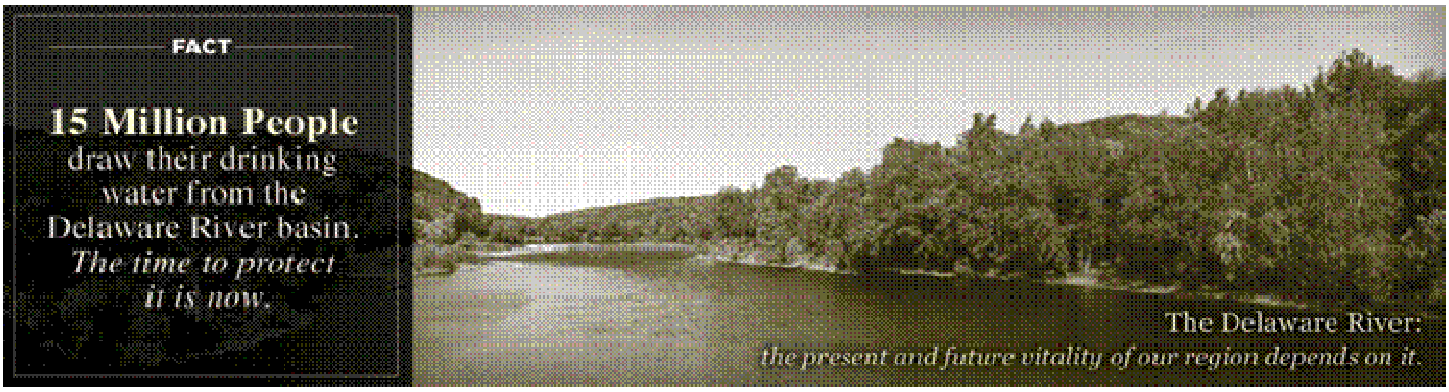


Delaware River Basin Forum
March 10, 2011
Event Summary

Sponsored by

Sourcewater COLLABORATIVE

Locally Sponsored by

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

Delaware River Basin Commission
DELAWARE • NEW JERSEY
PENNSYLVANIA • NEW YORK
UNITED STATES OF AMERICA

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF NEW YORK
DEPARTMENT OF HEALTH

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

The Delaware River Basin

The Delaware River Basin rises in the Catskill Mountains and courses 330 miles and through 13,500 square miles of rural and urban landscapes to the Atlantic Ocean. Although the watershed comprises less than one-half of one per cent of the land area of the continental US, nearly 1,000 community water systems – using surface water or relying on ground water – depend on the water resources of the Delaware Basin. In addition to domestic water supply, there are a variety of water uses in the Basin – for recreation, fisheries and wildlife, energy, industry, navigation – and the watershed is characterized by diverse land uses – from forests to agriculture to urban landscapes. The way we use our land and water now, and influences such as climate change and population growth, affect the quality and quantity of our water resources today and for the future.

The Delaware River Basin Forum

Protecting drinking water sources requires the ongoing efforts of many. Because so many agencies and organizations have active roles in the watershed, there must be collaboration between all of these groups. A one-day, basin-wide event was held to identify and address issues impacting water resource sustainability in an effort to bring these groups together for collaborative action.

The Forum, sponsored by the Source Water Collaborative, in conjunction with the States of Delaware, New Jersey, New York, and Pennsylvania, the United States Environmental Protection Agency, and the Delaware River Basin Commission, used modern video communication technology, which allowed for simultaneous participation at six locations throughout the Basin, as well as a worldwide internet broadcast. Additional Forum partners included private and municipal water suppliers, watershed- and water resource-focused organizations, environmental advocacy groups and academic institutions.

A central morning session in Philadelphia, broadcasted to regional sites in the four participating states, featured speakers who addressed the current and projected water demands within the Basin and factors affecting sustainability. Afternoon sessions at the regional locations focused upon local issues, providing local audiences with speakers on topics of local interest and inviting attendees (including private citizens, water operators, municipal and public works officials and representatives of various environmental and conservation groups) to converse.

