

WHAT HAPPENS WHEN THE POWER QUILTS

Treatment Plants Face a Challenge in a Blackout

by Stephen Hochbrunn

It should've been just another Thursday in August, a slow day on Wall Street, a great day at the beach. Then the lights went out—and stayed out. The massive power failure on August 14 cut off electricity across 9,300 square miles in eight states and Canada. At water and wastewater treatment plants in the affected areas, operators rapidly switched to backup power sources—if they could. In New York City, nearly half a billion gallons of raw and minimally treated sewage entered waterways after power went out at a major pumping station and two wastewater treatment plants. In Cleveland, the blackout knocked all four of its water treatment plants off line. In Detroit, five water treatment plants and a massive wastewater treatment plant went dark, prompting water boiling edicts from the city's health officials.

President Bush called the blackout a “wake-up call,” a sign of the need to modernize the electricity grid. It also underscored, in a dramatic way, the need for water and wastewater facilities to be prepared for power outages. More evidence of this need came on October 2 when the electricity suddenly went out at the Upper Blackstone Water Pollution Abatement District treatment plant in Milbury, Mass. Before backup generators could be fully hooked up, some two million gallons of undisinfected primary effluent—sewage that's been partially treated but may still contain pathogenic organisms—had entered the Blackstone River. Events such as these raise alarm and concern, and, in fact, a look into the readiness of our region's water and wastewater



PHOTOS COURTESY OF AFWA

Before and During: Satellite images reveal the breadth of the August blackout. The Air Force Weather Agency processed these images using data from the Defense Meteorological Satellite Program. The image on top was taken about 20 hours before the outage. The bottom image shows the same area seven hours after the blackout began.

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facilities for power failures shows there is room for improvement. There are also ample signs of preparation, of efforts and systems that ensure plants aren't powerless when the power goes out.

PREPARED FOR THE WORST

“When we built the Deer Island Sewage Treatment Plant, the NPDES [National Pollutant Discharge Elimination System] permit required that we have backup power,” said Jonathan Yeo, communications director at the Massachusetts Water Resources Authority (MWRA). “They weren't going to let that plant be built without a backup source of electricity.” State regulations and permits typically require that large water and wastewater plants have alternative power sources. At the Deer Island plant, which treats

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VARNEY'S VIEWS

The Head of EPA New England on Brayton Point, Water Quality Monitoring, Environmental Justice, NEIWPC

by Stephen Hochbrunn

As EPA New England's regional administrator, Robert W. Varney is one of the most prominent and powerful advocates for environmental protection in our region. Varney joined EPA in 2001, after serving as Commissioner of the New Hampshire Department of Environmental Services from 1989 to 2001, which made him one of the nation's longest serving state environmental agency heads. Varney was also a NEIWPC Commissioner during those 12 years, serving a two-year term as Chairman from 1995 to 1996.

On October 8, Bob shared his thoughts on a variety of issues during an interview at EPA New England's new Regional Laboratory in North Chelmsford, Mass.

STATES' NEEDS

IWR: Your long tenure as head of a state environmental agency certainly gives you insight into the challenges states face. What would you say are the priorities in the states right now?

Varney: One of the top ones obviously is the TMDL [Total Maximum Daily Load] issue. We've been working very closely with NEIWPC to take a different approach to TMDLs, to be innovative and cost-effective in what

we do. But state budget problems are the number one concern negatively affecting program implementation. We have tried to maintain flexibility in our performance partnership agreements and performance partnership grants with the states, providing them with as much freedom as possible to shift resources and to revise commitments due to the reduction in state general fund dollars. In addition, we're working with the states to identify opportunities to achieve the same goals at less cost in each individual program.

IWR: Obviously, we have environmental concerns here in the East that differ from those in the West—particularly combined sewer overflows and an aging infrastructure. Yet in Washington, the proposed EPA administrator is from the West, and every committee that deals with EPA's budget is headed by someone from west of the Mississippi. What impact does that have on you and the region with regard to water issues?

Varney: First, I think it's important to note that EPA headquarters has been very accessible and very interested in issues of importance to the Northeast. They appreciate the fact that the New England states have a

strong environmental ethic and that the state environmental agencies are doing a good job. They recognize that the relationship between EPA New England and the states is stronger than in other parts of the country.

We have a very close working relationship, and that's a major advantage for our region. Part of the reason is we have a smaller geographic area, so it's easier to convene meetings and to work cooperatively. But credit also goes to NEIWPC and the other interstate organizations. A lot of shared learning and collaboration goes on, and that's resulted in a higher degree of environmental protection and public health protection in New England.

I will say it's important for the Northeast states to continue to work together and with their congressional delegations to ensure the concerns of the region are heard. If they don't, the concerns may not be fully considered in Congress, whether it's a budget issue or legislation. There are many politically powerful states

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Robert W. Varney, EPA New England's Regional Administrator

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NEIWPCC
New England Interstate Water
Pollution Control Commission

Executive Director
Ronald Poltak

Deputy Director
Susan Sullivan

Established by an Act of Congress in 1947, the New England Interstate Water Pollution Control Commission is a not-for-profit interstate agency that utilizes a variety of strategies to meet the water-related needs of its member states—Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. NEIWPCC coordinates activities and forums that encourage cooperation among the states, educates the public about key water issues, supports scientific research projects, trains environmental professionals, and provides overall leadership in water management and protection. While NEIWPCC's initial emphasis was on surface water protection, the Commission now also devotes substantial attention and resources to such matters as wetlands restoration, nonpoint source pollution, water allocation, and underground storage tanks.

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IWR
Interstate Water Report


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Interstate Water Report (IWR) is published quarterly by NEIWPCC. It is funded by a grant from the U.S. Environmental Protection Agency and distributed free of charge to subscribers. To subscribe, contact NEIWPCC at the address above or fill out and return the subscription form in this issue. POSTMASTER: Send change of address forms to IWR/NEIWPCC, Boott Mills South, 100 Foot of John St., Lowell, MA 01852-1124.

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FROM THE EXECUTIVE DIRECTOR

THE INFRASTRUCTURE BUDGET GAP



Most, if not all, of us have realized for some time that there is a serious problem with the financing of our nation's water and wastewater infrastructure needs. Federal investment in this area has fallen dramatically since the "good old days" when Washington provided the funds to support the Construction Grants program, which built facilities and systems that improved water quality. Today, financing for such projects comes in the form of loans from the Clean Water State Revolving Fund. The federal government now provides less than 5 percent of infrastructure support funds whereas it once provided 75 percent.

This drop in federal support has forced EPA to rely on the SRF, rate increases, public/private partnerships, and innovative technologies to finance infrastructure needs. But it's not enough. Over the next 20 years, EPA predicts a shortfall of as much as \$534 billion in the funds necessary to replace, operate, and maintain the nation's aging pipes, pumps, and treatment plants. Other estimates of the shortfall go higher:

- ▲ Congressional Budget Office: \$292 billion to \$820 billion (capital and O&M)
- ▲ General Accounting Office: \$300 billion to \$1 trillion (capital and O&M)
- ▲ Water Infrastructure Network: \$460 billion (capital only), \$1 trillion (capital and O&M)

The job at hand is clear. We must all do everything we can to get the public, industry, Congress and the administration to support long-term sustainable funding for our infrastructure needs. Surveys show that the vast majority of Americans support protecting the nation's water resources. Yet, as I sit here today, a week before Thanksgiving, a federal budget has not been enacted. And the proposed budget under consideration does nothing to strengthen our commitment to this critical need.

We have a Congress that has, on the whole, adequately addressed long-term highway and airway needs and is on the verge of passing new energy policy legislation. The question, as the Association of Metropolitan Sewerage Agencies asks in its latest effort, is WHY NOT WATER?

What do you think? Share your views by emailing us at mail@neiwpc.org.

Sincerely,

Ronald Poltak
NEIWPCC Executive Director

TIME OF CHANGE

NEIWPCC to Play Increased Role in Mass. Wastewater Operator Training Program

by Tom Groves

Due to state budget cuts in Massachusetts, the state's Department of Environmental Protection (MA DEP) will shortly begin shifting its wastewater operator certification and training program to a new consortium of training organizations, led by NEIWPCC. The transition will be a gradual process, with MA DEP's involvement being reduced in phases, beginning January 1, 2004 and running through June 2005. MA DEP training and certification staff will initially maintain their existing roles, but their involvement will diminish over time as they assist NEIWPCC with the transition. By July 2005, MA DEP staff assistance will be completely phased out, and NEIWPCC and the consortium will be fully coordinating the state's wastewater operator certification and training program.

