



WASTEWATER DIVISION

MCUA Caps Year-Long Focus on Renewable Energy Opportunities



In addition to its responsibilities managing the Middlesex County Landfill and Wastewater Treatment Plant, the MCUA focused in 2015 on supporting new, more diverse energy sources—both for the MCUA itself and its neighbors.

Among the capstones in 2015 was the completion of two solar panel installations, one behind the Administration Building and a larger installation near the Wastewater Treatment Plant. Combined, the two installations cover approximately 25 acres and include nearly 14,000 individual panels. These solar panels will produce enough electricity to power the Administration Building, the Edison Pump Station, and the nearby Middlesex County Fire Academy—as well as supplement the power needs of the MCUA's Central Treatment Plant. The expected energy savings from the solar panels is approximately \$1.5 million.



Above: The larger solar panel near the Wastewater Treatment Plant.



Right: The solar panel installation just beyond the MCUA's Administration Building.



The completed pump station that sends effluent water underneath the Raritan River to the CPV's power plant for cooling.

Just across the Raritan River, power developer Competitive Power Ventures (CPV) cools its Woodbridge Energy Center (WEC) with effluent water from the MCUA. The pump station that sends the water under the river was constructed in late 2014 with successful testing in early 2015. The entire cost of the project – more than \$5 million – is being reimbursed to the MCUA by CPV.

The MCUA provides approximately 7 million gallons of cooling effluent water to the WEC, which will generate 700 megawatts of electricity, enough to power more than a half of a million homes. Most of the 7 million gallons will evaporate as part of the cooling process, but approximately 2 million gallons will return to the MCUA for further processing.

“These projects represent just two of the ways the MCUA increases energy efficiency through recycling existing resources,” explained MCUA Executive Director Richard Fitamant. “It is why we continue to find new ways to diversify our sources of green energy. The more we do this, the more dollars we save our ratepayers and the better off our environment will be in the long-term.”

Wastewater Division

December 2015 Statistics

- Average Influent flow – 99.15 mgd
- Average Effluent TSS – 19 mg/l
- Average Effluent BOD – 16 mg/l
- Biosolids production – 11,923 wet tons, a 9.3% increase over the five-year average. The entire amount was processed through the dryers.

*Rainfall for the month was 4.40 inches as measured at the plant.

For the year the average flow was 98.31 mgd and we recorded a total rainfall of 35.13 inches. The average effluent BOD for the year was 14 mg/l and the yearly average effluent TSS was 19 mg/l. Average monthly flows for the year ranged from 140.49 mgd in March to 82.39 mgd in August.

For the year we produced 161,402 wet tons, an 11 % decrease over the 10-year average. This is the third lowest amount of sludge treated by the plant since the end of ocean dumping in 1991. Of this total 156,494 tons (97%) were processed through the dryers, 4,908 tons (3 %) were lime stabilized and shipped out of state. This is the best yearly throughput (percentage wise) to date achieved through the dryers. Since March 2006 we have put 1,178,429 wet tons through the dryers.

Solid Waste Division

December 2015 Tonnage Figures

	Monthly Tons	Cumulative Tons
2015	48,750	559,977
2014	51,003	541,333

An average of 244 trucks hauled a total of 1,875 tons of waste to the landfill facility each day.