



News Release

RI Department of Environmental Management
235 Promenade St., Providence, RI 02908
(401) 222-2771 TDD/(401) 222-4462 www.dem.ri.gov

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Contact: Gail Mastrati 222-4700 ext. 2402
Stephanie Powell 222-4700 ext. 4418

DEM-SPONSORED TRAINING FOR TWO WASTEWATER PLANTS BRINGS LARGE DECREASES IN THE AMOUNT OF NITROGEN DISCHARGED INTO RI WATERS

PROVIDENCE – The Department of Environmental Management announces that nitrogen discharges from two municipal wastewater treatment facilities into state waters has significantly decreased, thanks to the second round of technical assistance provided by DEM to the treatment facilities. Since June, nitrogen discharges have decreased by 19 percent from the East Greenwich wastewater treatment plant, and by 40 to 60 percent from the Warren wastewater treatment facility.

Since 1998, DEM has been working to reduce the amount of nitrogen discharged from the state's wastewater treatment facilities. Excess nutrients stimulate algae growth, which robs water of the oxygen necessary to fish and shellfish. Studies have demonstrated that wastewater treatment facilities are a significant source of nutrients to upper Narragansett Bay. Fish kills, large nuisance seaweed blooms, and other pollution-related ills in Greenwich Bay and the Providence River in 2003 and 2004 have heightened public awareness about the importance of reducing nitrogen loadings to the Bay.

In addition to implementing formal permitting controls to reduce nutrient discharges from the state's wastewater facilities, DEM last fall provided technical assistance on interim nitrogen removal techniques to five municipal wastewater treatment facilities. The assistance was provided in return for the facilities' commitment to attempt voluntary and interim system changes to remove as much nitrogen as possible from their systems prior to any state-required upgrade. The participating facilities, which impact upper Narragansett Bay and Greenwich Bay, included the East Greenwich and Warren plants, as well as the Cranston, East Providence, and Narragansett Bay Commission's (NBC) Fields Point treatment facilities.

Dramatic Decreases Realized at East Greenwich and Warren Facilities

The town-operated East Greenwich treatment plant and the Warren facility, which is operated by Aquarion Services Company, have both used DEM-provided technical assistance to voluntarily modify current plant processes to optimize the removal of nitrogen. The East Greenwich facility is currently undergoing an \$8 million upgrade, scheduled to be completed in

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March 2006, to remove nitrogen from its discharge into Greenwich Cove. Although the Warren facility is currently not required by DEM to remove nitrogen from its discharge, it is anticipated that nitrogen limits will be established for this facility in the near future.

The variations in the amount of nitrogen removed from discharges from the East Greenwich and Warren facilities are attributed to the different techniques and treatment technologies employed at the two plants. For example, East Greenwich employed an internal recycle process, while the Warren facility took advantage of specially installed timers to regulate the nitrogen removal process. Both plants plan to continue the voluntary steps for as long as circumstances will allow.

While Warren and East Greenwich have shown dramatic reductions in their nitrogen discharges, the other targeted facilities were also able to take advantage of the technical assistance provided by DEM. The Cranston facility took advantage of the training to better understand plant performance of planned upgrades, and has focused its efforts on completing the construction necessary to meet permit limits for nutrients. The final nutrient-removal upgrades to the Cranston treatment facility will be completed in November. The East Providence plant continues to seek new ways to force the plant's biological process to remove nitrogen. While the East Providence facility has historically discharged somewhat low levels of nitrogen, additional reductions will be required in order for the plant to meet modified permit limits.

Due to the size and complexity of NBC's Fields Point treatment facility, the Bay Commission concluded that any interim modifications would be cost prohibitive, even on a small scale. NBC instead decided to focus its efforts on completing the planning and preliminary design to determine what permanent improvements will be needed at the Fields Point facility to meet new DEM permit limits for nitrogen.

DEM's municipal wastewater assistance program is funded by a \$15,000 EPA training grant used to help facilities maintain compliance or improve its performance. For the nitrogen-reduction assistance program, DEM called in two experts: Jeanette Semon Brown, superintendent of the Stamford, Connecticut wastewater treatment facility, and Charles Conway of the New England Water Pollution Control Commission. In addition, the Town of Burrillville's wastewater superintendent provided assistance to the Town of Warren, as Burrillville's facility is of a similar design and has been removing nitrogen for a number of years. Bill Patenaude, a principal engineer in DEM's Office of Water Resources, coordinated the training and monitored plant process upgrades throughout the yearlong initiative.

"The staff at each of these facilities deserve our gratitude for their initiative in taking these interim, voluntary steps to remove nitrogen from our waterways," said Patenaude. "In particular, the staff at the Warren wastewater treatment facility and its superintendent, David Komiega, and East Greenwich plant superintendent, Mike Pacillo and his staff, deserve great credit for their successes. Their outstanding efforts will benefit all Rhode Islanders, who place a high value on the Ocean State's greatest resource, its water."

In June, the East Providence Wastewater Treatment Facility and NBC's Fields Point facility received final permit limits from DEM regarding nutrients. This began a negotiation process to determine the specific timeframes needed by the plants to construct permanent upgrades to meet those limits. The Cranston and East Greenwich wastewater treatment facilities had already started DEM-required construction of plant upgrades to remove nitrogen prior to entering the voluntary program. DEM is currently reviewing possible future nutrient requirements for the Warren facility.

The Warwick, West Warwick and Woonsocket wastewater treatment facilities have completed upgrades to reduce the discharge of nitrogen. During the first round of technical assistance in 2000, DEM worked with the City of Warwick, which took drastic voluntary steps over a two-year period resulting in nitrogen discharge reductions of up to 70 percent. This was well before DEM mandates required such reductions.

Upgrades to the NBC Bucklin Point plant are expected to be complete this fall, approximately one year ahead of schedule. To meet the nitrogen discharge limits issued by DEM in June, the Woonsocket treatment facility will require further modifications, and the NBC Bucklin Point plant may require additional modifications. The Burrillville facility will be installing enhanced controls.

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