In addition to NEIWPCC, the consortium includes the New England Water Environment Association (NEWEA), Massachusetts Water Pollution Control Association (MWPCA), Northeast Rural Water Association (NeRWA), MA DEP, EPA New England, Massachusetts Board of Operator Certification, and the Upper Blackstone Water Pollution Abatement District. Representatives of these organizations have formed a Training Advisory Committee (TAC) that will steer the direction of the training program. NEIWPCC and the MWPCA will co-chair the TAC, which will meet quar-

terly to make recommendations on training needs, schedule, course content, training locations, and speakers. The TAC will work closely with the Massachusetts Board of Operator Certification to ensure that proper and sufficient training is provided to the operators of Massachusetts.

NEIWPCC will also immediately begin to play an increased role in the coordination of the Massachusetts operator certification program, but MA DEP will continue to be involved with the issuance of operator licenses, appeals, and other matters that are statutory requirements.

The changes associated with the transition will begin to be seen in the Winter/Spring Massachusetts training schedule. Although the schedule will look the same, registrations will go directly to NEIWPCC. Also, registration fees will be revised to reflect the increased need for the program to be self-supporting. In Fall 2004, a new, comprehensive NEIWPCC Training Catalog will be unveiled that will include our current regional training courses along with classes associated with the Massachusetts operator training program.

For more information on the Massachusetts wastewater operator certification and training program, contact NEIWPCC at (978) 323-7929 or email training@neiwpc.org.

READY FOR ROLLOVERS

JETCC Helps Maine Responders Be Prepared When Tank Trucks Overtake

by Stephen Hochbrunn

At 6:00 a.m. on a Friday, the choices for breakfast in Skowhegan, Maine, are limited. It's McDonald's or go hungry. Although his heart was set on hardier fare, Carl Allen ordered a plastic platter of eggs, nourishment at least for the day ahead. In two hours, he would be part of a team leading the last of this year's one-day courses in Maine on how to respond to a perilous and all too common event—a tank truck rollover.

When these trucks overturn, their tanks—laden with gasoline or other hazardous materials—can be damaged and leak, resulting in dangerous spills. It's critical that those responding to rollovers make the right moves, and Allen and his fellow instructors are doing what they can to teach the proper strategies. The thirst for this knowledge is insatiable, said Allen, an oil and hazardous materials specialist at Maine's Department of Environmental Protection (ME DEP). "We hold the classes in different parts of the state every year," he said, as he quickly consumed his meal. "But no matter what we do, there are always people saying, 'Why don't you come to our town?'"

NEIWPC's Leeann Hanson manages Maine's Joint Environmental Training Coordinating Committee (JETCC), which coordinates the tank truck rollover classes, and it's no surprise demand is high. On September 10, just two days before the class in Skowhegan, a tank truck carrying liquid methane overturned in Reading, Mass. Although none of the methane leaked from the tank, the cleanup and safety precautions shut down one of the state's busiest interchanges during the morning rush hour. Ten days later, a propane tanker rolled over in Norwell, Mass., forcing the evacuation of a school. As long as such accidents keep happening—and there's every indication they will—the need to know how to effectively respond will remain. In Maine, the JETCC courses are helping to meet that need, by delivering vital information to an appreciative audience.

"I learn something new at every one I go to," said Daigle Oil's Steve Farrington, who's attended several of the rollover courses and was among the 80 people at the Skowhegan class. Sappi, the South Africa-based pulp and paper company, hosted the session at its Skowhegan mill, which looms large over a typically quirky patch of Maine countryside that features roadside attractions like Marilyn's Doll and Supply Shop and a diner offering free grease to bear hunters. The mill is a beehive of activity, with hundreds of trucks—many carrying hazardous chemicals—entering and leaving every day. With that kind of traffic, there's always the potential for an accident, and at least a third of the group registered for the session worked for Sappi. The others worked for fire departments and energy companies. "I work in an isolated part of the state, where we need to be reliant upon our own resources," said Richard Ingraham of R.H. Foster Energy. "Most likely the only employee at a rollover is going to be the driver, and it's important to have the ability to recognize potential problems."

JETCC conducts about three rollover classes a year, and like all of them, the one in Skowhegan began with presentations by Allen and three other ME DEP employees—Tom Varney, Nathan Thompson, and Peter Blanchard. They covered a long list of topics, including the different models of tank trucks and their various valves and emergency shutoff systems, risk assessment, and emergency response procedures. Thompson strolled



At JETCC's tank truck rollover class in Skowhegan, Maine, attendees heard presentations before heading outside for a close-up look at the various types of tank trucks they may encounter when responding to a rollover emergency.


between the aisles as he emphasized the importance of first responders—usually firemen in the case of rollovers—making the right decisions from the moment they arrive on the scene. "I can't stress enough the importance of establishing a command post, calling in state or industry specialists who can provide technical assistance, and doing defensive measures first—like setting up dikes around storm drains," Thompson said. "After that, you can think about offensive measures like shutting off valves on the truck and containing the leak."

Of course, the best defensive measure might be to avoid rollovers in the first place, but that's not easy given the occasionally destabilizing nature of a tank truck's cargo. "When you're driving a liquid, and you take a turn too sharply," said NEIWPC's Hanson, "the liquid doesn't necessarily follow." While speed is a factor in many rollovers, it's wrong to assume the accidents can always be blamed on a lead-footed driver. "I responded to one rollover where the driver had pulled off to the side of the road to be courteous to the cars behind him," said Marshall Smith of Webber Energy Fuels. "He got into a ditch and the truck just tipped over."

Smith and Webber Energy have taken an active role in recent rollover classes, supplying the trucks that provide a hands-on experience. The company brought three trucks of various sizes to the Skowhegan class, including a tractor-trailer with a 12,000-gallon tank. In the afternoon, attendees moved in groups from truck to truck as the instructors explained how each should be handled in a rollover situation. Webber provides the trucks at no charge, an example of the wide support the program receives from the private and public sector that helps keep the course fee to just \$20. Primary funding for the courses comes from the Maine Emergency Management Agency.

As the Skowhegan session came to a close, Allen and the other instructors addressed a few remaining key topics, including the safe way to get a truck back on its wheels. "We used to roll a truck over and then right it as a demonstration during the classes," Allen told the group. "But the truck always got damaged in the

process." That prompted fellow instructor, Tom Varney, to crack, "There's a limit to [Webber Energy's] largesse." The attendees laughed—a light moment in a day devoted to serious business.

Adequate training can go a long way toward ensuring a coordinated, effective response to rollovers that mitigates damage to the environment and the threat to public health. But education is just a first step—experience counts too. "This type of training is invaluable," said Daigle Oil's Farrington. "This time, for example, I learned about safety devices on propane tankers. But when you start applying your training on the spot, that's when you learn the most." Given the frequency of rollovers, the attendees at the JETCC courses can expect to respond some day to a real tank truck emergency. They'll be prepared. 

SOUND PROGRESS

Report on Long Island Sound Cites Improvements and Needs

A report on the environmental issues affecting Long Island Sound makes it clear that progress has been made in recent years, but that further efforts are still needed to protect the 110-mile long estuary. The 16-page report, entitled *Sound Health 2003: A Report on Status and Trends in the Health of the Long Island Sound*, appeared as an insert in the Sunday, Sept. 28 editions of newspapers sold in the Sound's coastal communities; nearly half a million copies were distributed.

Published by the Long Island Sound Study and edited by NEIWPC's Robert Burg, the report highlights a number of areas of progress. For example, sewage treatment upgrades have led to dramatic reductions in the amount of nitrogen entering the Sound each day. However, as the report explains, high levels of nitrogen in the Sound still cause eutrophication and require continued attention. There is also the constant environmental threat from the relentless increase in population and development in communities surrounding the Sound.

The report can be downloaded from the Long Island Sound Study's new, extensive Web site (www.longislandsoundstudy.net), which includes a great deal of other information about programs and projects related to the Sound. NEIWPC is one of many partners supporting the work of the Long Island Sound Study, a cooperative effort involving organizations and individuals who share a common goal—to protect and improve the health of the Sound.



Blackout *continued from page 1*

waste from 43 greater Boston communities, there's no question of preparedness; the plant has two diesel-fired combustion turbine generators ready to supply backup power if needed. Installed in 1995 at a cost of \$28 million, the generators are derived from jet aircraft engines. Each can provide more than enough electricity to run the entire plant on a day of average power demand. The MWRA has also installed backup generators at all its pump stations. "It's just good business," Yeo said. Few would disagree with that statement after what happened in August in Cleveland and Detroit.

Most smaller wastewater plants are also prepared. "It's not that unusual for us to lose power," said Tom Landry, superintendent at the Pittsfield (Mass.) Wastewater Treatment Plant. "It happens about once a year, and it's really nothing to worry about for us." Landry's plant is located in the small portion of western Massachusetts that lost power in the August blackout. "We went to our generators for about four hours, and everything went smoothly. I've seen us go [without power] for a full day before without adverse effects."