Forum Goals

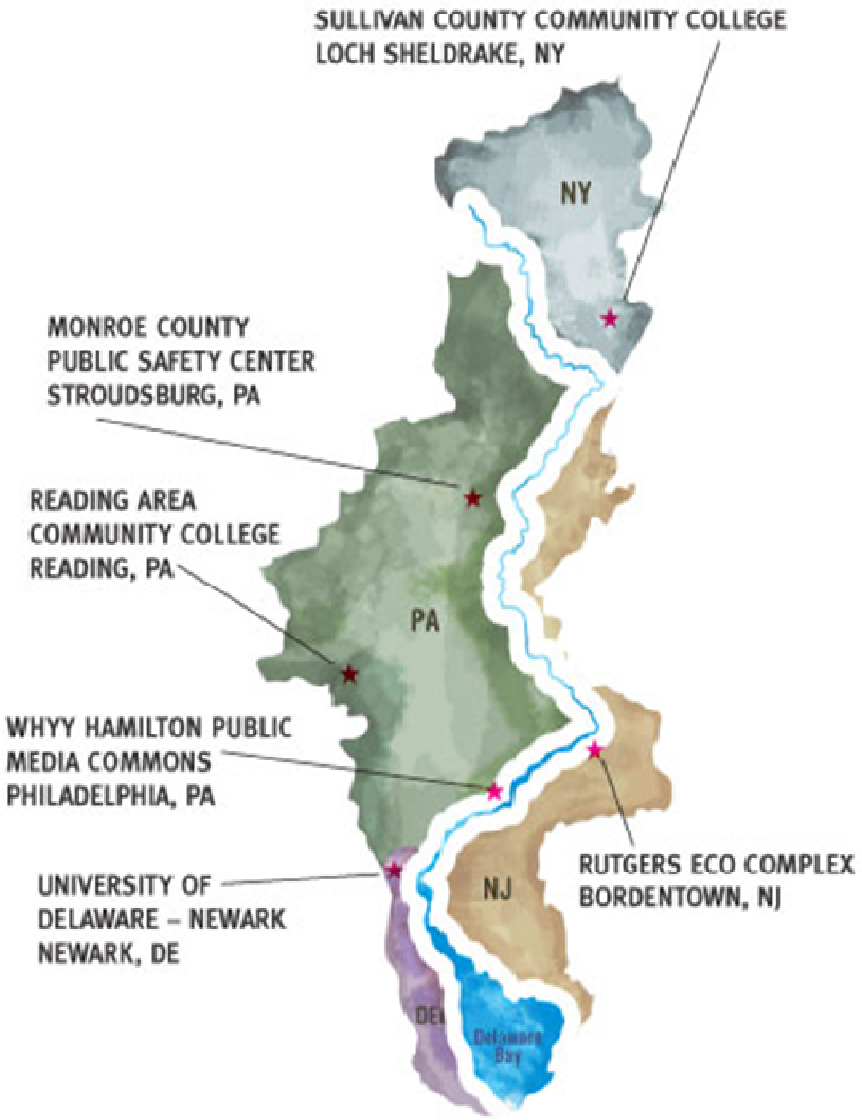
The goal of the Delaware River Basin Forum was to bring together the public, private and nonprofit entities that have a stake in clean and safe plentiful drinking water and can do something about it at the local level to develop a collaborative approach to protecting drinking water. The agenda consisted of both regional and local topics, such as:

- Water Use
- Regional Impacts of Climate Change
- Strategies for Water Resource Protection
- Tools and Tactics for Local Protection

Forum Outcome

The primary objectives of the Forum were accomplished, however a much larger, long-term coordinated collaboration among the stakeholders of the Delaware River Basin is needed to protect sources of drinking water for the 15 million people using the Delaware Basin as a drinking water source.

The Forum objectives included: a heightened awareness of issues and decisions affecting the water resource; connecting basin-wide and local players, issues and needs; creating a basic framework for ongoing collaboration among officials, planners, water suppliers and becoming more aware of the stakeholders' need for action, leadership and information sharing – more and better communication.



> *"No one leader or group can solve our problems alone in protecting drinking water… strong partnerships are critical."*
>
> ***Lisa P Jackson, Administrator, Environmental Protection Agency***
> ***March 10, 2011***

Central Location: Philadelphia, Pennsylvania
WHYY Hamilton Public Media Commons

The Philadelphia venue was the central location from where all sites were linked. Using internet connectivity, each of the 5 other regional locations were able to join this central location to participate in the discussions. Later in the morning and afternoon, the Philadelphia attendees met for a more locally focused discussion about surface and groundwater protection, similar to the local discussions held at the regional locations as well.

Lisa P. Jackson, Administrator
US Environmental Protection Agency

Conference Agenda

Opening Remarks
John Doran, Chief Engineer, WHYY Inc.
Shawn M. Garvin, Regional Administrator, Region 3,
US Environmental Protection Agency
Lisa P. Jackson, Administrator,
US Environmental Protection Agency (prerecorded)

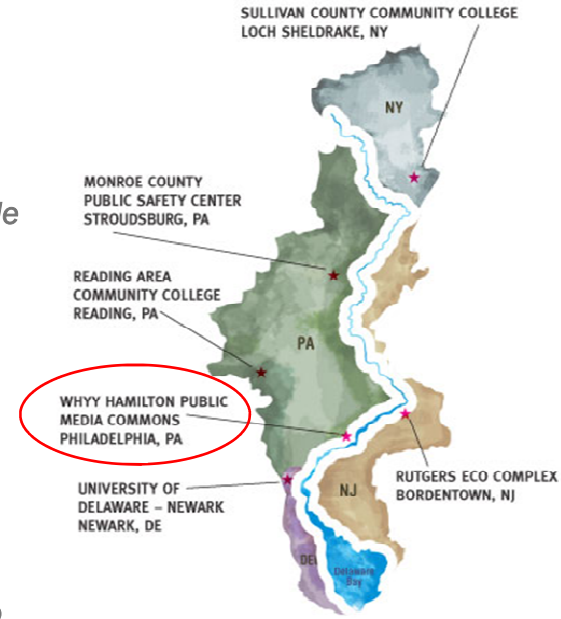
Instructions for the Day and Panel Introduction: Basin-wide Issues of Local Consequence: Water Use, Population Growth, Climate Change and Water Protection
Kathy L. Pape, President, Pennsylvania American Water

