



ONSITE

September 15–16

2010

**Watershed Science and
Technical Conference**

Thayer Hotel, West Point, NY



2010 Watershed Science and Technical Conference September 15–16, Thayer Hotel, West Point, NY

Each year, this conference showcases the most current trends, technologies and scientific developments in the arena of watershed protection and management. Usually, in response to our Call for Abstracts, a dominant theme appears reflecting the newest concern, a technological breakthrough, or the latest shifts regulatory tone and reach. Last year for example, Climate Change was the topic thread woven throughout our two-day discussions.

This year, while the traditional offering of cutting-edge information continues, a primary theme is decidedly absent. Instead, the conference punctuates the multiple longstanding themes that remain central to the business of caring for a watershed:

- Stormwater control
- Wastewater treatment
- Stream health
- Emerging contaminants and microconstituents
- Monitoring and modeling
- Pathogens, nutrients, and turbidity
- Recreational use, forestry, agriculture and more

We work together on these issues every day, and we've talked about them at conferences past, so we thought it opportune to 'circle back' and update our attendees on the newest findings and accomplishments in areas that are the 'ways and means' of watershed stewardship.

This conference continues its long history of bringing scientists, engineers and technical experts together with watershed stakeholders and the public to technically inform and present leading-edge research findings on the most current scientific trends and data regarding the New York City Watershed and other water supplies across the country.

Thank you for joining us!

Organizers



The New York Water Environment Association, Inc. (NYWEA) – Founded in 1929, by professionals in the field of water quality as a non-profit, educational organization. Association members helped lead the way toward existing state and national clean water programs. Today the Association has over 2,500 members representing diverse backgrounds and specialties, but all are concerned and involved with protecting and enhancing our precious water resources.
www.nywea.org



The New York State Department of Environmental Conservation – Exists to conserve, improve, and protect New York State's natural resources and environment, and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well being.
www.dec.state.ny.us



The Watershed Protection and Partnership Council – Created by the historic New York City Watershed Memorandum of Agreement to provide a regional forum to aid in the longterm protection of New York City's drinking water, and the economic vitality of the Upstate Watershed communities.
www.dos.state.ny.us/watershed/WPPC.htm



New York State Department of State – The Office of the Secretary of State was established in 1778, making it, other than the Offices of Governor and Lieutenant Governor, the oldest agency in the administration of New York State government.
www.dos.state.ny.us

Many Thanks to the Conference Sponsors

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- New York City Department of Environmental Protection
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- New York State Department of Health
- New York State Department of State
- New York Water Environment Association, Inc. Lower Hudson Chapter
- The New York State Environmental Facilities Corporation
- United States Geological Survey
- Watershed Protection and Partnership Council

