/Protected	Funding Source	Revenue
N. Everglades & Estuaries PES Program	Lake Okeechobee watershed, FL	171,000 acre-feet of storage created	Water Management District budget allocation	\$46 million committed through 2016
Edwards Aquifer Protection Program	San Antonio, TX	116,683 acres	1/8 cent sales tax approved	\$225 million since 2000
Upper Neuse Clean Water Initiative	Raleigh and Durham, NC	6,170 acres, 63 miles of stream	Raleigh: 1 cent per 100 gallons per month in water rate; Durham: 1 cent per cubic foot in water rate	\$17.7 million since 2005
New York City Source Water Protection Program	Catskill, NY (East Branch/West Branch Delaware River)	156,690 acres acquired or under easement; 93% of farms with Whole Farm Plans	NYC-DEP budget allocation	\$186 million to date; \$300 million committed 2007-2017
Eugene Water and Electric Board VIP	Eugene, OR (Mackenzie River)	N/A	1% utility rate increase to fund initial program	\$200,000 to \$250,000 annually anticipated
Denver Forest to Faucet Partnership	Denver, CO (South Platte River)	4,700 acres treated	14 cents per household per month or 4 cents per 1,000 gallons of water withdrawn	\$16.5 million from USFS; \$16.5 million from Denver Water
Truckee River Fund	Lake Tahoe, CA/ Reno, NV	101 watershed projects completed	2% of utility annual budget	\$9,200,000 since 2004
Central Arkansas Water	Near Little Rock, AR	1800 acres	Utility rate includes watershed protection fee based on meter size; averages 45 cents per month	Fee raises approximately \$1 million per year
Saugatuck River Watershed Partnership	Fairfield County, CT	Opened up 7 miles of river to fish passage	Annual contributions of \$5000 from larger municipalities; \$1000 from smaller municipalities	\$306,624 in contributions (municipal, private individual and foundation); \$243,849 in federal grants
Rhode Island Water Resources Board	Providence, RI (Narragansett Bay)	2,410 acres protected	Initial state budget allocation; 10 cents per 1,000 gallons surcharge	\$18,343,382 allocated for source water protection since 1991
New Jersey Water Supply Authority	Raritan and Manasquan River basins; Delaware & Raritan Canal basin, NJ	4,000 acres protected	Source water protection component to water rate; \$24 per million gallons	\$112,536 for 2014
Portland Water District	Portland, ME	1,500 acres	Budget allocation	\$175,000 annual allocation; \$500,000 in NRCS grant, \$500,000 in-kind match
Fondo para la Proteccion del Agua (FONAG)	Quito, Ecuador	1.2 million acres	Voluntary; 2 % of Quito water utility revenue	\$8 million in fund
Agua Por la Vida	East Cauca Valley, Colombia	19,000 acres	Voluntary contributions from water users	\$3,891,340 through Dec 2013; \$4,700,000 with matching funds through Dec 2010
Conserve to Enhance (C2E)	Tucson, AZ	N/A	Donation of water conserve savings and voluntary check-off on utility bill.	\$40,000 since 2011

SIX COMMON THEMES OF THE WATER FUND CASE STUDIES

1. Depend on strong public-private partnerships.
2. Maximize program funds by leveraging state, federal, and private foundation funding.
3. Base program activities on a conservation/strategic plan.
4. Build upon efforts of two essential sets of people within the community – champions and carriers/stewards.
5. Start out with seed money allocated to the program and matured into defining a funding mechanism.
6. Adapt to the unique setting in the watershed.