In southwestern Connecticut, where the lights also went out in August, the effect was similarly minimal. That was no accident, according to Rowland Denny, senior sanitary engineer at the Connecticut Department of Environmental Protection's Municipal Facilities Section. "In the old days, we didn't have generators. When the power went out, all the plants could do

"A lot of generators are ignored until the lights go out and then all of a sudden, it's 'Oh my gosh, it didn't start!'"

CHARLIE BERTRAND,
SOUTHWORTH-MILTON, TECHNICAL COMMUNICATOR AND TRAINER

was let the wastewater flow through and disinfect," Denny said. "Now, the majority of plants are able to continue with aerobic treatment. They're able to run on a generator or they have an alternative feed for power."

The problem is the majority isn't everybody. In New York, the pumping station responsible for much of the sewage spill in August didn't have auxiliary power, even though the state issued an order in 1995 calling for the construction of two generators at the site. At the two wastewater plants that contributed to the New York spill, a more common problem occurred—the plants had generators, but they didn't work right.

"A lot of generators are ignored until the lights go out and then all of a sudden, it's 'Oh my gosh, it didn't start!'" said Charlie Bertrand, a technical communicator and trainer at Southworth-Milton, which sells and rents generators and other heavy equipment throughout the Northeast. "What I see is a lot of the necessary maintenance doesn't get done." Bertrand, who teaches a NEIWPC course on emergency generator maintenance, also sees situations where plants have auxiliary power, but not enough of it. "It could be the plant's expanded, but they haven't expanded their backup capability," he said.

WHEN THE WORST OCCURS

At the Upper Blackstone plant, it's been no secret that its electrical system needs upgrading. A plan submitted by the plant to EPA in 2001 called for specific improvements, which are being made at a gradual and affordable pace. But this fall, the plant's basic backup system was the same as it had been for years—two independent power lines coming into the plant, which met EPA requirements for the facility, and two internal power feed lines. In early September, one of the internal lines



COURTESY OF THE WORCESTER TELEGRAM & GAZETTE

went down and wasn't fixed—to do so would have meant shutting down the plant temporarily and that wasn't possible during the high flows of that month. On October 2, the second internal line blew when an old splice let go. "That was something we never considered might happen," said Tom Walsh, the director at the plant. "We had total confidence in that line, but strange things happen."

With the power down, plant operators started collecting partially treated wastewater in unused process tanks and called GE Services, which was required in a service contract to rapidly deliver mobile power generators in such situations. The generators came quickly but not all were online by the time the emergency tanks filled; for an hour and a half, the plant discharged the undisinfected primary effluent into the river. "We should have brought in power generators in September so we could have fixed the first failed line without shutting down," Walsh said. "You have to figure the worst is going to happen."

Officials at the plant in Milbury are now moving ahead aggressively with the scheduled plant improvements. As part of the plan, the entire electrical system will be rebuilt and two new standby generators added.

ENCOURAGING SIGNS

Fortunately, incidents like the one in Milbury are rare in New York State and New England. Officials in New York also emphasize that, despite the problems with sewage releases around Manhattan, the blackout in August indicated that most wastewater facilities in the state are prepared for a sudden loss of power. "Less than 5 percent of our wastewater facilities had bypasses," said Joe DiMura, director of the Bureau of Water Compliance in the New York State Department of Environmental Conservation. "That's a tremendous success when you consider we have about 620 municipal wastewater treatment plants in New York."

Part of the reason for that success rate is that many state and treatment plant officials already learned their lesson about the need for backup power. The crippling ice storm in northern New England in 1998, for example, knocked power out in some areas for more than two weeks. "After the storm, a lot of wastewater treatment plants in Maine that had problems came to us for funding through the SRF [State Revolving Fund] program to put in power generation to keep the entire plant going when there was an outage," said Dick Darling, an environmental engineering specialist at Maine's Department of Environmental Protection and a frequent instructor in NEIWPC training courses. The awareness of what can happen during a severe blackout has led Maine to take no chances with new wastewater facilities, especially those located far from alternative power sources. "We just built a plant in a very rural area," Darling said. "It has a backup power system that

The Upper Blackstone wastewater treatment plant in Milbury, Mass., escaped the impact of the August blackout, but suffered its own power outage in October.

could run the plant and the rest of the town, if need be."

As for drinking water treatment plants in the region, power problems are virtually unheard of, and the August blackout revealed one clear advantage of the gravity-fed drinking water networks common in the region: When water travels downhill, electrical pumps aren't needed to move it along. That's why residents of New York City, which relies on a giant gravity-fed system, could still get clean water out of the tap while people in Detroit and Cleveland, which have pump-driven systems, were rushing out to buy bottled water. While Boston wasn't affected by the blackout, the MWRA said after the outage that 90 percent of its water service areas are gravity-fed. Even with zero outside power, the laws of physics would have kept most of the MWRA's core water services intact.

SEARCH FOR SOLUTIONS

However it happens, whether because of a power outage at a pumping station or—more commonly—the overflow of a combined sewer system, the spilling of raw sewage into a waterway has unfortunate consequences. "There are all the metals that go through unattenuated, and they can have a toxic effect on aquatic life. Then there are the solids that go through, sink to the bottom, and cause a problem for the benthic community," said Roger Janson, director of the NPDES Program, EPA Region 1. "It's not good for the environment or public health." During the August outage, New York and Cleveland closed city beaches due to concerns about swimmers coming into contact with disease-causing bacteria and other pathogens. In Newmarket, Ontario, about 1,000 dead fish washed ashore just days after raw sewage poured out of a nearby pumping station that shut down during the blackout.

An outage with such consequences can be beneficial in one sense—spurring needed change. After the August blackout, the head of the Federal Emergency Management Agency ordered a nationwide review of vulnerabilities at water and sewage treatment plants. Both Detroit and Cleveland are considering adding backup power sources at their treatment plants, and in New York, there is renewed pressure to install the legally required generators at the pumping station that had no backup power when it desperately needed it. As NYS DEC's DiMura said, "I think something like [the August blackout] isn't a bad reminder to look at our processes and procedures."

For plants that already have generators, a review of maintenance procedures is a good place to start. Proper maintenance doesn't have to be hard. "A lot of people think they have to test a generator every week, but all you need to do is start it every couple of weeks," said Southworth-Milton's Bertrand. "And you only need to let it run for a couple of minutes." Bertrand and NEIWPC's Don Kennedy offer more detailed advice on the care of emergency generators during a course offered by NEIWPC's Environmental Training Center. That course is expected to be offered again in the spring of 2004. If you're interested, sign up early. After the prominent blackouts of this year, don't be surprised if attendance is high. 💧

Varney continued from page 1

across the nation that have tremendous influence, but when the smaller states in the Northeast work with some of the larger states like Massachusetts and New York, they have more of an impact.

The Northeast states also need to be active and engaged in national organizations such as ASIWPCA [Association of State and Interstate Water Pollution Control Administrators] and ECOS [Environmental Council of the States]. That's sometimes hard to do particularly when you have budget cuts and limited travel dollars. But it's very important to have representation at these organizations' meetings and for the views of New England to be expressed.

BRAYTON POINT

IWR: You've been working for a long time on issues surrounding the Brayton Point power plant in Somerset, Mass. On October 6, your office and the Massachusetts Department of Environmental Protection issued a new water discharge permit for the plant. The permit requires Brayton Point to reduce its heated water emissions by 96 percent and cut its water intake by 94 percent. How do you see this process playing out?

Varney: I think the owners [USGen New England, a subsidiary of PG&E's energy unit] will appeal. It's been very clear to us from the beginning that unless we wrote a permit that they agreed with, they would appeal.

The issue with Brayton Point is that the permit is driven by science. The plant draws nearly one billion gallons of water from Mount Hope Bay every day for cooling and then discharges it back to the bay at high temperatures. The bay is very shallow, and that's an important point. It's about 15 feet deep, so the combination of the thermal discharge and the water intake has had a very significant negative effect on the bay's health. The company says they're being blamed for all of the problems of Mount Hope Bay, but we're not suggesting that. What we have noticed is the significant decline in the fish population that coincided with a significant increase in the plant's intake and level of discharge.

IWR: You've made it a part of your approach to encourage private industry to work as a partner in these types of situations. It doesn't look like that's the case here.

Varney: No, and this is a very large power plant. It's the largest in New England. Given that it's bankrupt, the company is obviously trying to minimize its cost of compliance, despite the fact that this one plant is highly profitable. [USGen New England and PG&E's energy unit are both reorganizing under protection of Chapter 11 of the federal bankruptcy code.] The plant's been a cash cow. But given the bankruptcy, it's only natural for them to contest the permit.

