Middlesex County Utilities Authority

Hurricane Sandy Update

June 8 to June 14, 2013

FEMA, USACE, USEPA and NJDEP

Federal and State agencies have visited the site and are fully briefed on the restoration efforts being implemented by the MCUA. These agencies are constantly monitoring the situation. Coordination with FEMA representatives is ongoing for reimbursement of restoration expenses.

Service Interruptions

None reported

Central Wastewater Treatment Plant

The Central Treatment Plant is fully operational and is handling all wastewater and trucked waste entering the plant in Sayreville. Currently, the Central Treatment Plant is being powered by the Landfill Gas to Energy Facility and local electric utility. Analysis of December 2012 operating data showed Plant performance was impacted by the unscreened sewage conveyed through the Temporary Bypass Pumping System at the Sayreville Pumping Station. Excessive solids reduced the efficiency of the Final Settling Tanks for several days. Plant performance from January through March 2013 was compliant with permit discharge requirements. During the month of April 2013 the plant experienced a temporary upset condition in the secondary treatment process which resulted in total suspended solids permit excursions.

The week's estimated daily average rate of wastewater flow and peak daily flow entering the Central Treatment Plant:

202 million gallons per day average
295 million gallons peak day (June 8)

South Amboy Pump Station

Operational; repairs to damaged equipment are being performed by MCUA, which are ongoing.

On-site temporary emergency generator is functional in the event of loss of the electric utility power feed into the pump station.

The estimated average rate of wastewater flow conveyed to the Central Treatment Plant:

1-2 million gallons a day

Edison Pump Station

Four Main Pumps capable of conveying 85 MGD of wastewater to the Central Treatment Plant are in operation. Pump No. 4 has developed operational problems relating to the motor. The Pump motor was tested and found to be acceptable; testing and troubleshooting the variable frequency drive for the motor is ongoing.

Initial phase of emergency work nearing completion; contractors are in the process of demobilization.

On-site emergency generators are functional in the event of loss of electric utility power; however, generator automatic control issues remain to be resolved.

Currently, the Main Pumps are able to convey 85 MGD which exceeds the average daily amount of wastewater that enters the station. Bypass pumping system capable of handing 20 -24 mgd is in standby mode.

The week's estimated daily average rate of wastewater flow and peak daily flow conveyed to the Central Treatment Plant:

40 million gallons per day average
55 million gallons peak day (June 8)

Sayreville Pump Station

Six Main Pumps capable of conveying an estimated 300 MGD of wastewater to the Central Treatment Plant are in operation.

Original Sayreville Pump Station

Main Pump Nos. 2E and 3E are operational [rated capacities of each pump 33MGD @ 102 feet Total Head], continuing the evaluation of pump hydraulic and mechanical performance; tests performed indicate Pumps 2E and 3E are capable of conveying approximately 80 MGD.

Continuing hydraulic evaluations of pump system conveyance capacity; draft report on the findings has been completed and is under review, further evaluations of the Temporary Bypass Systems conveyance capacities and additional surge analyses on the Original Sayreville Force Main and Sayreville Relief Force Main are ongoing.

Controls to permit manual back flushing of Main Pump Nos. 2E and 3E by MCUA Operators remain operable; back flushing of pumps was not performed this week.

Bar Screen No. 1ready for operation upon introduction of flow through the OSPS influent channel.

Sayreville Relief Pump Station

Main Pump Nos. 2R, 3R, 4R and 6R are operational [rated capacity of 3R &4R: 50 MGD @ 89 feet Total Head; rated capacity of 2R & 6R: 40 MGD @ 89 feet Total Head]; recorded flow from the individual Main Pumps has, at times, exceeded 60 MGD.

Controls to permit manual back flushing of Main Pump Nos. 2R, 3R,4R and 6R by MCUA Operators are operable; back flushing SRPS pumps was not performed this week.

Operating Bar Screen Nos. 1, 2, 3 and 4, as needed, and the Interconnection channel between SRPS Wet Well and OSPS Wet Well.

Additional work is required for the 34.5KV cutout switches on both the M39 and Q69 Main JCP&L Utility Feeders; arrangements are underway for the replacement of these switches. The MCUA Board of Commissioners approved an emergency authorization to complete this work. The replacement switches are unique and require an extended time for manufacturing with deliver scheduled for July.