Conserve to Enhance (C2E)

Location:

Tucson, AZ

Population:

775,000 people

Revenue and rate:

\$40,000; donation amounts vary

Watershed:

Arizona and Colorado River Basin

Acres enrolled/protected:

3 million gallons of water conserved

Partners:

- Tucson Water
- University of Arizona Water Resources Research Center
- Sonoran Institute
- Watershed Management Group

Description of the program:

The Tucson Conserve to Enhance (C2E) program links water conservation efforts with watershed restoration and enhancement to ensure that water conservation will translate into benefits for the environment. Participants conserve water, track the money saved through water conservation practices, and then donate their savings to C2E. The funds generated by program participants are overseen by a community advisory board, which chooses the beneficiary river or wash enhancement projects within the Tucson community. Funds donated will go directly to the environment, to protect and restore desert rivers, create instream flows needed for a healthy ecosystem, and increase groundwater levels. Donations have come directly from participant water savings and the “Conserve to Enhance” check box on Tucson Water monthly bills.

History of the program:

The program was initiated in Tucson in 2011. The Tucson Conserve to Enhance Program is a collaborative program managed and developed by the Sonoran Institute, the University of Arizona’s Water Resources Research Center, and Watershed Management Group. Their research outlines the difficulty in securing water for riparian restoration projects and reviews some current efforts to link individual water users to environmental enhancement.

Current status:

The program funded projects in 2013 and currently has a request for proposals open. This is one of three Conserve to Enhance projects using this structure developed by the University of Arizona’s WRRC.

Fondo para la Proteccion del Aqua (FONAG)

Location:

Quito, Ecuador

Population:

Over 2 million

Revenue and rate:

Endowment fund had \$8,000,000 in 2010; voluntary donations and 2 percent of water utility revenue.

Watershed:

Guayllabamba River Basin

Acres enrolled/ protected:

1.2 million acres

Partners:

- City of Quito
- Quito Water Utility
- The Nature Conservancy
- Fundacion Antiasana
- Other water users

Description of the program:

FONAG is an endowment fund that receives money from the government, public utilities, electric companies, private companies and non-government organizations. An independent financial manager invests the money and the interest is used to fund activities for watershed protection. FONAG is governed by a board of directors comprised of water users that have contributed to the fund. The board approves the annual operational plan of FONAG and approves reports, conducts audits and makes reforms to bylaws. FONAG also has a Technical Secretariat that acts as the executive director of the water fund.

The goals of FONAG are: to improve and maintain water quality and quantity for downstream users; to maintain regular flows of water throughout the year; to maintain and enhance natural ecosystem biodiversity; and to maintain and improve human well-being and quality of life for upstream human communities.

History of the program:

Almost 80 percent of Quito's water comes from three protected areas upstream. The major threat to this daily, clean water supply is land conversion in and around the protected areas. People living in the watershed depend on natural resources and water from the region for their livelihoods. Available productive land is diminishing as soils lose nutrients forcing families to move up in the watershed towards the natural ecosystems. These ecosystems are the key hydrologic regulators of the system. Conversion means diminishing water services to people downstream, but keeping watershed communities out is unjust and unsustainable. This complex management problem required time and money that municipal authorities of Quito did not have.

About 20 years ago, TNC and a local partner, Fundación Antisana, approached the Mayor of Quito with water flow studies. They wanted to demonstrate to the mayor that protecting the watersheds that supply water to Quito was crucial if citizens were to continue to enjoy the same water quality and quantity in the future. The mayor asked TNC to design a mechanism to link the citizens of Quito to their water source. The mayor's support helped the partners obtain the support of the Quito municipality and the Quito water company.

The Quito water fund was created with an initial investment of \$ 1,000 from TNC and \$20,000 from the Quito water company. Other water users have since joined FONAG. Since 2000, FONAG has leveraged its assets to generate an additional \$7 million for conservation work.

Current status:

Before 2010, all contributions were voluntary. In 2010, the Quito water utility passed a bylaw committing to pay 2 percent of revenue into the fund. The main beneficiaries of the activities are the local communities that live close to the water sources. They receive permanent support from FONAG through different programs, from environmental education to community-based projects that invest in rural livelihoods.

