



EnviroEd

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www.nywea.org.



Message From the Chair

How many people have had enough snow for one winter? Down here in the New York City area, it seemed like every time we turned around, it was snowing again. Well, hopefully that

is behind us for another year and spring will be here before we know it.

As part of our continuing public outreach effort, this February, the Public Outreach Committee sponsored about forty 7th, 8th and 10th grade students from two local New York City Schools to a day of fun and learning at the 83rd Annual NYWEA Meeting and Exhibition in New York City. The students not only got to learn about water and wastewater treatment from several senior professionals in the field, but also were able visit the vendor presentations in the exhibit hall and even walked away with some nice giveaways! In June, we'll continue the tradition of inviting young students to our meeting during the NYWEA and NEWEA Joint Spring Technical Conference and Exhibition at the Sagamore Hotel in Lake George, New York. The combined Public Outreach Committee is currently looking for a group of 6th, 7th and/or 8th graders from a local school to join us for another day of fun and learning. If you are interested in being a part of this exciting program, please contact either myself or Beth at the email address below.

Our committee values your opinion and ideas! If you have any suggestions for future newsletters or are interested in helping out, please e-mail either myself at Joseph.corrado@arcadis-us.com or Ms. Beth Petrillo at bpetrillo@dep.nyc.gov.

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Innovative Ways to Teach Children

New York

The Brooklyn Daily Eagle reported recently on three “new high schools—Millennium Brooklyn, Pathways in Technology Early College High School (P-Tech) and Brooklyn School for Math and Research that will be opening in Brooklyn.” The second of these, P-Tech, is for “students drawn to future careers in information technology (IT), computers, engineering, math and science.” The students will receive individualized support in securing an entry-level position in the IT industry. IBM, a founding partner, will provide all students with internship and training opportunities, exposing them to real-world technology careers.” They will also be able to earn credits and an associate degree from CUNY’s New York City College of Technology.

Missouri

The Kansas City Star reported recently that Ruskin High School was becoming the Academy of Engineering School. It is one of only a few in the Midwest with the National Academy Foundation distinction. The school hopes to encourage minority students to become involved in subjects such as math and science.

Environmental Education

Attention Schools!

Plan your next field trip to the Visitor Center at Newtown Creek, located on the grounds of the Newtown Creek WWTP in Greenpoint Brooklyn.

Stroll along the Newtown Creek Nature Walk. For more information regarding visiting hours and trip details, either visit the DEP website at www.nyc.gov/dep and click on Environmental Education or phone (718)595-3506.

Education Video

The EPA has 4 new video clips (Water- Why It's Important, All in a Day's Work, Flow into Success, and It's Green, Where Would We Be Without Water). These videos are directed toward high school and/or vocational technical school students.

For more information, go to <http://www.epa.gov/safewater/operatorcertification/wateryouwaitingfor/index.html>.

Spotlight on NYCDEP Commissioner Caswell Holloway



Interview with Cas Holloway

Commissioner of New York City's
Department of Environmental Protection

New York City's Department of Environmental Protection (DEP) provides clean and safe drinking water to over 9,000,000 New Yorkers. The DEP also collects and treats the wastewater that New Yorkers produce, so it can keep the water clean in New York Harbor.

Cas Holloway has been leading this agency as its Commissioner since January 1, 2010. The NYWEA Public Outreach Committee arranged for Matthew Frank (mfrank@AqueousAdvisors.com) to conduct this interview with him, to get his thoughts on the following topics

High School, College and Beyond

MF: When clubs have carwashes as fundraisers, how can they help the environment?

CH: First, if you're going to use a fire hydrant for your car wash, call 311, or call your local fire department, and get a hydrant permit. A fire hydrant can put out up to 1,000 gallons of water in a minute, which is a lot of water that you don't want to waste, and which can cause a lot of trouble if you're not prepared.

Second, use organic soap to wash the cars. Think about where the soap goes after it gets into the storm drain -- depending on where you live, it may get treated at a wastewater treatment plant, or go directly into the river, lake, or ocean. Soap bubbles foul up our clean waters, and the organic soap will decompose faster.

MF: How do you find out what it's like to work at the DEP?



CH: We recruit college students from across the country for our internship program. We are a national leader in water and in environmental protection, and want students to see that leadership.

Predicting the Future

MF: In five years, will the DEP use more or less energy than it does today?