Straws in the Delaware: Water Use Today and Tomorrow
Susan S. Hutson, US Geological Survey

Climate Change Implications for the Delaware Basin
Raymond G. Najjar, Jr., Ph.D. - Penn State University

Strategies for Drinking Water Protection–from Planning to Partnering
G. Tracy Mehan III, Principal, The Cadmus Group, Inc.

Delaware River Basin: Challenges On the Ground and In the Water
Carol R. Collier, ACIP – Executive Director, Delaware River Basin Commission



Shawn M. Garvin,
Regional Administrator, Region 3
US Environmental Protection Agency

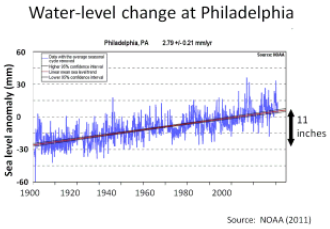
Drinking Water: Facts, Fears, and the Future
Jeffrey K. Griffiths, MD, MPH&TM, Tufts University School of Medicine

Summary of Forum Discussions and Future Direction
Victoria P. Binetti, Associate Director, Water Protection Division, Region 3, US Environmental Protection Agency

Central Location: Philadelphia, Pennsylvania
WHYY Hamilton Public Media Commons

Susan S. Hutson, US Geological Survey
Straws in the Delaware: Water Use Today and Tomorrow
Abstract: The influence of sea level rise of Delaware River Basin that will inevitably affect water supplies – both surface water and groundwater. In the future, major water purveyors will need to take steps to assess the vulnerability of their sources to saltwater intrusion and actions to protect their most susceptible supplies.

Raymond G. Najjar, Jr., Ph.D. - Penn State University
Climate Change Implications for the Delaware Basin
Abstract: Global trends and regionally relevant information based on climate change models were used for forecasting purposes, focusing upon temperature, precipitation and sea level change under different scenarios. Implications for water availability, reservoir storage and salt water intrusion were presented.



G. Tracy Mehan, Esq. , The Cadmus Group, Inc.
Strategies for Drinking Water Protection–from Planning to Partnering
Abstract: Safeguarding our water supply for the future will rely on prudent land and water management today, at every level, from basin-wide planning to backyard landscapes. Mr. Mehan discusses opportunities for water resource protection through strategic and integrated planning, policy-making and program execution, and collaborative partnerships.

Carol R. Collier, P.P., AICP
Delaware River Basin: Challenges On the Ground and In the Water
Abstract: Water does not respect political boundaries. We can best manage our water resources by respecting and working within the natural laws of a water system by: 1) managing by watershed boundaries, 2) jointly managing surface and groundwater, and 3) understanding the relationship of water withdrawal, in-stream flow needs, wastewater return and stormwater runoff. This holistic approach to water management is especially needed as the Delaware River Basin faces a number of new challenges that bring increased uncertainty.

Jeffrey K. Griffiths, MD, MPH, Tufts University School of Medicine
Drinking Water: Facts, Fears, and the Future
Abstract: Drinking water is critical to public health and our modern society. Dr. Griffiths briefly reviews why water is so important, as well as the current state of drinking water in the United States, noting real and potential challenges to the quality, and quantity, of US drinking water. These are presented through the lenses of a changing population, environmental and economic drivers, and climate change.

> *"Overall, the Forum helped to bring together stakeholders, and the facilitated discussion helped us to prioritize issues and general areas of further action."*
> *-Philadelphia Participant*

Regional Location: Philadelphia, Pennsylvania
WHYY Hamilton Public Media Commons

Conference Agenda

New York City's Source Water Protection Program
David S. Warne, New York City Environmental Protection

Clean Cities, Green Waters: Philadelphia's Sustainable Approach to Addressing Stormwater Through Green Infrastructure
Christopher Crockett, Ph.D., Philadelphia Water Department

Ground Water Protection At the Local Level
Matthew P. Lyons, Esq., Mayor, Washington Township, New Jersey

Facilitated Discussions
Theme: Surface and Ground Water Protection
The afternoon consisted of facilitated discussions of local issue priorities and strategies for local action to protect drinking water quality and quantity.