New York City Source Water Protection Program

Location:

Catskills/ Delaware Watershed, NY

Population:

90 percent of water supply for 9 million people

Revenue and rate:

\$186 million in last 20 years; NYC DEP has committed \$300 million from 2007 to 2017

Watershed:

Catskills/Delaware

Acres enrolled/ protected:

156,690 acres acquired or under easement as of 2011

Partners:

- City of New York
- NY Department of Environmental Protection
- US EPA
- USDA
- NRCS
- NRDC

Description of the program:

The program focuses on acquiring land and conservation easements, upgrading wastewater treatment plants and water supply facilities, and working with landowners to adopt best management practices that reduce pollutants in stormwater runoff. The city is also reducing turbidity in its reservoirs by erecting screens, building baffles, and using other technology to help settle sediments.

The agricultural land management aspects of the program are administered by the Watershed Agricultural Council (WAC). WAC applies strategic watershed management approaches that benefit the general public through incentivized, on-site practices performed on private lands. As of 2014, it has enrolled 93 percent of the farmers in whole farm plans. The WAC credits its success to voluntary participation, local control of the program, and farm plans implemented with funding from the New York City Department of Environmental Protection (NYC-DEP), U.S.D.A, U.S. Forest Service and other funding sources. These management plans cover land in addition to that acquired and under easement.

History of the program:

In January 1997, the City of New York, through the NYC-DEP, entered into a Watershed Memorandum of Agreement with some 76 signatories, including the EPA, the State of New York, many local governments in its watersheds, and a number of environmental and public interest groups. This agreement established a program for the Catskills, Delaware, and Croton watersheds, including adoption of new watershed regulations, environmental and economic partnerships with watershed communities, and a watershed land acquisition program. Funding for these programs was expected to come from utility user fees, bonding, and state and federal funding sources. The city chose to pursue this approach in lieu of building an \$8 billion filtration plant, which would also cost millions of dollars each year to operate.

Over the last 15 years, NYC-DEP and its partner agencies and organizations have developed and implemented an aggressive and comprehensive watershed monitoring and protection program that has not only maintained but enhanced the high quality of Catskill/Delaware water. The program has enabled the city to secure a series of waivers from filtration requirements under the Safe Drinking Water Act from 1993 through 2017.

Current status:

In addition to its source water protection plan, the city has embarked on other initiatives to address water quality issues. Last year, the city deferred a \$3.4 billion dollar mandate for handling combined sewer overflows by replacing costly gray infrastructure projects with green infrastructure projects. These initiatives have helped protect more than 1.2 million acres of land with total investments estimated at \$1.5 billion.

Rhode Island Water Resources Board

Location:

RI and the Providence Metro Area

Population:

Watershed supplies 1.02 million people with drinking water in RI

Revenue and rate:

10 cents/1,000 gallons surcharge on water supplies to disburse \$18,343,382 for source water protection programs.

Watershed

Narragansett Bay, 1,650 square miles, 60% of the watershed is in Rhode Island

Acres Enrolled/Protected:

2,410 acres through land acquisition or purchase of development rights

Partners:

- Dept. of Environmental Management
- Dept. of Administration
- Dept. of Health
- Division of Planning
- RI Public Utilities Commission
- RI Agricultural Council
- RI Environmental Council
- Professional Geologist
- Professional Water Supply Engineer
- General Public to develop and refine policies affecting water resources.

Description of the program:

This popular program is often referred to by municipal water suppliers as the “penny per hundred” program. For every one hundred gallons of water delivered (by major water suppliers) one cent is collected and set aside for land acquisition or for water quality improvement projects to protect the quality of drinking water supplies. Each water supplier participating in this program must spend a minimum of 55% for land acquisition – the primary protection activity. Examples of other projects that contribute to improved water quality include nonpoint source pollution or run-off prevention measures, treatment facility upgrades, water main cleaning or relining, and even the purchase of water conservation kits or watershed signage. The rate is 10 cents/1,000 gallons surcharge on water supplies to disburse \$18,343,382 for source water protection programs. Of this total, \$13,614,265 was allocated to protect 2,410 watershed acres through land acquisition or purchase of development rights, \$244,254 went to develop watershed protection plans, and \$4,484,863 was spent on 49 water quality improvement projects.