CH: In two years, the DEP will probably use more energy. We have two big projects that are mostly done, one with filters to get cleaner water from the Croton system in Westchester, and another with ultraviolet lights to get cleaner water from the Catskills. When we turn on those filters and lights, they'll require a lot of energy.

In the bigger picture, we look at energy and at the environmental effects of using energy. Mayor Bloomberg set a target for each city agency to produce 30% less greenhouse gases in 2017 than in 2006. We have a lot of ways to meet that target, and most of them will make us more energy-efficient.

MF: In ten years, will people be able to swim in the Hudson?

CH: People swim in the Hudson now -- I've swum in the Hudson River during triathlons, and the Manhattan Island Foundation runs other events in the river. The water is often rough, so I don't

recommend it unless you're a strong swimmer. You should also check with city and state agencies about when it's OK to go in the water, particularly after it rains. The good news is that the city has spent 6 billion dollars on water quality improvements since 2002, and the water in New York harbor is the cleanest that it's been in a century.

Especially for New York

MF: Is New York State water better than water in the rest of the country?

CH: Across the country, water is central to public health, and the U.S. Environmental Protection Agency has laws to make sure that Americans get clean water in their faucets wherever they live.

The federal government also has laws about keeping rivers clean, and we'd like some help on that. They could either give us money for the projects they tell us to build, or give us some flexibility so we can figure out which things are most important.

MF: What would you like to tell students about New York City's water?

CH: When you're thinking about how to quench your thirst, drink water. It's healthy -- no calories.

And drink tap water. We are lucky in New York City to have some of the highest quality water in the nation. Our tap water costs less than a penny a gallon, a thousand times cheaper than bottled water. It's also environmentally friendly.

Finally, learn about the water system. The DEP is an amazing agency, performing a function so vital that without it, New York City wouldn't exist. We have a website (www.nyc.gov/dep) and a Facebook site (www.facebook.com/nycwater) for the DEP -- look into it, it's fun.

Here's another Environmental Professional Job Description: Environmental Regulatory Manager

The NYWEA Public Outreach Committee features an environmental job description in each issue of the newsletter. In this issue we feature the responsibilities associated with an Environmental Regulatory Manager:

An environmental regulatory manager is responsible for overseeing the environmental performance of private, public and voluntary sector organizations. They also develop, implement and monitor environmental strategies, policies and programs that promote sustainable development.

Environmental regulatory managers examine corporate activities to establish where improvements can be made and ensure compliance with environmental legislation across the organization.

Environmental regulatory managers carry out environmental audits and assessments, identifying and resolving environmental problems and acting as agents of change. An important element of the role is to ensure staff are trained at all levels and that the workforce recognizes their own contributions to improved environmental performance.

Typical work activities

Environmental regulatory managers have an extremely varied workload, which usually entails working at a corporate and strategic level to identify significant environmental effects. Typical work activities include:

- developing and implementing environmental strategies and action plans that ensure corporate sustainable development;
- taking the lead on sustainable procurement for all goods and services;
- coordinating all aspects of pollution control, waste management, recycling, environmental health, conservation and renewable energy;
- leading the implementation of environmental policies and practices;
- ensuring compliance with environmental legislation;



- auditing, analyzing and reporting environmental performance to internal and external clients and regulatory bodies;
- carrying out impact assessments to identify, assess and reduce an organization's environmental risks and financial costs;
- promoting and raising awareness, at all levels of an organization, of the impact of emerging environmental issues, whether legislative or best practice, on corporate, ethical and social responsibility;
- managing the development and implementation of an environmental management system;
- coordinating public hearings and consultations on environmental matters;
- managing relations with the board of directors, senior management and internal staff;
- training staff at all levels in environmental issues and responsibilities;
- participating in environmental education and research;
- negotiating environmental service agreements and managing associated costs and revenues;
- writing environmental reports, assuming the lead responsibility with the company;

A recent survey in 2010 by the magazine Environmental Protection showed environmental regulatory managers earned anywhere from \$30,000 at a manufacturing facility in Salina, Kansas to \$115,000 in a consulting firm in Rockville, MD. The median gross pay for the job title was \$80,000 and the average was \$74,419. For more information on this survey, please go to <http://eponline.com/articles/2011/02/14/environmental-managers-and-their-earning-power.aspx>.

ACTIVITIES FOR CHILDREN



World Water Monitoring Day – September 18, 2011

Or choose your own day between March 22 and December 31, 2011!

