



Ocean County Utilities Authority

Issue 2

March 2004

North Plant Improvements Project Update

The Ocean County Utilities Authority's \$22.2 million Plant Improvement Project is continuing to progress toward its scheduled February 2005 completion date. Once operational, this substantial upgrade will enhance the wastewater treatment and odor control capability of the Authority's Northern Water Pollution Control Facility. Construction of the two new 100-foot diameter primary clarifiers and the 160-foot diameter equalization tank is near completion.

Construction Progress

The construction of the Plant Improvements Project is being performed by Northeast Remsco Construction, Inc. of Toms River, New Jersey, one of the leading heavy construction contractors in the state. The majority of concrete work has been completed for new Primary Clarifier Nos. 5 and 6. The new primary sludge removal pump station for Primary Clarifier Nos. 5 and 6 is scheduled to be completed in spring 2004. Similarly, a spring 2004 finish is expected for the new aerated grit chambers.

In November 2003, construction was completed on the new three million-gallon effluent flow equalization tank (EFE). Once in service, this tank will allow the Plant to handle excess flows associated with storm events and extreme wet weather.

Delivery of odor control covers and mechanical equipment is continuing almost daily. The installation of equipment is being carefully staged so that the odor control systems can be

brought on-line immediately following all mechanical testing. Approximately 32,000 square feet of process equipment covers are now staged on-site for this project.

Project History

For over 25 years, the North Plant has served the residents of six Ocean County communities: Bay Head, Brick Township, Jackson Township, Lakewood Township, Point Pleasant Beach, and Point Pleasant Borough as well as some areas of Monmouth County. The plant is equipped to provide comprehensive treatment to wastewater through primary and secondary processes. Once treated, effluent is disinfected, and then pumped one mile into the Atlantic Ocean through an outfall pipe for final discharge.



The primary clarifiers at the North Plant will be fully covered, enhancing OCUA's ability to control odors.

In Spring 2002, the Ocean Counties Utility Authority initiated a Project Advisory Committee (PAC) to inform Brick Township residents of operations and improvements at the North Plant. To broaden this outreach program, the OCUA newsletter updates local residents within the plant's service area of OCUA's current and future activities at the facility.

equipment at the Plant, and the installation of additional items to provide standby capacity for emergencies and peak flows. Odor control systems at various process units in the Plant will be constructed at a cost of \$3.6 million.

Built in 1976, the North Plant in Brick Township has the capacity to treat up to 32 million gallons per day (mgd) of domestic and light industrial wastewater.

When completed, this project will enhance the Plant's reliability in treating the daily flows, provide

flexibility in treating the peak flows that occur during seasonal periods, and expand the existing odor control systems.

To ensure the project is completed on time, the contractor continued to keep crews working on schedule throughout the winter, even during the most adverse weather conditions. Based on current progress, the project is on-target to meet its original February 2005 completion date.

Other Service Area Improvements

The Authority operates and maintains eight wastewater pump and lift stations (NPS 1-8), 43 miles of gravity interceptor sewer, seven miles of force main, 3,200 feet of Barnegat Bay

Crossing, and 6,600 feet of Atlantic Ocean Outfall, all of which are continually inspected, maintained, and upgraded as needed. The need for improvements is the result of population expansion, system upgrades to improve wastewater treatment, efficiency improvements to reduce energy costs, and continual preventative maintenance work.

Pump station rehabilitation has included new flow metering equipment, new energy-efficient variable frequency drives, improved emergency standby power systems, modifications to the ventilation and odor control contact chambers, improved valving, and concrete rehabilitation. Lift Stations NPS-7 in Bay Head Borough and NPS-8 in Point Pleasant Beach recently received Archimedes screw pump replacements. Rehabilitation of Pump Station NPS-1 in Brick Township, NPS-2 in Point Pleasant Borough, and NPS-5 in Jackson Township has been completed. All of these projects will improve the efficiency and reliability of our existing pump stations.