Watershed Science and Technical Conference

September 15–16, 2010 – Program and Schedule

DAY 1	Wednesday, September 15, 2010 (Location: George Washington Room)
8:00 am	Registration (Lobby) and Continental Breakfast, George Washington Room
9:00 am	Welcome – Thomas Whetham, NYWEA President
9:15 am	Opening Remarks – William C. Harding, WPPC Executive Director
9:30 am–9:45 am	Caswell Holloway, Commissioner, New York City Environmental Protection (NYCEP)
9:45 am–10:00 am	James M. Tierney, Assistant Commissioner for Water Resources, New York State Department of Environmental Conservation (NYS DEC)
10:00 am–10:30 am	Break
MORNING	SESSION I (Location: General Bradley North)
	Contact Hours: 2 Engineer
Moderators	Robert DeGiorgio, Dvirka and Bartilucci; Lisa Melville, NYSDOS
10:30 am	Rain Gardens at Vassar College: A Water Quality Assessment Emily Vail, Vassar College Environmental Research Institute; Lynn Christenson, Mary Ann Cunningham and Stuart Belli, Vassar College
11:00 am	Manursing Lake Tidal Gate Replacement and Aquatic Habitat Restoration Hugh Greechan, and Thomas Shay, Woodard & Curran; Sven Hoeger, Creative Habitat Corp.
11:30 am	Converting a Bowling Alley to Wetlands: Wetland and Stream Restoration in New York City’s Water Supply Watershed Laura Csoboth and John Roebig, HDR; Jose Nieves and Maria G. Mandarino, NYC Environmental Protection
12:00 pm	Community Implementation of the Moodna Creek Watershed Management Plan, Orange County, NY Kelly Dobbins, Orange County Water Authority; Michael Principe and Michael Murphy, HDR; Katy Dunlap, Simon Gruber
12:30 pm–1:30 pm	Lunch, George Washington Room (Lower Level)
AFTERNOON	SESSION II (Location: General Bradley North)
	Contact Hours: 2 Engineer 2 Wastewater
Moderators	John Sansalone, NYSDEC; Jean Noel, NYSDOS
1:30 pm	Tertiary Treatment Upgrades Before/After Impact Study: Effluent and Lake Phosphorus Results Jose Lozano and Lynn Smith, City of Ithaca
2:00 pm	Advanced Oxidation Processes and Reverse Osmosis Treatment of Pharmaceutical in a Municipal Wastewater Treatment Plant Effluent Darcy Sachs, Scott A. Grieco and Tee Tong-Ngork, O’Brien & Gere Engineers, Inc.; Patrick J. Phillips, US Geological Services
2:30 pm	Break, General MacArthur Room
3:00 pm	Post Regulatory Upgrade Effluent Water Quality Improvements at the Delhi, NY, Wastewater Treatment Plant Paul LaFiandra, NYC Environmental Protection
3:30 pm	Is Wastewater Reuse Coming to the “Water Rich” Northeast? The University of Connecticut Evaluates MF/RO and UV to Solve Its Water Supply Problems Cynthia Castellon, Richard Cisterna and Joyeeta Banerjee, Hazen and Sawyer, P.C.

PDHs, Water and Wastewater Contact Hours are also being applied for.

AFTERNOON

SESSION III (Location: General Bradley South)

Contact Hours: TBA Engineer

Moderators

Scott McFarland, AECOM; William Harding, NYSDOS

1:30 pm

Mercury Cycling and Bioaccumulation in a Central Adirondack Stream Ecosystem

Karen Riva-Murray and Douglas A. Burns, US Geological Survey

2:00 pm

Ammonia Recovery Process for Municipal and Agricultural Applications

Morton Orentlicher, ThermoEnergy\Castion Corporation; Tim Shephard, Cornell University

2:30 pm

Break, General MacArthur Room

3:00 pm

Trends in Stream Macroinvertebrate Bioassessments

in New York City Water Supply Watershed Streams, 1994–2009

Martin Rosenfield, NYC Environmental Protection

3:30 pm

A Comparison of Field and Lab Filtration of Samples to Meet the Methods Update Rule

Gerard Marze and Karen E.B. Moore, NYC Environmental Protection

AFTERNOON

SESSION IV (Location: George Washington Room)

Contact Hours: 2 Engineer 2 Wastewater

Moderators

Robert DeGiorgio, Dvirka and Bartilucci; Lisa Melville, NYSDOS

1:30 pm

FAD Related Stormwater Control – Drewville Road

Eric Lochner and Jesse Horsford, Gannett Fleming;

Maria Mandarino and Zaidoun Ereifej, NYC Environmental Protection

2:00 pm

Stormwater Retrofit Program in the New York City Watershed

Andric Rodriguez and Lowell Kachalsky, O'Brien & Gere Engineers, Inc.

2:30 pm

Break, General MacArthur Room

3:00 pm

Phased Activated Sludge Concept Retrofitted for Compliance

with Chesapeake Bay Nutrient Reduction Initiative

Dave Holland, Aqua-Aerobic Systems, Inc.

3:30 pm

Catskill Aqueduct Stop Shutter Improvements

Ginger Modafferi, HDR Engineering; Maria Mandarino and Zaidoun Ereifej,

NYC Environmental Protection

4:10 pm

Bus departs from front of Hotel for tour of historic West Point Campus

4:30 pm

Reception, Patio Tent, Lower Level

DAY 2

Thursday, September 16, 2010

MORNING

SESSION V (Location: General Bradley North)

Contact Hours: 2.5 Engineer 2.5 Wastewater

8:00 am

Registration (Lobby) and Continental Breakfast, George Washington Room

Moderators

Scott McFarland, AECOM; William Harding, NYSDOS

9:00 am

Building New York City's Operations Support Tool: (1) Background and Need

James H. Porter, NYC Environmental Protection;

Grantley W. Pyke, Hazen and Sawyer, P.C.