I also want to emphasize that EPA didn't independently decide what went in this permit. We had consultants involved in reviewing the information. And there was very close collaboration with the environmental agencies in Massachusetts and Rhode Island. We all reached a consensus on what should go in the permit.

IWR: That collaboration would seem to put you on pretty solid footing as you proceed through the appeals process.

Varney: Right.

WATER QUALITY MONITORING

IWR: In EPA's *Draft Report on the Environment 2003*, it says, "The way in which the nation collects water quality data does not support a comprehensive picture of watershed health at the national level." What steps do we have to take to improve this comprehensive picture?

Varney: It's a very important issue for the region. For

many years, I complained that there was not enough money spent on water quality monitoring and that EPA needed to provide more flexibility through its funding to the states to increase the amount of water quality monitoring conducted in each state. I've also been a strong advocate of volunteer monitoring programs. While I was in New Hampshire, we were able to obtain some federal funding to buy water quality monitoring equipment for use by river and watershed organizations, which provided the equipment to volunteers. We can not only use volunteer monitoring to observe trends over time—to be able to answer the question of whether a water body is getting cleaner—but also to identify areas where there are problems that we didn't know about. Having a network of volunteers to supplement the work of EPA and the states is absolutely critical, and we need to continue our efforts to strengthen this network.

ENVIRONMENTAL JUSTICE

IWR: Another priority of yours for a long time has been environmental justice, which basically means that everyone, regardless of race, culture, or income, should enjoy the same degree of protection from environmental and health hazards. This issue first came into prominence in the early 1990s, amid concerns that environmental risk was higher in racial minority and low-income populations. Have we made progress since then? Where do we still need to increase our efforts?

Varney: Frankly, we made very limited progress during the 1990s, and as head of New Hampshire's environmental agency, I felt EPA was moving too slowly on the issue. I established an environmental justice policy at the New Hampshire DES, which made it one of the first, if not the first state environmental agency to establish or adopt such a policy. But I had to plead with EPA to create a workgroup at the regional level to convene a group of state environmental agency representatives to get together once a quarter to collaborate on environmental justice programs and discuss how to address the issue proactively in New England.

Since I joined EPA New England, we've developed an environmental justice action plan that is now being implemented. One of the elements of the plan is mandatory environmental justice training for every EPA employee with the goal of integrating environmental justice into all of our work, in the same way that we integrate pollution prevention into all of our work. We have also strengthened our relationships with the environmental justice community and increased funding on projects in designated environmental justice areas.

On Saturday [Oct. 4] for example, I was at a press event in Boston helping to dedicate Chelsea Urban Wild Park, on the Chelsea waterfront. Later in the day, I was in Everett [Mass.] where a new elementary school has been built on a brownfields site. So we're helping to turn blighted, contaminated properties into major community assets. We're providing desperately needed green space and access to the waterfront, and it's all being done in close collaboration with community activists and municipal officials.



Bob Varney (back row, second from right) with former Acting EPA Administrator Marianne Horinko and Boston Mayor Thomas Menino at the grand opening of the Chelsea Urban Wild Park on Oct. 4.

COURTESY OF EPA

NEIWPCC'S ROLE

IWR: Finally, how can we at NEIWPCC better help EPA meet its goals?

Varney: I think NEIWPCC's doing the right things, I honestly do. It's a very active organization that we've worked very closely with, and we're pleased with the work it's been doing. The key is to continue the momentum. NEIWPCC brings the states together in various program areas, and there's a great deal to be gained by working in a collaborative way. It's an organization that's a very important part of the overall environmental management system in the Northeast. 💧

WELCOME ABOARD**Four New Appointees to NEIWPCC's Roster of Commissioners**

by John Murphy

Four new names have been added to the list of 35 Commissioners who direct and oversee the work done by NEIWPCC. Each of NEIWPCC's seven member states has five representatives on the Commission; they are appointed by their state governors or, in some cases, assume the post due to their position.

Governor Craig Benson of New Hampshire appointed three new Commissioners. **Robert Cruess** is the president and CEO of TF Moran, Inc., a firm specializing in civil engineering, surveying, landscape architecture and land planning. He is also a Water Commissioner for the city of Manchester, N.H. Cruess is a former national director of the Water Environment Federation, and has also served as a principal with Hoyle Tanner Associates and as an assistant chief engineer with the N.H. Department of Environmental Services.

Frank Thomas is the director and chief engineer of the Manchester, N.H., Department of Public Works. He's been with Manchester DPW since 1972, and has more than 35 years of highway and environmental experience. Thomas is a member of the American Society of Civil Engineers, Water Environment Federation, American Public Works Association, and New Hampshire Public Works and Municipal Engineers Association.

Robert A. Weimar is a senior vice president at Camp Dresser and McKee, Inc. (CDM), a consulting, engineering, construction, and operations firm helping public and private clients improve the environment and infrastructure. Weimar has more than 30 years of experience in the municipal water and wastewater industry. He has a bachelor's degree in civil engineering from the University of Massachusetts and is a diplomat of the American Academy of Environmental Engineers.

Governor John Baldacci of Maine appointed the fourth new commissioner, **Andrew Fisk**. He is the director of the Bureau of Land and Water Quality at Maine's Department of Environmental Protection. Fisk has worked in state government since 1997, serving in planning, policy, management, and administrative positions at Maine's Department of Conservation and the Department of Marine Resources. He has master's degrees in soil science and city and regional planning, as well as an interdisciplinary doctorate in environmental science and public policy and planning from Rutgers University. 💧

John Murphy (jmurphy@neiwpc.org) is a student at UMass Lowell and a NEIWPCC intern.



A Review of Significant Water-Related Legal Developments

by Beth Card

Focus on Amphibians in Wetlands Permit Case

A long legal saga involving the spotted salamander has come to a close. The case began in May 1999 when Avalonbay Communities, Inc., applied to the Town of Wilton (Conn.) Inland Wetlands Commission for an inland wetlands permit. Avalonbay intended to build a 119-unit apartment complex on a 10-acre piece of land it owned in Wilton, and the company wanted to conduct regulated activities in areas adjacent to the designated inland wetlands on the property.

After reviewing Avalonbay's application, the Commission denied the permit, citing the potential impact to the wetlands buffer area. Although the proposed development would take place on upland areas of the property outside of the wetlands area, the Commission felt it would inevitably destruct the habitat of the spotted salamander, which would accelerate the decline in the population of the species. The spotted salamander relies upon wetlands for a portion of its life cycle, particularly during its breeding season. During the permit review process, the Commission retained a herpetologist, who reported finding four spotted salamanders on the property.

Avalonbay appealed the decision to Connecticut's Superior Court, which dismissed the appeal. So the company moved on to the state's Supreme Court, where its legal odds seemed considerably better. The Supreme Court had previously established that a municipal wetlands commission may regulate activities taking place outside the wetlands boundaries and upland review areas but only if the activities are likely to impact the wetlands themselves. This prior opinion left the salamander habitat on Avalonbay's property unprotected.

The Supreme Court heard arguments in the case in April, and on October 14, issued its decision. In her

opinion, Justice Vertefeuille wrote that the Superior Court had improperly agreed that the Commission had correctly exercised its jurisdiction by denying Avalonbay's permit. The judge said that because the legislature had not provided for protection of wildlife or biodiversity in its statutory definitions of "wetlands" and "watercourses" and because the Commission's authority does not extend beyond the operative language of the statute, the Inland Wetlands permit should not have been denied. The Supreme Court reversed the judgment and remanded the case to the trial court with direction to vacate the permit denial.

The Supreme Court decision will only provide additional support to Avalonbay in a separate but related case. The company is suing the Milford Inland Wetlands Agency and Planning and Zoning Board, which had denied a similar project on the grounds of protecting Eastern Box Turtle habitat.


Impact of Court Decision in Biosolids Case

The verdict in a closely watched Georgia case involving biosolids has been cited in support of a recent petition calling on EPA to issue a moratorium and ban on the land application of treated sewage. The Center for Food Safety, in conjunction with a number of other organizations including Citizens for a Future New Hampshire and the Resource Institute for Low Entropy Systems, filed the petition on October 7. It requires a formal action or response by EPA within 60 days.