Regional Location: Philadelphia, Pennsylvania
WHYY Hamilton Public Media Commons

Highlights of the Forum

Challenges and Issues

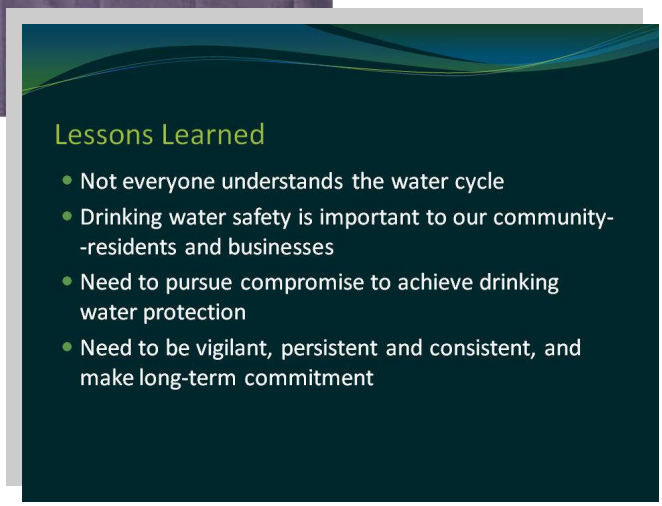
- Leadership – at all levels
- Education – many audiences and modes
- Externalities – what is the true cost of water

What is Working or Could Work?

- Land preservation
- Education (e.g., watershed middle school program)
- Publicize good ideas (e.g., rain barrel conversation) and demonstration/model projects (Philadelphia stormwater fee program)
- Coalitions, collaboration, partnerships

Next Steps

- Build/optimize leadership – integrating all levels, integrating resource management
- Use technology, social media tools
- Let officials know we care about water!
- Document, so we can tell the story!



Regional Location: Reading, Pennsylvania
Reading Area Community College

Throughout the day of the forum, participants at the Reading location participated in presentations and discussions about issues that impact the water resources of their local communities, watersheds, and water supplies.
While the morning presentations provided an overview of local water quality concerns and actions being taken to address them, the afternoon discussions helped to spur new collaborative strategies that can be implemented regionally. The forum also helped to identify "next steps" for putting these ideas into action.

Conference Agenda

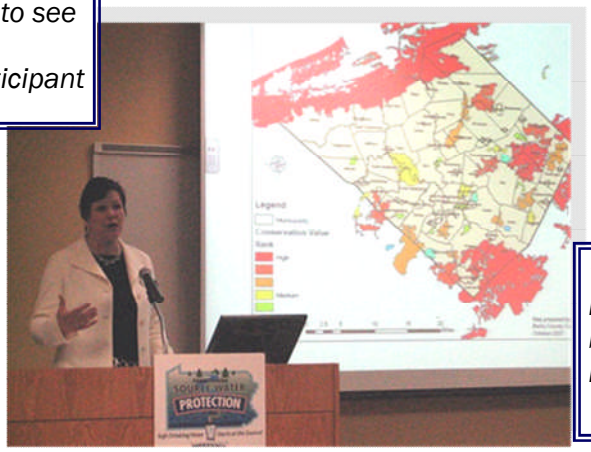
Implementing SWP through the Schuylkill Action Network
Tom Davidock, Partnership for the Delaware Estuary

Source Water Protection Technical Assistance Program
Lyn O'Hare, Spotts|Stevens|McCoy

Success Stories in Source Water Protection
Kim Murphy, Berks County Conservancy

The afternoon consisted of facilitated discussions of local issue priorities and strategies for local action to protect drinking water quality and quantity. The group discussed regional watershed issues and how to move ahead on the proposed local actions.

"It's great to see the whole picture and not just a piece of the puzzle. The forum was definitely worth the time and participation. I hope to see more in the future."
-Reading Participant



"This information should help establish plans for better success and implementation."
-Reading Participant

Regional Location: Reading, Pennsylvania
Reading Area Community College

Highlights of the Forum

Challenges and Issues

- Making funding options work and potential legislation
- Coordination between land use officials and technical experts
- Measuring & Implementation of Monitoring Results

What is Working or Could Work?

- Municipal networking – example: 5-6 municipalities partnering to improve infrastructure costs, share resources (e.g. joint purchases)
- Berks Co. State of the Environment Report (by Berks Conservancy; annual, user-friendly, baseline data w/simple indicators, involved monitoring, not just report but strong community outreach to share results)
- Education/Outreach – example: Eco-Camp for Kids that was FUN & educational; abandoned urban lots converted to community gardens to engage residents in local environmental concerns