9:30 am

Building New York City's Operations Support Tool: (2) Structure and Functionalities

William Weiss and Grantley W. Pyke, Hazen and Sawyer, P.C.;

Daniel P. Sheer, HydroLogics, Inc.; James H. Porter, NYC Environmental Protection

10:00 am

Break/Refreshments

10:30 am

Longterm Survival of Fecal Bacteria in Hudson River Sediment

Timothy Kenna, Lamont-Doherty Earth Observatory; Andrew S. Ferguson, Columbia University;

Alice Layton, University of Tennessee; Brian J. Mailloux, Barnard College

11:00 am

Occurrence of Cyanobacteria Toxins in New York State – The Facts Behind the Headlines

Gregory Boyer, SUNY College of Environmental Science and Forestry

11:30 am

Are Coliform Bacteria Good Indicators of Pathogen Occurrence in NYC Source Water?

Kerri Alderisio, NYC Environmental Protection

12:00 pm

Lunch, George Washington Room (Lower Level)

AFTERNOON

SESSION VI (Location: General Bradley North)

Contact Hours: 2 Engineer 1 Wastewater

Moderators

Frank Langone, IBM; William Harding, NYSDOS

1:00 pm

Evaluation of Perennial Stream Protozoan Data to Establish Means and Percentile Range Guidelines for Potential Resampling

Christian Pace and Kerri Alderisio, NYC Environmental Protection

1:30 pm

Identifying High Septic Density Areas in the Wappinger Creek Watershed

Neil Curri, Cornell Cooperative Extension, Dutchess County;

Russell Urban-Mead, Chazen Companies; Celine Teo Ying Zhen, Vassar College

2:00 pm

Break, General MacArthur Room

2:30 pm

The History of Algal and Bacterial Blooms and Their Management in New York City Reservoirs

Lorraine Janus, NYC Environmental Protection

3:00 pm

Addressing Invasive Species in the New York City Watersheds: The Invasive Species Working Group

Barbara Dibeler, NYC Environmental Protection

MORNING

SESSION VII (Location: General Bradley South)

Contact Hours: 2.5 Engineer

8:00 am

Registration (Lobby) and Continental Breakfast, George Washington Room

Moderators

Frank Langone, IBM; Lisa Melville, NYSDOS

9:00 am

Water Quality Trends in NYC Watershed East of Hudson Streams (1993–2009)

James Mayfield, NYC Environmental Protection

9:30 am

Final Results of the Catskill Forest Nutrient Imbalance Experiment

Gregory Lawrence and Douglas A. Burns, US Geological Survey

10:00 am

Break/Refreshments

10:30 am

From Drinking Water Taste Complaints to a Source Water Algae Bloom – NYC DEP’s Experience with and Management of *Chryso-sphaerella* in Kensico Reservoir

Tracy Lawrence, NYC Environmental Protection

11:00 am

Protecting Ground Water via Pesticide Registration in New York

Steven Pacenka and Brian K. Richards, Cornell University

11:30 am

Historical Trends of Permitted Right-of-Way and Aquatic Pesticide Use within the New York City Watershed System and Aqueduct Property (1993–2009)

David Quentin, NYC Environmental Protection

12:00 pm

Lunch, George Washington Room (Lower Level)

AFTERNOON

SESSION VIII (Location: General Bradley South)

Contact Hours: 2 Engineer

Moderators

Scott McFarland, AECOM; Lisa Melville, NYSDOS

1:00 pm

Comparison of Two Change Factor Methodologies over West of Hudson (WOH) Catskill Mountain Watersheds

Aavudai Anandhi and Allan Frei, City University of New York;

Donald C. Pierson and David G. Lounsbury, NYC Environmental Protection

1:30 pm

A Historical Analysis of Water Quality Data in the New York City Watershed Streams Using the Protocols of the DEC/DEP Memorandum of Understanding

Ray Homolac, NYC Environmental Protection

2:00 pm

Break, General MacArthur Room

2:30 pm

The Importance of Snow and Snowmelt in Present and Future Simulations of New York City Reservoir Water Quality