The case involved Carolyn and Bill Boyce, owners of the Boyceland Dairy near Augusta, Ga., who claimed some 300 of their dairy cows died as a result of eating hay grown in their fields that were treated with biosolids. (Biosolids is a term often used to describe sewage sludge that has received treatment to standards

set forth by EPA allowing for its beneficial re-use.) At the trial in Superior Court of Richmond County, a jury heard two weeks of testimony, which included debate over what caused the death of the cows and whether that cause can be linked to the land application of biosolids. Attorneys for the Boyces pinned the blame on metals and other toxic materials in the more than 23 million gallons of sludge that came from the Messerly Wastewater Plant in Augusta. The plaintiffs implied that EPA 503 Regulations are either ineffective or were improperly enforced by the city. The jury ultimately awarded Boyceland Dairy \$500,000, significantly less than the \$12.5 million sought by the family.

Since the verdict, we've not only seen the petition for a moratorium filed, but also a compelling letter written to EPA Assistant Administrator of Water, Tracy Mehan, by James Ellison, a defense attorney for Augusta. Weighing in on the case as it impacts EPA's response to the petition, Ellison described how Boyceland's case was initially dismissed from Federal District Court in response to a motion for summary judgment by the defendant, forcing Boyceland to seek retribution in Superior Court. Ellison provided a detailed analysis of why he feels the expert testimony delivered by the plaintiffs failed to link the death of the cows to biosolids. Ellison said the final result of this case has yet to be determined as several post-trial motions have already been filed on grounds that there was a lack of sufficient evidence to support the Boyces' claims. Ellison urged EPA officials to deny the petition.

A coalition of water quality groups and 16 major municipal organizations has also sent a letter to EPA calling on the agency to reject the petition. The coalition argues, among other things, that the beneficial use of properly managed biosolids through land application is a safe and time-tested recycling practice and that the safety of beneficial use of biosolids has been underscored by decades of scientific work. In a related move, EPA has announced that it will not regulate dioxins in land-applied biosolids (see below). 

Beth Card (bcard@neiwppcc.org) is NEIWPPCC's director of water quality programs.

DIOXIN DECISION

EPA Weighs Risks and Decides Not to Regulate Dioxin in Land-Applied Biosolids

by Michael Jennings

The long-awaited announcement came on October 17: EPA said it will *not* regulate dioxins in land-applied biosolids. After five years of study, the agency determined that dioxins from biosolids do not pose a significant risk to human health or the environment. For years, farmers have been safely applying biosolids (which are created during the wastewater treatment process) as fertilizer to sustainably improve and maintain productive soils and stimulate plant growth. But concerns about the presence of dioxins in biosolids prompted EPA to take a closer look at the potential impact.


The term dioxin refers to a family of toxic chemicals that includes polychlorinated biphenyls (PCBs). The dangers they pose are clear. Studies have shown that, in animals, dioxins can cause cancer and have a variety of non-cancerous effects; there is strong evidence to suggest humans are susceptible to the same toxic effects. It's also clear how dioxins can end up in biosolids. Most dioxins are trace-level byproducts of combustion and industrial chemical processes, and can show up in the sewage flowing into wastewater treatment plants. In the course of wastewater treatment,

sewage sludge is generated, which treatment plants further process to make the nutrient-rich organic materials known as biosolids.

In evaluating the potential human exposure to dioxins from biosolids—and the risks associated with that exposure—EPA examined the impact on the most highly exposed population—those people who apply biosolids as a fertilizer to their crops and animal feed, and then consume their crops and meat products throughout their lifetime. EPA's analysis showed that, in this group, only 0.003 new cases of cancer could be expected each year or only 0.22 new cases of cancer over a span of 70 years. The cancer risks are even lower for the general population. Regrettably, there are currently no dependable methods for calculating possible non-cancer risks to either a highly exposed farm family or the general population.

EPA also performed a Screening Ecological Risk Analysis (SERA) on the risks to wildlife due to exposure to dioxins from biosolids. While there is some uncertainty in the SERA estimates, the analysis indicates that wildlife should not be significantly impacted as a result of exposure to dioxins in land-applied sewage sludge.



Additional information pertaining to EPA's decision not to regulate dioxin in land-applied biosolids can be found at the Web sites for the EPA Office of Wastewater Management (www.epa.gov/owm) and the EPA Office of Science and Technology (www.epa.gov/waterscience). 

ROUND TWO

Second NEIWPCC Survey of Oxygenates Shows Some Shift in Standards

by Kara Sergeant

A NEIWPCC survey shows some states are taking new steps to protect soil and groundwater from fuel oxygenates that may spill from leaking underground storage tanks (LUSTs)—but states are still approaching the problem in many different ways. The survey, which was developed and conducted for NEIWPCC by Ellen Frye with the help of a grant from the EPA Office of Underground Storage Tanks, marked the second time NEIWPCC has taken a close look at state experiences with one of the most commonly used fuel oxygenates, methyl *tertiary*-butyl ether (MtBE). In both surveys, NEIWPCC received responses from all 50 states, providing a comprehensive picture of how states are coping with this complicated issue.

The first survey, conducted in 2000, examined how states remediated soils and groundwater contaminated with MtBE, and the responses revealed sizable gaps in the collective responses to various issues associated with MtBE in the environment. Refiners add oxygenates to gasoline to comply with the federal reformulated gasoline (RFG) program, which has helped reduce emissions of motor vehicle pollutants. But studies have shown that MtBE poses a public health threat when present in high levels in drinking water supplies.

In the survey conducted this year, NEIWPCC broadened the focus to examine state experiences not only with MtBE but also with other oxygenates, such as

tertiary-butyl ether (TBA), ethanol, *tert*-amly methyl ether (TAME), ethyl *tertiary*-butyl ether (EtBE), and diisopropyl ether (DIPE). The new survey showed a slight increase in the number of states that have some type of an action level, cleanup level, or drinking water standard for MtBE (see table). Some are taking similar steps for the other oxygenates of concern, but given these weren't covered in the 2000 survey, it is not possible to identify a trend. Methanol was added to the list in the table because seven states listed this oxygenate under "other" in the survey.

Overall, the survey revealed that while many states have made a shift in levels toward increased protectiveness over the past three years, the shift has not been dramatic. Fifteen states are considering making changes to their action and cleanup levels, primarily to lower existing MtBE standards or add standards for other oxygenates. There also continues to be a large variability among the states in cleanup, action, or drinking water levels for the oxygenates. The lack of a federal Maximum Contaminant Level (MCL) for oxygenates and a shortage of health and toxicity information helps explain the differences. As one respondent noted, "If MtBE is considered by EPA to be a national issue, then it ought to be a national priority.... They need to establish a reference dose, a cancer potency factor, or an MCL for all of the oxygenates." In 1997, EPA issued an advisory recommending that MtBE concentrations in drinking

Numbers of States with Oxygenate Action Levels, Cleanup Levels, or Drinking Water Standards. (Comparison data for 2000 and 2003 available only for MtBE.)			
OXYGENATE	2000	2003	PROPOSED (2003)
MtBE	38	42	1
TBA	NA	7	3
Ethanol	NA	4	0
TAME	NA	4	1
ETBE	NA	3	2
DIPE	NA	6	2
Methanol	NA	7	0
Other Anything detected would trigger action/ must be reported	NA NA=Not Available	3	0

water be in the range of 20 to 40 micrograms per liter or below.

The survey also showed that while MtBE is not the main factor driving cleanup or investigative activities at LUST sites, most states are sampling and analyzing for it at the sites, and undertaking remediation of it, even without standards. These actions are less likely for the other oxygenates.

The complete results and executive summaries of the 2000 and 2003 surveys are available on NEIWPCC's Web site (www.neiwpcc.org).

Kara Sergeant (ksergeant@neiwpcc.org) is a NEIWPCC environmental analyst and coordinator of our Underground Storage Tanks Workgroup.

PROFILE

A Conversation with JETCC Coordinator Leeann Hanson

by Stephen Hochbrunn

It's pretty easy to figure out how Leeann Hanson would fare on a career test. In fact, you'd have to assume there was something wrong with the test if it didn't show she should be in a job where she's coordinating multiple projects, organizing and managing countless details, and working seamlessly with many different types of people. Because that's what Hanson likes to do, has always done, and does extremely well.

Hanson, 42, began working for NEIWPCC in 1992. Three years later, she took over as Coordinator of the Joint Environmental Training Coordinating Committee (JETCC), which NEIWPCC manages under a contract from Maine's Department of Environmental Protection. Traditionally, JETCC has focused on organizing and conducting training programs for Maine's wastewater treatment plant operators, but under Hanson's guidance, its role has expanded in recent years. She spoke with us from the JETCC office in South Portland, Maine.

IWR: This has been a challenging year for you and JETCC, hasn't it?