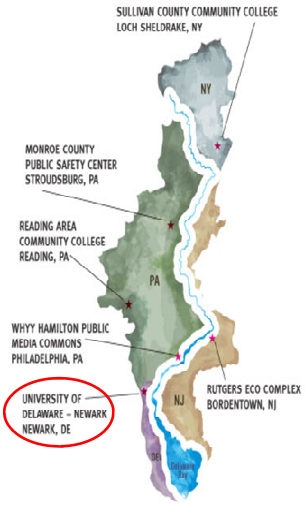
Next Steps

- Berks Co. Cooperative Purchasing Council through the Center for Excellence in Local Government at Albright College will hold a regional meeting for all 72 sewage/drinking water system operators to talk about issues, concerns, resources, funding & success stories – short term; long term – similar forums for Boards & elected municipal officials; willing to report back basin-wide on progress.
- Berks & Schuylkill Counties will work w/Schuylkill Action Network to include source water protection information into consumer water/utility bills – short term; longer term – possible basin-wide approach to all utilities.
- Schuylkill Action Network to have riparian buffer analysis conducted in source water protection areas in East Greenville Borough w/in next 6 months (short term); use riparian buffer analysis model basin-wide (long term)

"It was useful to help identify some of the current and future challenges affecting the headwaters."
-Reading Participant

Regional Location: Newark, Delaware
University of Delaware

Conference Agenda



Opening Remarks and Welcome
Katherine Bunting-Howarth, Director, DNREC Division of Water
David Small, Deputy Secretary, Delaware DNREC

Farm to Tap: Implementation of Sustainable Solutions to Protect Wilmington's Water Source
Matthew Miller, City of Wilmington

Economic Value of Drinking Water Supplies in Delaware
Jerry Kauffman, University of Delaware Water Resources Agency

Runoff Reduction & Recharge: The Three R's of a New Paradigm for Stormwater Management
Randy Greer, DNREC Div. Soil & Water Conservation

The Benefits that Source Water Protection Contribute to Drinking Water Compliance
Edward Hallock, DHSS Div. Public Health, Office of Drinking Water

Introduction to the afternoon session
Rita M. Landgraf, Secretary, Delaware Department of Health and Social Services

Nutrients in Delaware's Drinking Water
Judy Denver, USGS

Delaware's Low Cost Approach to Assessing Statewide Groundwater Quality
Josh Kasper, DNREC

Delaware Department of Agriculture's Groundwater Monitoring Network
Laura Mensch, DE Dept. of Agriculture

Division of Waste and Hazardous Substances' Regulatory Programs and Groundwater Concerns
Marjorie Crofts, Director, DNREC Div. of Waste and Hazardous Substances

Source Water Protection Area Management: Protecting the County's Water Resources And Ensuring Adequate Water Quantity for Future Needs
George Haggerty & Stacy McNatt, New Castle County Department of Land Use

Local Challenges associated with Source Water Protection
Jigar Patel & John Hayes, Delaware Rural Water Association

Discussion and Exchange of Ideas for Better Implementing Drinking Water Protection

Regional Location: Newark, Delaware
University of Delaware

Highlights of the Forum

Challenges and Issues

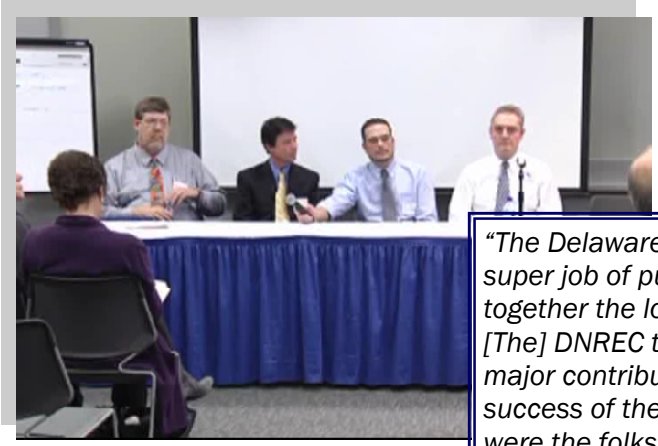
- Making funding options work and potential legislation
- Coordination between land use officials and technical experts
- Measuring & Implementation of Monitoring Results

What is Working or Could Work?

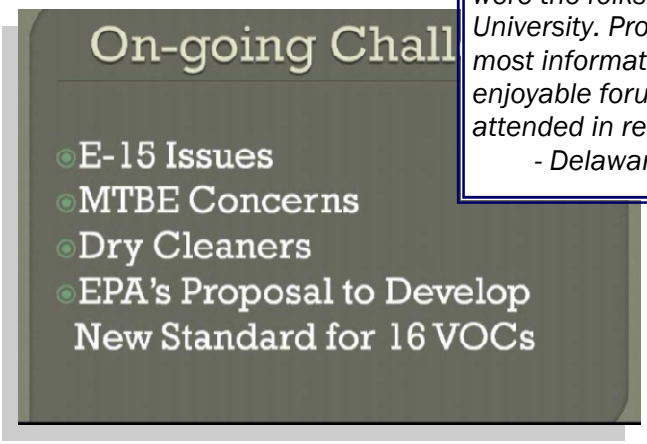
- Active stakeholder groups
- Delaware River Basin Commission & Partnership for Delaware Estuary – coordination with state and local agencies and active public involvement
- Many of the issues presented are well in hand with respect to being addressed at the local and state level