Donald Pierson and Mark S. Zion, NYC Environmental Protection;

Adao Matonse, City University of New York

3:00 pm

Effects of Longterm Trends in Solar Radiation on Watershed Evapotranspiration and Implications for Modeling and Longterm Planning in New York City’s Water Supply Watersheds

Mark Zion, Donald Pierson and Elliot Schneiderman, NYC Environmental Protection

MORNING	SESSION IX (Location: George Washington Room) Contact Hours: 2.5 Engineer 1.5 Wastewater
8:00 am	Registration (Lobby) and Continental Breakfast, George Washington Room
Moderators	John Sansalone, NYSDEC; Jean Noel, NYSDOS
9:00 am	NYC DEP Forest Management Plan Fred Gliesing, NYC Environmental Protection; Bruce D. Higgins, USDA
9:30 am	Acidification Status of Streams and Soils of Forested Lands of the Catskill Mountains, NY Jason Siemion, Gregory B. Lawrence and Peter S. Murdoch, US Geological Survey
10:00 am	Break/Refreshments
10:30 am	Optimization of Anaerobically Digested Dairy Manure Parameters for Phosphorus Recovery Matt Huchzermeier and Wendong Tao, SUNY College of Environmental Science and Forestry
11:00 am	Hormones, Pharmaceutical Compounds and Estrogenicity of Wastewater Effluents from Different Treatment Plant Types in New York State Anne Ernst, Patrick J. Phillips and Barry P. Baldigo, US Geological Survey
11:30 am	Monitoring the Hudson with HRECOS Arlene Onion, NYS Department of Environmental Conservation
12:00 pm	Lunch, George Washington Room (Lower Level)
AFTERNOON	SESSION X (Location: George Washington Room) Contact Hours: 2 Engineer 2 Wastewater
Moderators	John Sansalone, NYSDEC; Jean Noel, NYSDOS
1:00 pm	Pharmaceutical and Personal Care Products in New York City's Watersheds: Results from DEP's 2009 Study Timothy Martin, David Lipsky, Ian Hurley and Carla Glaser, NYC Environmental Protection
1:30 pm	Pharmaceutical Formulation Facilities as Sources of Pharmaceuticals to the Environment Patrick Phillips, US Geological Survey
2:00 pm	Break, General MacArthur Room
2:30 pm	Silver Nanotechnology Unregulated, Emerging Contaminants: Bioaccumulation, Toxicity and Genotoxicity Effect in Exposed Aquatic Organisms Allen Clayton, Rachel Serafin, Chau Quach and Zofia Gagnon, Marist College
3:00 pm	Microconstituents: Why All the Concern? How Can They Be Controlled and Treated? Joy McGrath and Joseph Cleary, HydroQual, Inc.
MORNING	SESSION XI (Location: General Grant Room) Contact Hours: 2.5 Engineer
8:00 am	Registration (Lobby) and Continental Breakfast, George Washington Room
Moderators	Robert DeGiorgio, Dvirka and Bartilucci; Fred Schuepfer, HDR/LMS
9:00 am	Assessment of Regional Forest Health and Stream and Soil Chemistry Using a Multi-scale Approach and New Methods of Remote Sensing Interpretation in the Catskill Mountains of New York Richard Hallett, USDA Forest Service; Jason Siemion, US Geological Survey; Mary Martin and Lucie Lepine, University of New Hampshire; Jen Pontius, University of Vermont
9:30 am	Proven Value of Watershed and Reservoir Modeling for a Remedial Investigation William McMillin, Jamie Butler, Klaus Albertin and Alam Mohammed, CH2M HILL
10:00 am	Break/Refreshments
10:30 am	Suspended Sediment Transport Dynamics in the Esopus Creek Watershed Rajith Mukundan, City University of New York; Donald C. Pierson and Elliot Schneiderman, NYC Environmental Protection; David O'Donnell, UFI
11:00 am	Assessment, Restoration and Management of Watersheds: A Pilot Effort on the Esopus Creek in the Catskill Mountains of New York State Sarah Miller and J. Craig Fischenich; Michael G. Channell, US Army Engineer Research and Development Center; W. Daniel Davis, NYC Environmental Protection