Hanson: Absolutely. A fair portion of the money we use to conduct wastewater training comes from the State of Maine, and with the tight budget, the state cut its annual support for our programs by 75 percent. We're compensating by increasing business development in other environmental media. For example, we've begun training contractors in erosion control. We're also taking on a variety of one-time projects, like helping to coordinate the Stormwater Management in Cold Climates Conference [held November 3-5 in Portland, Maine]. It's simply a matter of diversifying our sources of revenue, which can be a good thing. For example, we'd never been

involved in anything of the magnitude of the Stormwater conference, and it got us involved with a number of other groups and agencies that we hadn't worked with before. Of course, everyone had a different perspective on how to organize the sessions and pull together all the components for such a large production. That was a challenge, an interesting one.

IWR: What do you like best about your job?

Hanson: Meeting the different people from different walks of life, from government officials and managers at consulting firms to the real grass-roots hard-working people in the labor force who are rarely recognized for the work they do. I enjoy talking to the people in the field who might tell me they're being told to do something but not getting enough direction on how to do it. I find out what they need, talk to the managers or regulators who are telling the workers what they want them to do, and set up a class that meets everyone's needs. It's really what JETCC has been doing for nearly 20 years. We're a low-cost, easily accessible resource for government agencies and interested parties in Maine to call upon to create environmental training programs and deliver them.

IWR: What did you do before joining NEIWPCC?

Hanson: I was born and raised in Brewer, Maine, and got a bachelor's degree in journalism and speech communications from the University of Maine. Then I did a variety of things, like working as a labor contractor in Portland and in New York. For a while, I worked as a faculty liaison in the film department at New York University. I've always been an information gatherer and an organizer, always done things that involved coordi-

Leeann Hanson, JETCC Coordinator



nating projects, whether it was finding workers for jobs or working with the administration and faculty at NYU. But when I came back to Maine in 1992, I knew I wanted to get into environmental and educational work.

IWR: But we understand that when you left New York in '92, you didn't exactly take the most direct route to Maine.

Hanson: Well, the trip actually took about three months. At the time, I had a boyfriend who was from Spain, and we decided to do a cross-country trip together in a Volkswagen. It was like our last hurrah, because we both knew he was going back to Spain when it was over. We drove through almost every state, meeting people in places like Idaho who couldn't believe it when they met us, because Maine was so far away and Spain was inconceivable.

IWR: Anything particularly memorable?

Hanson: The Pacific Northwest. It was like Maine, only the mountains were bigger, the waves were bigger, the beaches were bigger, the trees were bigger, the sky was bigger—everything was bigger.

IWR: Would you do it again?

Hanson: Oh, definitely—only with somebody else.

(Editor's note: An article on the Stormwater Conference will appear in the next issue of IWR.)

HOW TO "PROVE" A TECHNOLOGY

NEIWPCC Studying Approaches Used to Evaluate New Onsite Systems

by Tom Groves

In virtually every field, new technological developments are occurring at a rapid pace. It's no different in the world of onsite wastewater treatment systems (commonly called septic systems). Onsite wastewater regulators and regulatory technical review panels across the country find themselves evaluating a growing number of manufacturers' requests for technology approvals. Unfortunately, there's no national consensus about the quantity and quality of data necessary to determine that a new technology is a "proven" technology. That should soon begin to change, however, thanks to a new NEIWPCC study.


In July, NEIWPCC entered into a cooperative agreement with the National Decentralized Water Resources Capacity Development Project, which is administered by Washington University in St. Louis, to conduct a study entitled "Variability and Reliability of Test Center and Field Data: Definition of Proven Technology from a Regulatory Viewpoint." It's an innovative research project that will compare the differences between test center data and real world data for onsite systems. As part of the project, NEIWPCC will develop tools that can assist regulators with making decisions based on this data. NEIWPCC staff along with a national advisory committee, which includes regulators from Pennsylvania, New Jersey, and Massachusetts, will also

develop a model for evaluating data on three existing technologies with proven test and field data for biochemical oxygen demand and total suspended solids. It is hoped that this model will be useful to all state and local onsite wastewater regulators.

The project, which will run through the end of July 2004, comes at a critical time. Currently, there is a wide range in the type of technical support documentation that manufacturers of new onsite systems submit when seeking regulatory approval for a product. Some companies go to the extent of providing peer-reviewed journal articles with attached third party research reports, while others simply claim "Our system works just like Company X's system that you already approved" and provide little or no supporting third party research. At the same time, states and Canadian provinces are remaking their entire rules on onsite systems to reflect more performance-based approaches. The growing concern for the environmental aspects of onsite wastewater systems is causing a shift in the rule-revision process from the traditional focus on disposal to a greater emphasis on treatment. Enabling states to better evaluate these new treatment technologies is a key goal of the project.

Fortunately, one issue the project does not have to address is how to generate adequate data. The onsite

wastewater program arena is rich with existing data sources, including test centers and organizations; university test facilities; vendor sampling; and state, county, and local monitoring. The problem isn't a shortage of data, but rather the lack of a way to assemble valid high-quality data into unified sets needed to confirm statistical trends and relationships. This new NEIWPCC project will help develop these statistical relationships, which will in turn optimize field-testing protocols, reduce unnecessary and costly testing, help predict field performance levels, and allow for more uniform acceptance of new technologies by states, counties and local onsite oversight and implementing agencies.

The research will also help develop a decision support system that integrates test center and field data to correctly predict field performance, and it will provide the regulatory and manufacturing communities with common sense guidance on how much data of what quality is needed to accept a technology as "proven." As the onsite program and industry moves towards a performance-based code and approach, the research will provide a baseline understanding of how to assemble, assess and interpret new and existing data sets to maximize their benefit to an onsite program. 

Tom Groves (tgroves@neiwpcc.org) is NEIWPCC's director of wastewater and onsite programs.

IF YOU BUILD IT (RIGHT), THE FROGS WILL COME

NEIWPCC's Wetlands Workgroup Hears Mitigation Success Stories

by Rebekah Lacey

So, what is the right way to create a wetland? As reported in the last issue of *IWR*, the practice of creating new, man-made versions of wetlands devoured by development is often not done successfully. But it is possible to get it right. On October 2, members of NEIWPCC's Wetlands Workgroup heard presentations about two wetland creation projects carried out by the New Hampshire Department of Transportation (NH DOT).

Al Garlo of Normandeau Associates, a consulting firm hired by NH DOT, discussed the Pine Road mitigation site, a 320-acre former sand-and-gravel pit at which 100 acres of wetland were created as part of the mitigation for wetland impacts caused by widening a section of Route 101. Mark Hemmerlein, an environmental manager at NH DOT, discussed the Nottingham site, a four-acre wetland created as mitigation for wetland impacts that occurred as a result of improvements to Route 4. Some common themes about key elements of successful mitigation sites emerged from the two presentations, including pit-and-mound microtopography and the control of invasive species.

PIT-AND-MOUND MICROTOPOGRAPHY

In natural wetlands, elevated "mounds" are created in various ways, such as by the roots of overturned trees, by stumps of dead trees, or by certain plants such as tussock sedges. These mounds support plants, such as many of the larger trees, that need slightly drier conditions, while plants adapted to very wet conditions grow in the "pits" between the mounds. Each mound or pit may be as small as a few feet across. In portions of both the Pine Road and Nottingham mitigation sites, crews did not simply grade the topsoil to certain elevations



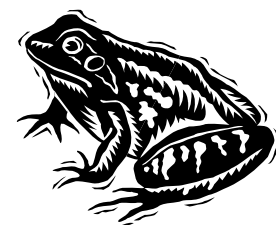
COURTESY OF MARK HEMMERLEIN, NH DOT

Under construction: In July 1998, crews performed rough grading at the 4-acre site in Nottingham, N.H., that would eventually be turned into a thriving, man-made wetland.


and slopes, but actually shaped it into pits and mounds to more closely mimic a natural wetland. According to Garlo, the mounds created a drier environment for the trees planted on them and helped the trees flourish, solving the problem of the low survival rate often seen for young trees planted at created wetlands.

VIGILANCE AGAINST INVASIVE SPECIES

The presence of invasive species such as Phragmites (common reed) and purple loosestrife is a common problem in created wetlands. Both Garlo and Hemmerlein stressed the importance of controlling the soil brought in to the site to ensure it does not contain the seeds of these plants. Garlo also said that he recommends weeding and herbicide applications if necessary



in the first few years post-construction until a thriving, diverse native plant community is established.

The Wetlands Workgroup will be devoting one meeting a year to discussing compensatory mitigation, and the October 2 meeting was the first of these annual sessions. (Compensatory mitigation involves not only creating new wetlands, but also restoring, enhancing, and preserving existing wetlands to compensate for those filled by development) The rest of the meeting included broader discussions about other factors that contribute to mitigation success. Members discussed mitigation banking, state and federal policy updates, accounting for temporal losses, and the use of preservation in a mitigation plan. The meeting continued the momentum from other recent regional efforts to improve mitigation, such as the April meeting held in Chelmsford, Mass., sponsored by NEIWPCC and the New England district of the U.S. Army Corps of Engineers (see the Summer 2003 issue of *IWR*). NEIWPCC hopes the information sharing and discussions at these meetings will contribute to improving the effectiveness of compensatory wetland mitigation in the region. 