Next Steps

- Funding
- Education and Advisory
- Measuring & Implementation of Monitoring Results



"The Delaware team did a super job of pulling together the local content. [The] DNREC team [was] a major contributor to the success of the program, as were the folks at the University. Probably the most informative and enjoyable forums I've attended in recent years."
- Delaware Participant



Regional Location: Stroudsburg, Pennsylvania
Monroe County Public Safety Center

Conference Agenda

BCRA's Source Water Protection Program to Protect Drinking Water - And Now the Hard Work Begins
Kenneth R. Brown, Manager, Brodhead Creek Regional Authority

The PA State Water Plan and Critical Area Resource Planning in the Delaware River Basin
Michael M. Stokes, AICP, Asst. Director, Montgomery County Planning Commission

The Common Waters Fund: a Forest-to-Faucet Approach for the Delaware River
Will Price, Pinchot Institute

Putting Source Water Protection into Practice at Groundwater Systems
Matt Genchur, Source Water Protection Program Manager, PA Rural Water Association
Marian Keegan, Director of Community Conservation, Hemlock Farms Community Association

A facilitated discussion of local issue priorities and strategies for local action to protect drinking water quality and quantity was held.

Regional Location: Stroudsburg, Pennsylvania
Monroe County Public Safety Center

Highlights of the Forum

Challenges and Issues

- Adult Education
- Natural Resource Planning vs. Political Boundaries (watershed scale vs. local municipalities)
- Planning for Sustainable Water Resources
- Overdevelopment/sprawl/increased consumptive use
- Disconnect between elected officials and long term planning
- Diminished/ineffective media
- Better Science/Quantify Resource Base

What is Working or Could Work?

- Better Cooperation (open space)
- Holistic Approach – Integrated
- Community Planning Initiatives
- Early Education
- Increased Activism and Volunteers

Next Steps

- Fund Growing Greener
- Increase information and education as a way to increase advocacy/way to implement plans and involvement
- 2020 Comp Plan Update (Monroe Co) – make water protection part of the plan
- DRBC Fee for Marcellus drilling
- Redevelopment
- Fines used for revenue/funding environmental initiatives

Regional Location: Bordentown, New Jersey
Rutgers University EcoComplex

Conference Agenda

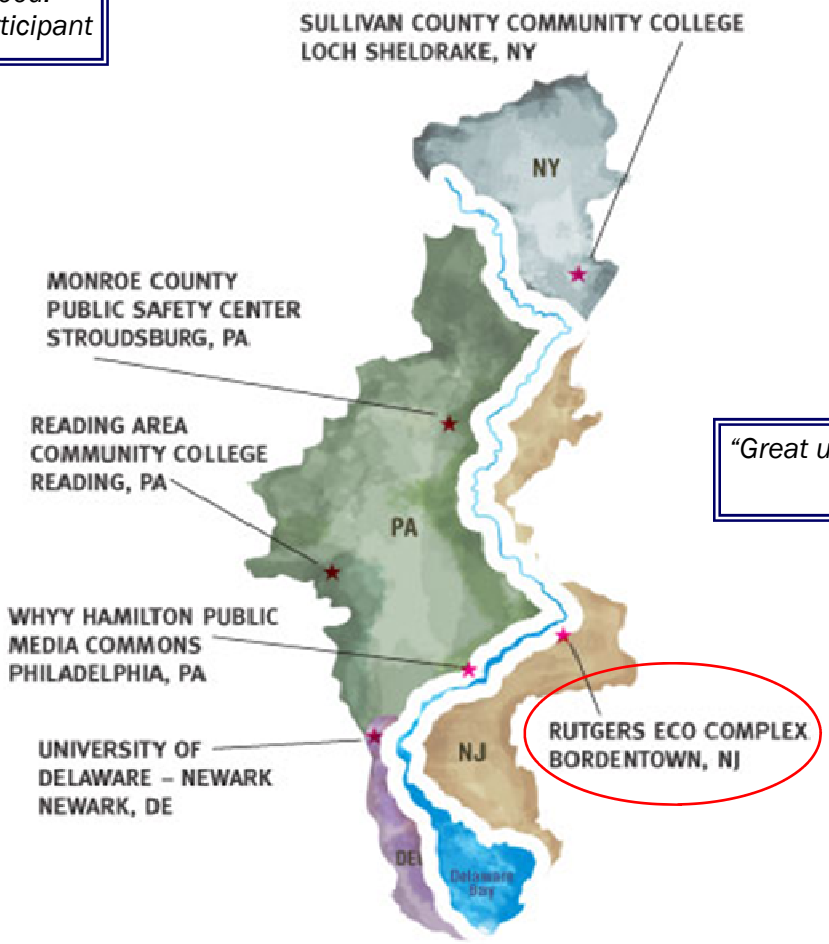
Managing Rainwater Runoff to Protect Drinking Water Supply at Low Cost
Dr. Christopher Obropta, Rutgers University, NJ Agricultural Experiment Station)