Main Pump No. 4R normal operation remains a concern; pump discharge cone valve and motor bearing temperature issues exist and amperage usage continues to be elevated. To address the amperage usage, an additional set of replacement diodes have been ordered for the pump motor rotating diode assembly. The replacement diodes have been received and coordination for installation on the pump motor is underway. Main Pump No. 4R operational if needed.

During testing of Main Pump No. 5R, an electrical issue regarding the motor was identified and it was determined the motor needs to be removed, inspected and refurbished offsite. The motor was removed from the site for refurbishment at the Scheinert & Sons motor repair shop. Inspection of the motor performed has determined that a complete rebuild of the stator is necessary. Completion of the rebuild work is anticipated in July.

On-site emergency generator is functional in the event of loss of the two electric utility power feeds into the pump station; transfer of load to the generator must be performed manually. The generator is sized to operate two Main Pumps along with ancillary pump station equipment in either the SRPS or OSPS. Emergency generator was not operated.

Commissioned VFD and initiated startup activities for Main Pump No. 1R, excessive vibration issues with the pump motor are prevalent preventing operation of the pump; testing and troubleshooting both VFD and motor has been ongoing and will continue to identify the problem with representatives from Scheinert and ,the VFD manufacture, ABB; a report has been received from Scheinert indicating the vibration is not a mechanical issue but rather of electrical origin and recommended additional testing; an interim report from ABB was received on June 7. The report was reviewed and additional information was requested. Planning is underway for the additional tests recommended by Scheinert.

Also, a high temperature warning alarm was activated for Main Pump Motor Nos. 2R and 6R through the VFDs which caused the motors to shut down. The cause was believed to be the ambient temperature in excess of 90˚ F at the time. The Pumps are operational and adjustments to the temperature settings in the VFDs are expected to remedy the problem. This is being coordinated with the VFD manufacturer ABB.

Completed the installation of new power cables to valve actuators to all Main Pumps including Main Pump No. 6R; completed replacement of circuit breakers for Main Pump suction valve actuators; completed replacement of wire to lower and upper level bridge cranes; continued removal of damaged control and power wiring to sluice gate operators; completed installation of replacement power feeder to fan motor for Odor Control System; and continued installation of lighting on intermediate level.

Temporary Bypass Pumping System

System remains operational and operation has been on an intermittent basis due to Main Pump Nos. 2E, 3E, 2R, 3R, 4R and 6R capable of conveying all of the dry weather flow and the maximum wet weather flow to the Central Treatment Plant. Temporary Bypass Pumps were operated on June 8, 2013 between 12:00AM and 4:40AM for capacity assurance during a significant wet weather event for conveyance of sewage flow when all six Main Pumps were in operation. Pump maintenance was performed as needed.

Temporary Bypass Pumping System at the Weber Ave. Meter Chamber was not operated and will remain on standby. This System serves to isolate the MCUA Interceptor pipeline sewage flow from the local sanitary sewer collection system to mitigate potential impacts during wet weather events.

The week's estimated daily average rate of wastewater flow and peak daily flow conveyed by the Main Pumps and/or Temporary Bypass Pumping System to the Central Treatment Plant:

160 million gallons per day average
237 million gallons peak day (June 8)

Temporary Wet Weather Overflow Facilities

All piping, screening equipment and pumps have been removed from the MCLF site; removal of fill and stone for equipment pads and area restoration has been completed.

Industrial Users

The Sayreville Pump Station and Edison Pump Station currently can convey average daily flows to the Central Treatment Plant therefore; Industrial Users may resume discharging to their respective wastewater collection systems. Also, MCUA maintained the reduced trucked in waste rate until January 4, 2013. As of January 5, 2013 the Septage Rate is $48.00/1000 gallons and the Industrial Rate is $72.00/1000 gallons.

Uncontrolled Overflows

None as of January 26, 2013

Controlled Overflows

None as of January 17, 2013

Middlesex County Landfill Hours

Middlesex County Landfill is fully operational and open to accept solid waste for disposal. Below is the operating schedule for the Landfill in East Brunswick until further notice.

Monday thru Friday	7:00am – 3:00pm
Saturday	7:00am - 12:00 noon
Sunday	Closed

Contact Information: Tony Cicatiello, 908.568.3280