New Classroom Kits are available, in addition to the Basic Kits, are now available for World Water Monitoring Day 2011. For \$49 plus shipping and handling, each Classroom Kit includes all the materials necessary to conduct up to fifty (50) rounds of testing for dissolved oxygen, pH, turbidity, and temperature, with five sets of hardware. The Basic Kit includes the same materials, but only contains a single set of hardware for \$13 plus shipping and handling.

For more information about kit components or placing an order, please go to www.wvmd.org/Test_kits.

Websites of Interest

- **www.nywea.org** This is the Metropolitan chapter website of the New York Water Environment Federation.
- **www.dec.ny.gov** The New York State Department of Environmental Conservation has launched a new electronic newsletter for families. It is called DEC Outdoor Discovery. Each issue introduces subscribers to a seasonal environmental or nature topic, suggests a related activity, and lists family-friendly events at DEC's environmental education center. To subscribe, go to the website above and click on DEC Outdoor Discovery.
- **www.epa.gov/teachers** This is EPA's newly revised and improved environmental education website for teachers. One new feature is the addition of grade levels for the cited classroom materials.
- **<http://www.epa.gov/fishadvisories/kids>** EPA website for kids.
- **www.teachengineering.com** Teach Engineering is a multi-university partnership that has developed K-12 engineering education curriculum modules that are standards-based, free and available over the internet. It aims to equip teachers with lessons in science, math and engineering that are creative and exciting.
- **<http://science.nsta.org>** National Science Teachers Association newsletter. Each issue is filled with informative articles.
- **<http://www.wef.org/LearnAboutWater/ForEducators/CurriculumMaterials/>** - The Water Environment Federation has many children's publications including: *Water the Amazing Journey — Go With The Flow, and World-wide Waste, It's not a Load of Rubbish.*
- **www.engineeringk12.org** Go Engineering's e-newsletter is for K-12 educators. Its purpose is to promote the importance of engineering and technology education and explore the many ways that engineering and technology can help teachers meet the challenge of making mathematics and science come alive for students.
- **www.pbs.org/journeytoplanetearth** Funded by the National Science Foundation, Journey To Planet Earth is a video series that helps students and adults understand the most critical and timely issues facing the natural sciences.
- **<http://pbskids.org/curiousgeorge>** Explore sand, water, and wind with Curious George. Use the Curiosity Center

Activities to host a hands-on Earth Science event for the children and in your classroom. Children will be eager to visit the hands-on Curiosity Centers, exploring and making their own discoveries.



- **www.epa.gov/watersense/water/drop.htm** The WaterSense program announces an exciting new set of educational materials for kids and teachers "A Day in the Life of a Drop" teaches students about the connections between the sources of the water they use and how that use affects human health and the environment. These fun learning materials include a teacher's guide, two student worksheets, a spreadsheet to track water use at home, and a pledge for students and their families to filter out bad water habits.
- **www.h2ohero.org** It's a kid-oriented site discussing stormwater and it includes video games.

Activities for Students

Paper Cup Challenge

Take an everyday product like the classic paper cup and try to redesign it without using glue, tape or staples. Additionally, the cup must be able to hold water for a short period of time.



Attn: Parents of High School Seniors

Did you know that NYWEA has a Child of Member Scholarship? Do you have a son or daughter following in your environmental footsteps? If so, you may want to encourage them to submit a scholarship application in the Child of Member category. The NYWEA typically offers a total of six (6) \$1,500 scholarships and one (1) \$10,000 scholarship. It's not too soon to be planning to apply for their 2012 program.

Jim Anderson Memorial Scholarship - This offers one \$1,250 scholarship annually. Applicants must be enrolled in a B.S. or B.E. full-time engineering program with a focus on environmental issues, particularly water and wastewater. **Application deadline is May 1, 2011.**

Visit the NYWEA website (www.nywea.org) for more information about these and all our scholarships and deadlines.

Awards, Contests & Training

2011 U.S. Stockholm Junior Water Prize

What is the SJWP?

The International Stockholm Junior Water Prize (SJWP) is the most prestigious youth award for a high school water science research project. Its purpose is to increase youth attention toward the water environment, and to sensitize them – as future leaders - to local and global water challenges. HRH Crown Princess Victoria is the patron of the prize. In a royal ceremony, during World Water Week, the international winner receives \$5,000 USD and a blue crystal sculpture.