In 2004, structural and mechanical improvements to Pump Station NPS-3 in Brick Township, and Phase II wetwell and mechanical improvements to Pump Station NPS-6 in Jackson Township, are scheduled to begin.

The Authority will rehabilitate some of the interceptor sewer lines in Brick Township using trenchless technology. This work will

Anticipated Construction Schedule

TASKS	2003												2004												2005	
	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F				
Construct Primary Clarifiers and Equalization Tank																										
Construct Main Pump Building Extension and Grit Tanks																										
Construct Yard Piping Work																										
Place On Line Grit Tanks and Install Covers																										
Rehabilitate Four Existing Primary Clarifiers																										
Start-up Odor Control for Primary Clarifiers														★												
Complete Remaining Clarifiers and Grit Tanks																										
Test Equalization Tank and Pump Station																										
Construct Screw Pumps																										
Construct Gravity Belt Thickener																										
Construct Nocardia Control System																										



reline the existing pipe with a cured-in-place pipe (CIPP) to avoid excavation of local streets, thus minimizing disturbances to properties and neighborhoods. When completed in April 2004, CIPP will provide years of trouble-free service.

What You Can Expect

To date, we trust that construction activities have had minimal impact on noise, traffic, and odor releases. Although construction vehicles have utilized Mantoloking Road and

Route 35 during the project, no significant delays of local traffic have occurred. No local roads have been closed due to construction, and OCUA does not anticipate any closures for the remainder of the project.

Through the continued proactive dust control efforts of the contractor, dust has not been an issue, and should not be an issue for the duration of the project. Similarly, noise levels produced by various construction equipment will continue to be moderate.

OCUA: Your Good Neighbor

During this construction project, as well as throughout the year, the Ocean County Utilities Authority (OCUA) always strives to deliver dedicated, quality service to Ocean County residents.

Odor Control

OCUA contracted with an engineering consultant to complete a comprehensive odor control study at the North Plant prior to initiating construction. The study evaluated all interior and exterior processes and equipment. Plant components were evaluated on the basis of functionality and maintenance, and appropriate recommendations for interim improvements were provided. The study allowed OCUA to identify potential areas of concern early – such as dewatering – and to establish necessary odor control systems and an action plan for the plant improvement project.

Interim improvements recommended by the study have all been implemented by OCUA. Some of these measures include:

- Covered equipment and

process units were smoke tested and, where necessary, were sealed to prevent odorous air from escaping.

- Roof exhaust fans at the Waste Activated Sludge Building and the Sludge Handling Building were modified in order to better disburse exhaust from within these buildings.
- Temporary covers were installed over the clarifier effluent channels to prevent odorous air from escaping.
- Individual odor neutralization systems were installed at various areas around the North Plant.

Power Outages

OCUA has been successful in dealing with local power outages that were experienced throughout the summer of 2003. OCUA was able to utilize backup generator power during these outages to keep the North Plant fully operational.



OCUA Chairman John Parker (left) presents the Gold Award to OCUA's North Plant Director, Kenneth Stegemann, and Plant Operator Steven Coggon.

AMSA Peak Performance Awards

Each year, the Association of Metropolitan Sewerage Agencies (AMSA) bestows deserving operators of area wastewater treatment facilities with awards for their outstanding compliance with their individual National Pollutant Discharge Elimination System (NPDES) permits. For 2002, OCUA's North Plant received the Gold Award for 100% compliance with its NPDES permit. OCUA's two other treatment facilities also received awards: one additional Gold Award, and one Platinum Award for five consecutive years of achieving 100% compliance.



Who to Call

We apologize for any inconvenience the project may cause and encourage you to call with your questions or concerns. For your assistance, OCUA provides the following two North Plant contacts:

For construction status

Sean M. Leary, Construction Manager
William Granda, Resident Engineer
732-477-4858

For odor concerns

Monday - Friday, 7 a.m. - 3:30 p.m.
Plant Operations: 732-920-1301, Ext. 3359
All Other Times: 732-920-1301, Ext. 3347



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