11:30 am **Geologic Investigations Supporting Stream Management Strategies in the Ashokan Reservoir Watershed: A Status Report**
Dan Davis, NYC Environmental Protection; Andrew Kozlowski, NYS Geological Survey; John Rayburn, SUNY New Paltz; Cory Ritz, Ulster County Soil and Water Conservation District

12:00 pm Lunch

AFTERNOON **SESSION XII** (Location: General Grant Room)

Contact Hours: 2 Engineer

Moderator **Fred Schuepfer, HDR/LMS**

1:00 pm **Suspended Sediment and Turbidity in the Esopus Creek Watershed**

Christiane Mulvihill, Jason Siemion and Michael R. McHale, US Geological Survey

1:30 pm **Effects of Altered Hydrologic, Turbidity and Thermal Regimes**

on Rainbow and Brown Trout Populations in the Upper Esopus Creek

T.J. Ross, Cornell University; William L. Fisher and Barry P. Baldigo, US Geological Survey;

Thomas P. Baudanza, NYC Environmental Protection

2:00 pm Break, General MacArthur Room

2:30 pm **How Is Forest Harvesting Intensity Related to Water Quality in the Catskill Mountains?**

Douglas Burns, Jason Siemion and Peter Murdoch, US Geological Survey;

Rene Germain, SUNY College of Environmental Science and Forestry

3:00 pm **Ecosystem Disturbance in Catskill Mountain Streams:**

Indicators of Climate Change or Coincidence?

Barry Baldigo, M. McHale, D.A. Burnam and Peter Murdoch, US Geological Survey;

A.J. Smith, NYC Environmental Protection

MORNING **SESSION XIII** (Location: General Pershing Room)

Contact Hours: 6 Engineer 6 Wastewater

Wastewater Asset Management Workshop:

Protecting, Maintaining, and Investing in Your Valuable Asset

Phil Smith

This is a full day workshop that will show how to develop an Asset Management Plan for your wastewater infrastructure. The attendees will get a sample (model) asset management plan. The workshop also includes a demonstration of the free USEPA asset management software. USEPA, NYSDEC, and NYSEFC are all focused on this issue.

7:45 am–8:00 am Sign in and **Early Start**

8:00 am–8:45 am Group exercise on

What Contributes to a Well Maintained, Well Operated and Well Managed WWTP and ‘The Ten Steps’.

8:45 am–10:00 am **Asset Management Program Development – The Components, the Approach and the Process**

10:00 am–10:30 am Break

10:30 am–12:00 pm **Asset Management Plan – The Product and a Sample Project Report**

12:00 pm–1:00 pm Lunch

1:00 pm–1:45 pm Overview of Free USEPA Asset Management Software – **‘TEAMs’ and ‘CUPSS’**

1:45 pm–2:00 pm Group Exercise on

Evaluating Asset Criticality and Asset Condition

2:00 pm–2:15 pm Break

2:15 pm–3:00 pm Group Exercise continued

3:00 pm–3:30 pm **Implementing Asset Management Programs Back Home –**

Barriers, Communications and Useful Tools

3:30 pm–3:45 pm **Open Discussion, Wrap up and Evaluations**

Watershed Science and Technical Conference – Exhibition

Exhibit Hours: Wednesday, 8:30 am–4:00 pm • Thursday, 8:30 am–3:30 pm • Location: General MacArthur Room