Rebekah Lacey (rlacey@neiwpcc.org) is a NEIWPCC environmental analyst and coordinator of the Wetlands Workgroup.

IN THE SPOTLIGHT

At this year's Water Environment Federation meeting in Los Angeles in October, U.S. EPA recognized five New England wastewater treatment facilities for exemplary performance. The facilities were among just 17 nationwide to receive national Operations and Maintenance Excellence Awards. The plant in **New Canaan, Conn.**, was recognized with a second place award in the medium-sized advanced treatment category. In the small advanced category, the plant in **Johnson, Vt.**, received a second place award. The plant in **South Kingstown, R.I.**, won second place in the category for medium-sized secondary treatment plants. In the category for small secondary plants, the facility in **Antrim, N.H.**, won first place. The **Lisbon, N.H.**, wastewater treatment plant received first place honors in the "most improved" plant category.

Susy King, a NEIWPCC intern and graduate student at Duke University's Nicholas School of the Environment and Earth Sciences, is using the work she is conducting for NEIWPCC as a basis for her master's project. King is working with NEIWPCC's Laura Blake on the Connecticut River Nitrogen Reduction Project, an effort to develop an Upper Connecticut River Basin Total Nitrogen Reduction Strategy to support the effort to meet water quality goals for Long Island Sound. She has been analyzing results from the New England SPARROW (Spatially Referenced Regressions On Watershed Attributes) Model for the Connecticut River Watershed. Upon completion of her master's program at Duke in June 2004, King will join NEIWPCC as a full-time environmental analyst.

Recent NEIWPCC hires: **Matthew Griffiths** is an environmental analyst in Albany, N.Y. **Rebecca Weidman** is an environmental analyst at NEIWPCC headquarters in Lowell, Mass., and the new coordinator of our Nonpoint Source Pollution Workgroup. Welcome aboard!



Tom Varney (seen on the right in photo above) has received the Maine Department of Environmental Protection Employee Service Award. Each year, the governor of Maine presents an Employee Service Award to just one person from each of the state's departments and agencies. Varney works in ME DEP's Bureau of Remediation and Waste Management, and helps teach the tank truck rollover classes coordinated by Maine's Joint Environmental Training Coordinating Committee, which is managed by NEIWPCC. In this picture, Varney is explaining the various systems in a tank truck's hatch cover to an attendee at the September rollover class in Skowhegan, Maine (see article on page 3).

In an email exchange, Varney discussed the award in typically humble fashion. "I'm proud to have received it," he wrote, "but Carl [Allen, an ME DEP colleague] and a lot of other people in this Bureau certainly deserve the award more than me. If I did anything to deserve it, it would have to be the mostly positive outlook that I've maintained for 30 years." No doubt Varney's unflagging dedication to his work and eagerness to share his extensive expertise also played a role in the decision to honor him with this prestigious award.

MEETING A NEED *NEIWPCC Manual to Aid N.H. Drinking Water Systems*

by Denise Springborg

In New Hampshire, most public water systems serve fewer than 500 people and are operated by people working part-time, for little or no pay. While these operators typically do a fine job, they're not full-time drinking water professionals, and many have expressed an interest in a self-help book designed specifically for their needs—a practical guide to understanding and managing their water systems. In about a year, the operators will get their wish.

In the fall of 2004, NEIWPCC and the New Hampshire Department of Environmental Services will publish a manual that will cover a wide variety of topics related to operating very small groundwater systems. The manual has been in the works since 2000, when NEIWPCC began working with NH DES's Water Supply Engineering Bureau to develop the guide. Various ideas for organizing and producing the manual have been explored, and during the 2001 and 2002 Annual N.H. Drinking Water Expos, NEIWPCC interviewed many small water system operators to determine their specific needs.

The completed manual will include chapters on protecting groundwater, operation and maintenance of various well types and pump stations, water conservation methods, treatment techniques, sampling methods, financial management, and what to do during emergencies. Once it is published, NEIWPCC and NH DES will hold training sessions to promote the guide and its use.

For more information on the manual, contact Denise Springborg, NEIWPCC's director of drinking water programs, at dspringborg@neiwpc.org.

FROM THE HILL

Water-Related News Out of Washington

by Beth Card

EPA: JOINING THE CABINET?

It may seem like the U.S. Environmental Protection Agency has always been around, but in fact, it's a fairly young agency. In 1970, the Nixon Administration and Congress, acting in response to increased public demand for cleaner water, air and land, worked together to establish the EPA. But unlike other young agencies such as the Department of Energy, EPA was not established with Cabinet-level status. While past presidents have welcomed EPA administrators to participate in Cabinet meetings, the establishment of EPA as a Cabinet-level agency would likely raise its status in the eyes of the public and further highlight the nation's commitment to environmental protection.


Such a change, however, does not come easily in Washington. The past three administrations, including the current Bush Administration, have tried unsuccessfully to bring EPA into the Cabinet. The failures are generally blamed on problems with the drafted legislation associated with the implementation of the bills. In 1994, for example, Republicans attempted to include a provision calling for EPA to conduct cost-benefit analyses for all regulations that the agency proposed.

Proponents of the idea haven't given up. This year, two separate pieces of legislation were filed, both for the purposes of raising EPA to the Cabinet level. Representative Doug Ose (R-Calif.), chairman of the House Subcommittee on Energy Policy, Natural Resources and Regulatory Affairs, sponsored one of the bills, HR 2138. It would reorganize EPA's structure from its current program offices to an organization focused on broad themes consistent with the Bush administration's long-term plans. The other bill, HR 37, sponsored by Representative Sherwood Boehlert (R-N.Y.), would not make any internal structural changes or mandates, but simply change the status of the federal agency. The Bush administration has indicated it will not express a preference for either bill, but House Democrats voiced concerns with Rep. Ose's bill, saying the vagueness of its mission statement could lead to environmental risks. No timetable has been established for the finalization of either bill. The most recent floor action took place during a subcommittee meeting on September 9.

GAO INVESTIGATION OF SWANCC GUIDANCE COMPLIANCE

Following the much-debated Supreme Court decision in

2001 concerning federal regulatory authority over isolated wetlands (*Solid Waste Agency of Northern Cook County (SWANCC) v. Army Corps of Engineers*), the Corps and EPA jointly issued guidance to field offices. The gist of the guidance was that reviews of isolated wetlands cases would no longer be done in field offices; rather, they would take place at agency headquarters in Washington. On this issue for a change, both developers and environmental organizations are on the same side, expressing similar concerns about the aftermath of the SWANCC decision and whether the guidance will be implemented consistently from region to region. There are also concerns that field offices will no longer be involved in the reviews of these isolated water systems.

Those concerns were not ignored in Washington. The General Accounting Office, which is the investigative arm of Congress, is now reviewing how the SWANCC decision and subsequent federal guidance are being interpreted and implemented. Congressman Ose requested the investigation on the grounds that there has been an inconsistent and, in some cases, complete lack of implementation of the guidance. 

Beth Card (bcard@neiwpc.org) is NEIWPCC's director of water quality programs.

EPA ENFORCEMENT OF CWA UNDER SCRUTINY

Congressional Hearing in Massachusetts Focuses on Agency's Actions Against Polluters

by Stephen Hochbrunn

Members of the House Subcommittee on Energy Policy, Natural Resources and Regulatory Affairs left Washington behind on Oct. 15 to hold a field hearing in Ipswich, Mass. The choice of venue carried symbolic weight; Ipswich sits at the mouth of the Ipswich River, which has been named one of the nation's most endangered rivers. The hearing focused on whether U.S. EPA is on the right track in enforcing the Clean Water Act, and much of the talk concerned an internal EPA report that was leaked in June to *The Washington Post*.

The report, completed by EPA's Office of Enforcement and Compliance Assurance (OECA) in February, analyzed the office's performance with regard to National Pollutant Discharge Elimination System (NPDES) "majors"—those facilities that are major dischargers of wastewater. EPA critics seized on several findings. For example, from fiscal year 1999 to fiscal 2001, there was a 45 percent decrease in formal EPA enforcement actions against majors. At the hearing, J.P. Suarez, EPA's assistant administrator for OECA, attributed the drop to his office's shift in resources to the wet weather priority area, which includes combined sewer overflows (CSOs). He also said, "Data show that 49 percent of facilities recover from SNC [significant non-compliance with the Clean Water Act] without formal action."