History of the program:

Since 1991, the RI Water Resources Board and Board Corporate have jointly administered a state surcharge levied on customers located in major water supply districts. The results reflect significant progress toward protecting the quality of the state’s drinking water resources investing 78% of the total funds for land protection. In November of 2002, the state issued approximately \$7.2 million in new bonds for Phase III of this successful program which ran through February 2006. In 2004, \$1.14 million (61%) protected 144 acres of watershed land through land acquisition or purchase of development rights. An additional \$740,000 funded eight water quality improvement projects for six water supply districts.

Current status:

The surcharge levied on every gallon of water used by customers (with the exception of senior citizens and commercial agricultural users) is collected by the state and deposited into the General Fund and a Corporate Trust account. The money is used to offset costs of new infrastructure, to pay down debt service on bonds and to cover a proportion of agency operations associated with supply functions. By law a percentage of the surcharge is retained by the water suppliers to administer the water supply systems management planning program, 36.1% for watershed protection and 57% for the state general fund-debt service.

Truckee River Fund

Location:

Lake Tahoe, CA and Reno, NV

Population:

Supplies 700,000 people with drinking water in Lake Tahoe, CA and Reno, NV.

Revenue and rate:

Established by an initial \$340,000 contribution by the Truckee Meadows Water Authority (TMWA) and replenished by a contribution of 2% of the annual budget.

Watershed:

Truckee River, 3,060 sq. mi.

Acreage Enrolled/Protected:

101 watershed restoration projects

Partners:

- Desert Research Institute
- The Nature Conservancy
- Keep Truckee Meadows Beautiful
- Nevada Land Conservancy
- Washoe County Sheriff's Office
- Nevada Schools of Higher Education
- Truckee River Watershed Council
- Friends of Nevada Wilderness
- City of Reno
- City of Sparks
- Nevada Department of Wildlife
- Pyramid Lake Paiute Tribe
- Tahoe Regional Planning Authority

Description of the program:

The Truckee River Fund was created to fund projects that protect and enhance water quality and the watershed. The Truckee River's source is Lake Tahoe and is the primary water supply for many communities including Reno-Sparks. The river is increasingly threatened by aquatic invasive species, stormwater runoff, nonpoint source pollution and erosion from recent wildfires. The river is an important recreational asset for Northern Nevada for kayaking, fishing, rafting and swimming.

The Fund "shall be used exclusively for projects that enhance water quality and water resources of the Truckee River, or its watershed". The Fund provides TMWA with a vehicle to respond to outside groups and organizations involved in improving the health of the Truckee River System and watershed, thus benefiting the primary water source for the community and TMWA customers. The fund is held at the Community Foundation of Western Nevada, a 501(c)3 non-profit organization.

History of program:

The Truckee Meadows Water Authority (TMWA) established the Truckee River Fund in 2004. Until then, no coordinated regional effort existed to foster ideas, research, educational outreach and projects that would protect the Truckee River and water quality. But, when TMWA was formed in 2001 as a public utility, an opportunity arose to create a program to respond to this need. The TMWA Board of Directors created a nonprofit, tax exempt 501(c)3 program to fund projects to improve or protect Truckee River water quality. In 2005, the Nevada Attorney General concluded that TMWA could legally make "charitable contributions" to the Truckee River Fund as long as the money would be spent on projects within the utility's jurisdiction, such as protecting its water source. A 2005 audit by the Nevada State Bureau of Consumer Protection stated the creation of the Fund was "Appropriate to ensure the continued access and use of TMWA's primary water supply commodity."