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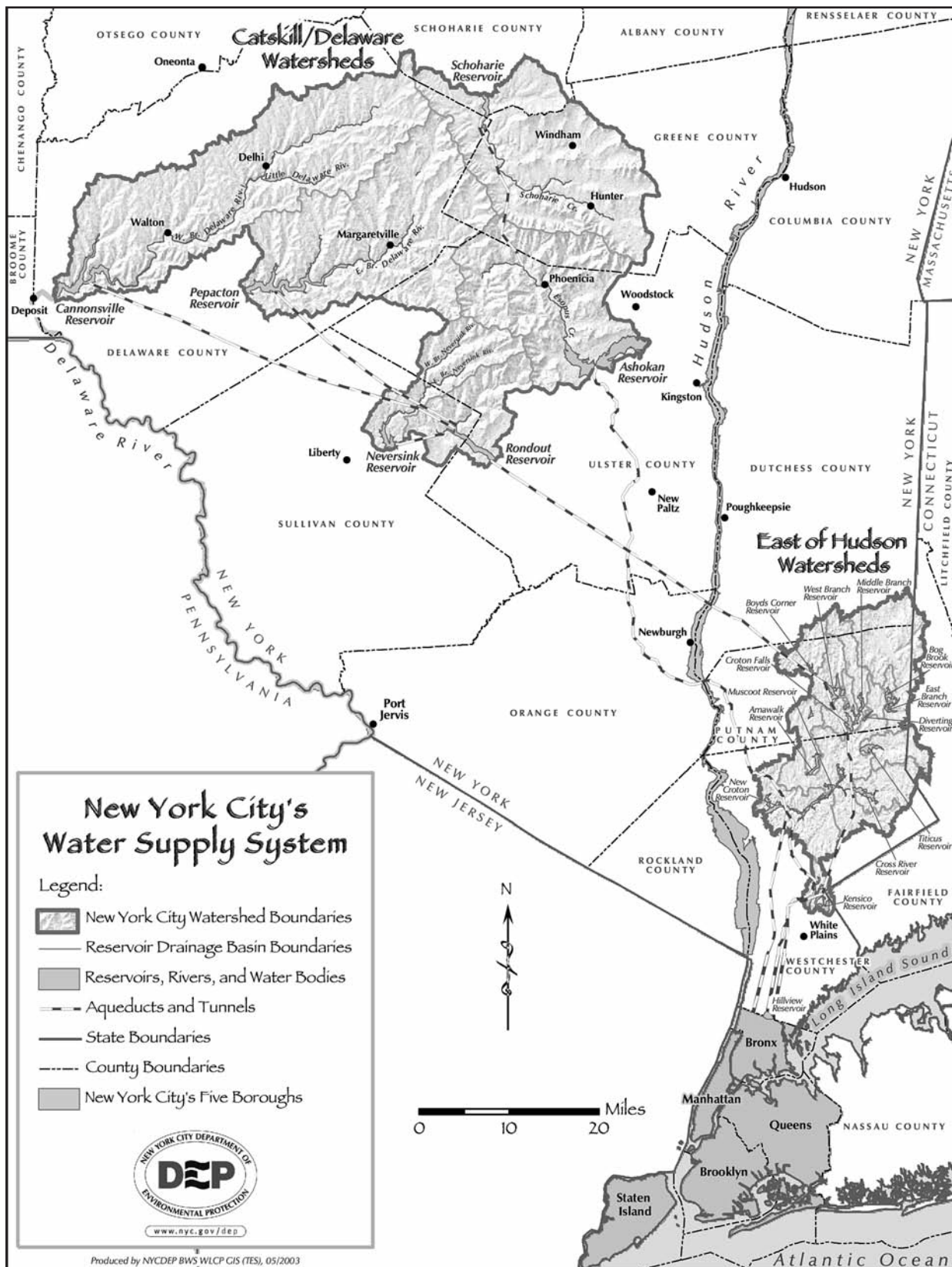
Conference Sponsors

Many thanks to:



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New York City's Water Supply System Map



“Watershed – An area of land, a bounded hydrologic system; within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community.” – John Wesley Powell

Special Events

Pre-Conference Special Event

Tuesday

3:45 pm–6:30 pm

Sail Aboard the Clearwater Sloop

Cost: \$40 (Seating Limited to 35 People)

Join us for a unique opportunity to sail aboard the Clearwater sloop – a 106-foot wooden sailing vessel designed after 17th and 18th centuries' Dutch sailing sloops.



Wednesday, Special Events

4:10 pm–5:30 pm

Tour of United States Military Academy at West Point

Cost: \$25 (Limited Seating)

Enjoy a fascinating bus tour of the USMA campus with interesting contemporary and historical stops. Stops include Trophy Point and the parade field where you will see monuments (Battle Monument) and statues of Patton, Eisenhower, MacArthur, Thayer, and Washington – to drop a few names!

Our guide will talk about cadet life and the history of the Academy including West Point's importance in the Revolutionary War and The Great Chain. The final stop will be a cemetery stopping at grave sites of some of the more famous graduates (Custer, Marcus, White, Goethals and Anderson).