Stormwater Opportunities, Cost or Benefit: The Choice is Yours
Todd Kratzer, New Jersey Water Supply Authority; Paul Pogorzelski, Hopewell Township

Lawn Watering Made Easy: The ET Index Program
Kenneth Taaffe, South Jersey Resource Conservation and Development Council

The afternoon consisted of facilitated discussions of local issue priorities and strategies for local action to protect drinking water quality and quantity. Breakout sessions of smaller groups were then organized for particular topics for participants to discuss with one another how to move ahead on the proposed local actions.

"Speakers were good."
-Rutgers Participant



"Great use of technology."
-Rutgers Participant

Rutgers University Eco Complex
Bordentown, New Jersey

Highlights of the Forum

Challenges and Issues

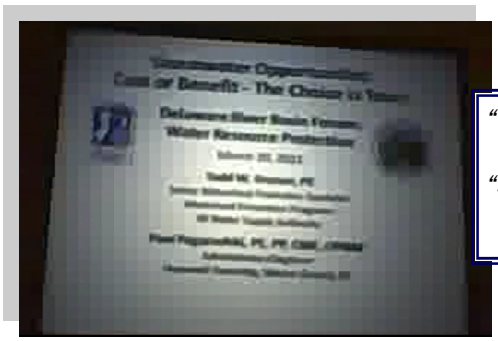
- Improve Education: particularly of municipal boards and those local officials involved in environmental decision-making, but also of others (including USEPA)
- Reduce Bureaucracy: decrease the red tape associated with obtaining grants/ economic issues
- Increase Emphasis on Coordinated Planning: smart planning saves dollars, yet there is a disconnect among municipal entities, other agencies, and USEPA

What is Working or Could work?

- NJDEP and the League of Municipalities partner in developing and offering more intensive environmental resource training
- New Jersey Department of Community Affairs require that planning board members take environmental courses in order to serve on the board
- Incorporate "building green" standards (e.g., faucets, low-water toilets, rain gardens/barrels, active/passive solar) into building codes
- Decrease delays in processing grants meant to solve local problems (e.g., removing impervious cover; infrastructure loans)
- Provide incentives for appropriate action by setting water rates proportional to the:
  - a) impervious surface associated with that customer
  - b) treatment required to handle the runoff from that customer's surfaces
- Encourage local public works departments, planning boards, and governing boards to work together to enhance smart planning, as these agencies do not always coordinate their efforts.
  - a) Combined meeting of these organizations regularly (e.g., quarterly)
  - b) Regional action

Next Steps

- As generic barriers to local action were considered no commitments to local action were made. Suggestions offered by attendees will be submitted for consideration by state officials.



"Thought-provoking discussion"

"Some good ideas discussed"
-Rutgers Participants

Regional Location: Loch Sheldrake, New York
Sullivan County Community College

Conference Agenda

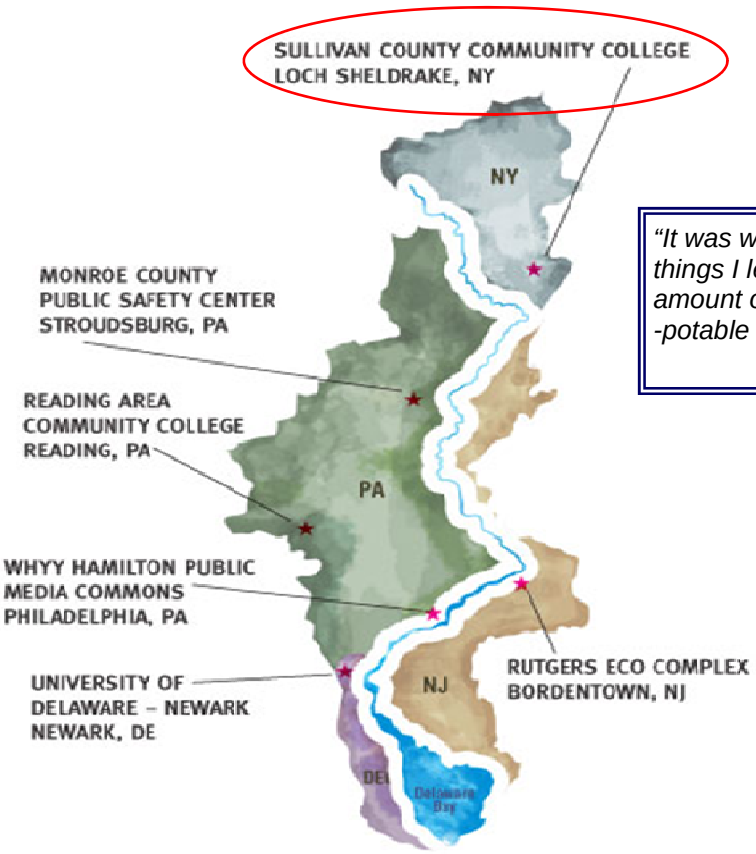
Stream Bank Stabilization on Tributaries of the Delaware River
Les Kirby, Sullivan County Soil & Water District