EPA Region 1 Administrator Bob Varney testified that New England is moving aggressively to complete CSO mitigation. "Of the 120 CSO communities in New England, over 80 have been addressed by an administrative or judicial enforcement action," Varney said. Under questioning from U.S. Representative John Tierney (D-Mass.), Varney stressed that flexibility is important when trying to bring sewer systems into compliance. "We give communities a realistic time frame to get the work done," he said. "They can defer some of the improvements that would be less cost-effective in terms of the impact on public health."

The EPA report also found that the fines paid by SNC violators were modest, averaging \$5,000-\$6,000.



John P. Suarez, EPA's assistant administrator for Enforcement and Compliance Assurance, at the hearing in Ipswich

When Rep. Tierney questioned the impact that such a fine would have on a major polluter, EPA's Suarez said, "The numbers bear further scrutiny. We're going back to find out if there's appropriate

escalation [of fines] for repeat offenders."

Some of the most pointed comments of the hearing came during a discussion of OECA's Facility Watch Lists, which are used to identify, track, and pursue facilities that have repeatedly violated environmental laws. Suarez cited the lists as an example of how his office is implementing a recommendation in the February report that called for OECA to target SNCs with the worst compliance records. Several witnesses questioned the decision to keep the lists private. "Until you make the data public, there won't be enough pressure on the facilities to address the problems," said Dr. Shelley Metzenbaum, director of the Environmental Compliance Consortium. Suarez and others argued that by keeping the lists private, there was a better chance of working with facilities to make the necessary changes. "If [a list] goes public, the facilities will take it as the end of the discussion, rather than the beginning of it, which it should be," said Steve Thomson, executive director of the Oklahoma Department of Environmental Quality.

Speaking after the hearing, Tierney said he'd continue to monitor OECA's response to the internal report. "My feeling is, historically, the federal government has played a bigger role in enforcement, and I think we have to get back to that," Tierney said. "It's important to know there are meaningful penalties." But Suarez, in an interview after his testimony, cautioned against using the report to draw "false conclusions" about his office's work. "There's good work being done by all of our officers," Suarez said. "We're working in a thoughtful and productive way—and the result is going to be cleaner water." 💧

MOUNTAIN SUMMIT ASIWPCA Conference Addresses Challenges

by Beth Card

The setting for this year's annual conference of the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) may have been idyllic, but the topics on the agenda were unmistakably serious. Held in August in the mountain town of Whitefish, Montana, the conference attracted representatives from almost all of the state and interstate water programs as well as EPA staff. Attendees discussed a wide range of issues related to water quality programs, technical challenges, and national policies.

During a session held by the Monitoring and Standards Task Force, ASIWPCA members and EPA staff addressed a key topic—the unexpected inclusion in last year's federal budget of a \$4 million line item for water quality monitoring. While that amount is clearly not enough to fully address the national need for increased monitoring support, task force members viewed the move as a good faith effort by Congress. EPA will use the funds to conduct a nationwide probabilistic monitoring initiative, which will provide Congress with a snapshot of the quality of the nation's waters. EPA will select sampling sites, and the states will receive the funds for conducting the monitoring through the 104(b)3 grant process. The sampling is expected to be conducted next summer, with a final report sent to Congress by the end of 2005. EPA officials hope that by successfully completing this initiative, additional federal support for monitoring programs will follow. NEIWPC is exploring ways to partner with state staff on this issue.

Other sessions at the conference examined technical issues associated with water quality standards programs, nonpoint source programs, permitting initiatives and federal funding. ASIWPCA members also heard the latest on EPA's much-debated Watershed Rule; it appears that right now there is no clear answer as to whether this rule will be released for comment. Tracy Mehan, assistant administrator of EPA's Office of Water, indicated during his speech that the rule may have changed since it was unofficially released earlier this year. 💧

KNOW YOUR ACRONYMS!

Here we go again, with yet another challenge of your ability to define acronyms encountered in the water field. (Hint: Even if you're new to the field, you should already be familiar with three acronyms in this list if you've read this issue of *IWR* closely.)

CMOM

ECOS

MCL

NBEP

RFG

IWR

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CALENDAR OF EVENTS

Please note that NEIWPCC workgroup meetings are designed to foster focused small-group discussions among workgroup members on specific issues. Workgroup members are drawn from state and federal regulatory agencies and NEIWPCC staff. For general information about our workgroups and their points of focus, please visit our Web site (www.neiwpcc.org) or call 978-323-7929.

DECEMBER

- Dec. 2**
New England Bedrock Delineation Studies Meeting
Lowell, Mass.
- Dec. 4-5**
Water/Wastewater Asset Management Workshop
(cosponsored by NEIWPCC)
EPA New England Regional Laboratory,
North Chelmsford, Mass.
- Dec. 11-12**
Northeast Aquatic Nuisance Species (NEANS)
Panel Meeting
Kellogg Environmental Center, Derby, Conn.
- Dec. 11-12**
Regional 104(g) Coordinators Meeting
Sugar Hill, N.H.
- Dec. 12**
NEIWPCC Executive Committee Meeting
Lowell, Mass.
- Dec. 12**
NEIWPCC Residuals Workgroup Meeting
Lowell, Mass.
- Dec. 12**
NEIWPCC UST/LUST State Fund Workgroup Meeting
Lowell, Mass.
- Dec. 15**
NEIWPCC Water Quality Standards
Workgroup Meeting
Lowell, Mass.

JANUARY

- Jan. 13**
NEIWPCC Groundwater Managers Workgroup
Meeting
Lowell, Mass.

- Jan. 15-16**
NEIWPCC Commission Meeting
Lowell, Mass.
- Jan. 19-21**
Annual Northeast Aquatic Plant Management
Society Meeting
Saratoga, N.Y.
- Jan. 22**
EPA Region 1 Quality Assurance Roundtable
EPA New England Regional Laboratory, North
Chelmsford, Mass.
- Jan. 25-28**
New England Water Environment Association
(NEWEA) Annual Conference and Exhibit
Boston, Mass.
- Jan. 27**
Load Reduction Estimation Training
(for NEIWPCC Nonpoint Source Workgroup)
Lowell, Mass.

FEBRUARY

- Feb. 2-4**
Nonpoint Source Management: Implementation at
the Watershed Level (conference cosponsored by
ASIWPCA and EPA)
Austin, Texas
- Feb. 11**
NEIWPCC Onsite Wastewater Task Force Meeting
Lowell, Mass.
- Feb. 24-27**
State Onsite Regulators Conference
Orlando, Fla.

*To check for additions or changes to
this listing, see the Calendar of Events at
NEIWPCC's Web site www.neiwpcc.org.*

KNOW YOUR ACRONYMS ANSWERS

CMOM – Capacity Management, Operation, and Maintenance To understand CMOM, you must first understand another acronym—SSO, which stands for sanitary sewer overflow. SSOs are unintentional discharges of raw sewage from municipal sewer systems; they frequently happen when stormwater inflow and groundwater infiltration cause flows that exceed pipe capacity. Since raw sewage is hazardous, EPA has proposed regulations designed to reduce SSOs at 19,000 municipal sanitary sewer collection systems. The regulations call for the systems to develop and implement CMOM programs to ensure their wastewater collection systems are properly managed, operated, and maintained.

ECOS – The Environmental Council of the States ECOS is a national non-profit association of state and territorial environmental commissioners. While only environmental agency heads can actually be members of ECOS, the council holds an annual meeting each year that is open to the public.

MCL – Maximum Contaminant Level The Safe Drinking Water Act sets MCLs for a variety of contaminants. These enforceable standards spell out the highest level of each contaminant that is allowed in drinking water.

NBEP – Narragansett Bay Estuary Program One of 28 National Estuary Programs in the U.S., the NBEP works to protect and preserve Narragansett Bay, which is located in Rhode Island and southeastern Massachusetts. With a grant from EPA, NEIWPCC supports the NBEP by funding activities such as the publication of the *Narragansett Bay Journal*. NEIWPCC also coordinates and funds the Partnership for Narragansett Bay Watershed Action Grant program.

RFG – Reformulated Gasoline The Clean Air Act requires that RFG be used in cities with the worst ground-level ozone. RFG must contain at least 2 percent oxygen by weight. (Oxygen helps gasoline burn more completely, reducing harmful emissions.) Most fuel providers use MtBE as an oxygenate, which has made RFG a water pollution issue. When gas containing MtBE leaks from underground storage tanks, the MtBE can contaminate drinking water supplies. MtBE may cause cancer if ingested in high doses.

CONTRIBUTIONS TO IWR ARE WELCOME AND APPRECIATED

Please submit articles or story ideas to:

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