4:30 pm–6:00 pm

Reception at the Thayer Hotel overlooking the scenic Hudson River, Patio Tent, Lower Level

Enjoy refreshments while networking.

Thursday, Special Event

12:00 pm

Lunch with Guest Speaker, Josh Fox (Location: George Washington Room)



Gasland, a gripping, timely and necessary documentary film about the largest domestic natural gas drilling boom in history, was conceived of, directed, narrated and filmed by Josh Fox. *Gasland* premiered at the 2010 Sundance Film Festival and is dedicated to the non-profit organization Damascus Citizens for Sustainability (DCS). It is the winner of five major awards in 2010: a Sundance Film Festival Special Jury Prize, a Big Sky Documentary Film Festival Artistic Vision award, a Thin Line Film Festival Audience Award, a Yale Environmental Film Festival Grand Jury Prize and a Sarasota Film Festival Special Jury Prize. The film premiered on HBO in June 2010 and has its national theatrical release in September 2010. Fox is the recipient, along with Michael Pollan and Alice Walker, of the 2010 LennonOno Grant for Peace, created by Yoko Ono to honor her late husband John Lennon's dedication to peace and commitment to the preservation of human rights. Josh Fox was one of four recipients selected based on their courage and commitment to peace, truth and human rights.

Join us on Thursday at 12:00 Noon to hear Josh's perspective on natural gas drilling.

Evaluation Criteria

The Watershed Protection and Partnership Council's Technical Program Committee reviewed submitted abstracts for quality, technical merit, interdisciplinary utility, as well as temporal and substantive relevance. All papers presented will be included in the Compendium of Abstracts that will be published for distribution at the conference and to interested parties.

Mark Your Calendars! Upcoming NYWEA Meetings:

**Elected Officials Wastewater Training –
Basic and Advanced, Monroe County**
September 28–29, 2010

WEFTEC

October 3–6, 2010, New Orleans, LA

Nitrification/Denitrification

October 22, 2010, Ballston Spa

October 29, 2010, IBM, East Fishkill

Elected Officials Wastewater Training – Advanced

December 8, 2010, Sherrill, NY

83rd Annual Meeting

February 7–9, 2011

New York City, Marriott Marquis

Nitrogen Removal

March 3, 2011, Brewerton, NY

March 16, 2011, Bergen Point, Long Island

April 4–5, 2011, Batavia, NY

Anaerobic Digestion

March 17, 2011, Bergen Point, Long Island

April 6, 2011, Little Falls, NY

May 3, 2011, Amherst WWTP

Troubleshooting O&M

March 21–24, 2011, Old Forge, NY

Asset Management

April 27, 2011, Chenango, NY

May 4, 2011, Frank E. Van Lare,
Rochester, NY

NYWEA/NEWEA Joint Spring Technical Conference & Exhibition

June 6–8, 2011

Sagamore, Lake George, NY

For more details, visit www.nywea.org



**New York Water
Environment Association, Inc.**
525 Plum Street, Suite 102
Syracuse, NY 13204

2010 Watershed Science and Technical Conference

Pre-Registration Form

September 15–16, 2010 • The Thayer Hotel, West Point, NY

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Watershed Science and Technical Conference	Registration Costs			Enter Fees
	Student	Member ⁽¹⁾	Non-Member ⁽²⁾	
Two Days – Wednesday & Thursday, September 15–16, 2010	\$55.00	\$1: 7.00	\$287.00	
One Day – Wednesday, September 15, 2010	\$30.00	\$157.00	\$437.00	
One Day – Thursday, September 16, 2010	\$30.00	\$157.00	\$437.00	
Special Functions				
Tuesday 3-Hour Sail Aboard Clearwater Sloop		\$40.00	\$40.00	
Wednesday Tour of US Military Academy at West Point		\$25.00	\$25.00	
			Total Registration	\$

Two Days (Wednesday & Thursday)
One Day (Wednesday)
One Day (Thursday) } Includes: Continental Breakfast, Lunch and Breaks on both days

(1) Member rates apply to Members and Conference Sponsors.

(2) Non-member registration includes a one-year Affiliate Membership.

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Cancellations must be submitted in writing by August 27, 2010. A 20% service fee will apply to all cancellations received before August 27, 2010; no refunds will be made on registration fees or special events after August 27, 2010.