The SJWP was founded by the Stockholm Water Foundation and is administered by the Stockholm International Water Institute (SIWI). ITT Industries is the global sponsor.

In the United States, the Water Environment Federation (WEF), and its member associations, sponsor and organize the state and national competition with support from ITT Industries and The Coca-Cola Company.

The New York State selection process for the 2010 SJWP Competition was one of the most competitive in recent memory. After all the smoke cleared, the winning project was entitled “The Encapsulation of *Alcanivorax borkumensis* in a Gelatin Hydrogel Membrane for Water Filtration Purposes,” by William Genova, Lauren Herrera, and Ijeamaka Anyene of Brentwood High School. The authors were able to test the ability for bacteria encapsulated in an environmentally friendly gel to be used in oil remediation. William Genova was sponsored by NYWEA to travel to the National SJWP competition in St. Louis, MO, where he represented New York well.

The 2011 SJWP Competition will be held in Chicago, Illinois from June 23-25. For more information on the competition, in-

cluding entry criteria, please visit: <http://www.wef.org/SJWP>.

2011 Golden Apple Awards for Schools in NYC

Enter your school's efforts in one or all three (recycling, waste reduction, clean-up and gardening projects) contests of the DSNY. Each school competes within their grade division (elementary, intermediate, or high school) for citywide and borough honors. For more information, go to www.nyc.gov/wasteless/goldenapple. **Deadline for filing is May 1, 2011.**

NYSDEC

Applications are now being accepted for the **7th annual NYS Environmental Excellence Awards program.**

The awards program recognizes businesses, governments, not-for-profit organizations, educational institutions and individuals in New York State that are achieving environmental excellence through innovative and environmentally sustainable practices or partnerships. **Completed applications must be post marked by Friday, May 20, 2011.**

NYSDEC is especially interested in applications for projects that have achieved significant environmental benefits through: innovative and cutting-edge pollution prevention technologies; manufacturing process improvements; initiatives to reduce greenhouse gas emissions; programs that make schools and businesses more “green;” energy conservation and green energy production efforts; waste reduction and recycling efforts; storm water management and watershed planning; environmental protection and restoration efforts; and land conservation.

Download application materials and more information about the award program at DEC's website at <http://www.dec.ny.gov/public/945.html>.

AAAS Leadership in Science Education Prize for H.S. Teachers

The American Association for the Advancement of Science (AAAS) recog-

nizes high school science teachers for the development and implementation of innovative methods for teaching and encouraging the next generation of scientists. The winner will receive a \$1,000 cash prize to support the development and continuation of the strategy, activity or program. **Applications deadline is May 27, 2011.**

Gulf of Mexico Foundation Teacher Training Expeditions – June 19-24, July 9-13.

The Gulf of Mexico Foundation offers two teacher training expeditions sponsored by Conoco Phillips for K-12 and college-entry educators nationwide every year. “Intercoastal Waterway Wetlands Expedition” and “Down Under, Out Yonder.” Participants must pay a \$100 refundable deposit to take the course and are responsible for transportation, room and board. For more information go to www.gulfmex.org.

Online Course Strengthens Elementary Engineering Education Strategies

PBS TeacherLine has introduced an online course developed at Purdue University for elementary teachers specifically to strengthen their teaching strategies in science, technology, engineering, and math. It is a 30-hour course that shares teaching strategies to provide students with an early foundation in engineering.

ASCE (American Society of Civil Engineers)

The Lower Hudson Valley Branch is seeking applications for \$2,500 scholarships to pursue a career in civil engineering. Candidates must be a high school senior, pursue a degree in a civil engineering-related field at a 2- or 4-year college in the U.S., reside in or attend a college in Rockland or Westchester County (or be a child of a Lower Hudson Valley Branch member). **Applications must be submitted by April 15, 2011.** For more information go to www.ascemetsection.org.



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Upcoming Events - Mark your Calendar!

National Environmental Education Week—April 10-16, 2011

- ➔ • NYWEA /NEWEA Joint Spring Technical Conference & Exhibition - June 6-8, 2011, Sagamore Hotel, Bolton Landing, Lake George, NY
- ➔ • Water Reuse Association 25th Annual WaterReuse Symposium - September 12-15, Omni Shoreham Hotel, Washington, DC
- ➔ • Watershed Science & Technical Conference - September 15-16, 2011, Hotel Thayer, West Point, NY