Storm Water Management Practices in the Watershed
Joe Damrath, NYCDEP

Reducing Pharmaceuticals in Water: Update on New York's Proactive Approach to Household, Institutional, and Manufacturing Discharges
Scott Stoner, New York State Department of Environmental Conservation

Enhancing the Protection of Municipal Drinking Water Sources
Steve Winkley, New York Rural Water Association

Facilitated discussions were held in small groups on local issues, priorities and strategies for local action to protect drinking water quality and quantity. Breakout sessions focused attendees on how to move ahead with local action.



"It was worthwhile. One of the things I learned was the huge amount of water consumed for non-potable uses in the lower basin."
-New York Participant

Regional Location: Loch Sheldrake, New York
Sullivan County Community College

Highlights of the Forum

Challenges and Issues

- Local Planning- education of planning boards. Education is limited by insurance concerns. Source water is a low priority
- Exemptions (all levels) that compromise human health (agriculture, hydraulic fracturing, etc.)
- Irreversible impacts from hydraulic fracturing
- Remove politics from decision making
- Infrastructure needs
- Human waste

What is Working or Could Work?

- Land use planning at the local level; profits by industry, private, and agriculture
- Activism: especially effective when there is a tangible immediate amount
- Wellhead protection program (communication could be enhanced)

Next Steps

- Enhanced enforcement by the state
- Enhance transparency- state and federal agencies
- Regulations - strengthen them (at all levels of government)
- Raising money (taxes, contributions, water rates, funding to agencies, permit fees, grants)
- Education and outreach by utilities
- Collaboration with similar organizations

"I learned about the fracking and how that will/could be the issue for all the areas including Fallsburg. The future loss of fresh water due to the changes in weather - in the next 30 years - is also a concern that most people are NOT aware of. I found this training to be beneficial and very well done, all in all. Thank you for the opportunity to attend"
-New York Participant

"[I learned that] while fracking is extremely important, [there are] so many other issues & possible solutions"
-New York Participant

Delaware River Basin Forum
Planning Team Summary

Objectives Achieved

- Heightened awareness of issues and decisions affecting the water resource
- Connecting basin-wide and local players, issues and needs
- Creating a basic framework for ongoing collaboration and awareness of the stakeholders' need for action, leadership and information sharing

Highlights

- Green meeting emphasis
- Newer communication modes
- Electronic poll of potential participants about concerns and issues
- Website for registration, agenda, evaluations, etc.
- Social marketing, including blogs, Tweets and e-mail
- Podcasts, including Google Earth flyover and interviews
- Live web-stream broadcast

Collaborative Next Steps

- Develop summary of Forum, including process, format and outcomes, basin-wide and local issues, needs, actions and recommended next steps
- Potential for States, DRBC, EPA, & others to provide continued leadership/ facilitation
- Maintain collaboration with stakeholders
  - ⇒ Reconvene for status check, summer 2011
- Website maintenance- depending on funding (meld into SWC site)

"I would suggest finding a way to advertize similar forums to a broader audience. Although the forum was a great source of information it did feel like preaching to the choir. We need to get people outside of the "watersheds" community in on this type of information."

-Philadelphia Participant

The Source Water Collaborative is a coalition of 23 national organizations and agencies united to protect sources of drinking water. The Collaborative encourages actions that contain or prevent contaminants from reaching the sources of our drinking water; promote development patterns that limit threats to the integrity of lakes, rivers, ground water, water recharge areas or other sources of drinking water; match uses of land with locations least likely to affect current or future sources of drinking water; and preserve the land needed to protect the quality of current and future sources of drinking water.

www.ProtectDrinkingWater.org

Source Water Collaborative Member Organizations

American Planning Association
American Water Works Association
Association of Metropolitan Water Agencies
Association of State and Interstate Water Pollution Control Administrators
Association of State and Territorial Health Officials
Association of State Drinking Water Administrators
Clean Water Fund
Environmental Finance Center Network
Groundwater Foundation
Ground Water Protection Council
National Association of Counties
National Environmental Services Center, West Virginia University
National Ground Water Association
National Rural Water Association
North American Lake Management Society
River Network
Rural Community Assistance Partnership
The Trust for Public Land
US Department of Agriculture – Farm Service Agency
US Department of Agriculture – Forest Service
US Environmental Protection Agency
US Geological Survey
Water Systems Council