Current status:

TMWA is charged with the task of supplying customers with water that is safe, clean and meets all EPA Standards. All Fund Advisor and TMWA Board meetings are publicized in advance and open to the public. The fund gives TMWA a mechanism to secure matching funds to complete projects at a much lower cost than if TMWA was paying the entire amount. All projects are recommended for funding by the Truckee River Fund advisors through an open and competitive Request for Proposal process and reviewed by the TMWA Board of Directors at a public meeting for final approval. The Truckee River Fund utilizes an Advisory Committee of nine members that equally represents and is appointed by the three political entities in the area: Washoe County, City of Reno, and City of Sparks. To date, the Truckee River Fund has distributed \$5.2 million to fund 101 watershed restoration projects.

Upper Neuse Clean Water Initiative

Location:

Raleigh and Durham, NC

Population:

700,000 people

Revenue and rate:

1 cent/100 gallons “watershed protection fee” in Raleigh resulting in \$1.8 million a year; 1 cent per cubic foot in Durham.

Watershed:

Upper Neuse River

Acres enrolled/protected:

6,170 acres, 63 miles of stream protected through April 2012

Partners:

- Conservation Trust for North Carolina
- Ellerbe Creek Watershed Association
- Eno River Association
- Tar River Land Conservancy
- Triangle Greenways Council
- Triangle Land Conservancy
- Trust for Public Land
- City of Raleigh
- City of Durham
- Wake County
- Orange County
- Granville County
- Franklin County
- Person County and other local, state and federal

Description of the program:

The program conserves priority forests, wetlands, floodplains and other vegetated areas that serve as natural “water treatment facilities.” The partners adopted the approach as a cost-effective way to preserve the high quality of water for drinking water supply. Identified secondary benefits include flood prevention and habitat protection.

The state-funded North Carolina Clean Water Management Trust Fund has provided significant support, committing more than \$11 million in grants to UNCWI projects to purchase land and conservation easements worth more than \$59 million. A 3-year US Endowment for Forestry and Communities grant is being used to help UNCWI partners promote and maintain sustainable forest practices on strategically located lands in the basin to reduce pollutants in stormwater runoff. The project will help landowners continue generating timber revenue, even as they help to ensure downstream water supplies are protected.

Pepsi Bottling Venture’s partnership with UNCWI supports the emerging North Carolina Youth Conservation Corps (NCYCC) program in the Upper Neuse basin. The NCYCC will provide paid summer jobs for 16-24 year olds, with the aim of teaching youth valuable work and life development skills through hands-on outdoor work on high priority conservation projects.

History of the program:

The UNCWI was created in response to growing development pressure on the region’s water quality and quantity. Raleigh received estimates of up to \$150 million to install a new water filtration system if impairment in the water supply exceeded certain levels. In 2005, Raleigh Mayor Charles Meeker, with City Council support, established the Upper Neuse Clean Water Initiative. The Council made financial commitments to drinking water protection with annual allocations, ranging from \$500,000 to \$1.5 million, for watershed conservation.

UNCWI completed a conservation plan with the oversight of a technical team of agency and resource experts and input of stakeholders from across the basin. The plan prioritizes parcels based on their ability to help protect water quality if conserved. It helped illustrate the hydrologic connection between upstream communities that impact water quality and downstream communities that use the water supply. The partners promoted a “beneficiary pays” principle to promote watershed protection, highlighting the fact that watershed protection costs less than watershed restoration and water treatment.

Current status:

In 2011, Raleigh established a “watershed protection fee” of 1 cent per 100 gallons, included in customers’ monthly water bills. The fee costs homeowners an average of 40 cents per month and generates about \$1.8 million annually for land protection to protect drinking water quality. Since 2005, Raleigh has allocated on average more than \$1 million per year for land conservation in the Upper Neuse. Nearby Durham instituted a fee for the same purpose (1 cent per cubic foot).