

Mandated work completed at Marlay-Taylor facility

Plant already exceeding state standards for sewage treatment

By JASON BABCOCK
jbabcock@somdnews.com

The construction to upgrade the largest sewage treatment plant in St. Mary's has been completed with only some minor finishing up to do. New state treatment standards are already being met, and though the work took longer than expected, the project came in within budget.

"It's a good project. The contractor did a good job. The chief engineer did a good job. I think we've got a project now that serves the community well in meeting the [Chesapeake] Bay restoration goals," Dan Ichniowski, interim director of the St. Mary's County Metropolitan Commission, said Wednesday.

"It's working very well, working as designed," DuWayne Potter, superintendent of the Marlay-Taylor Wastewater Reclamation Facility, said. "We're having a significant impact on the quality of water."

Work to convert the treatment process from biological nutrient removal at Marlay-Taylor to enhanced nutrient removal began in October 2013. Last December, MetCom officials expected the project to be completed in March.

The enhanced nutrient removal process was considered completed on Oct. 1 by the Maryland Department of the Environment. Now there is only some more paving to finish and more plantings to be



STAFF PHOTOS BY JASON BABCOCK

DuWayne Potter, superintendent of the Marlay-Taylor Wastewater Reclamation Facility in Lexington Park, looks over one of the two large reactor tanks which removes more nitrogen from sewage. A layer of foam covers the water's surface.

made before the contractor, MEB General Contractors of Chesapeake, Va., completely finishes up in the next couple of weeks.

When the Environmental Protection Agency and MDE came up with the new standards to improve water quality in the Chesapeake Bay watershed, "we had an original estimate of \$120 million" to upgrade Marlay-Taylor, Ichniowski said. "We had that reviewed and looked at again and came down to a \$40 million budget," and the work did not go over that amount.

Under the new regulations, sewer plants are supposed to produce 4 milligrams per liter of nitrogen or less, as well as reduced levels of phosphorus. The old standard of nitrogen was 8 milligrams per liter. MetCom aims to stay below 3 milligrams per liter of nitrogen in its treated effluent.

In November, the sewage treatment plant in Lexington Park produced 2.6 milligrams per liter, Potter said. Marlay-Taylor

discharges its treated effluent into the Chesapeake Bay through a 2-mile-long pipeline.

Marlay-Taylor has a capacity of 6 million gallons per day, but averages 3.8 million gallons a day, Potter said. Marlay-Taylor is the 50th of the 67 major sewage treatment plants in Maryland to complete its upgrade to enhanced nutrient removal.

The St. Mary's County plant will be permitted to discharge 73,093 pounds of nitrogen a year, a reduction of 48,379 pounds.

Nitrogen and phosphorus degrade the water quality of Chesapeake Bay and its tributaries because they feed algae blooms. Once those blooms decay, the water is deprived of dissolved oxygen, which kills other aquatic life.

While Marlay-Taylor has improved its effluent, it comes at a higher cost.

MetCom is using 147 gallons a day of a carbon source called MicroC 2000 to aid in the enhanced nutrient removal pro-



Lab technicians Daniel Pratson, left, and Samantha Parsons work out of a new building at the Marlay-Taylor Wastewater Reclamation Facility in Lexington Park where upgrade work has been completed to improve the sewage treatment process.

cess. That product is \$2 a gallon, and MetCom is looking at \$107,000 a year in new expenses just for that.

"The cost of treatment is going up. The MDE said 'you shall' — and we do," Potter said.

Old electrical equipment has been replaced by more pieces of equipment, though those operate more efficiently. There are several mixers in two huge water reactor tanks at the site.

"The electrical cost of these things running 24 hours a day is pretty significant," Potter said.

Under the old treatment, it cost \$1.79 million to operate Marlay-Taylor last year.

Asked how much the new treatment process is costing, Potter said, "I don't have a good handle on the electrical use yet."

However, if plants produce 3 milligrams per liter of nitrogen or less and 0.3 milligrams per liter of phosphorus or less on an annual basis, MDE could help agencies in those higher oper-

ational costs, Potter said, up to \$180,000 from the Chesapeake Bay restoration fee. There is a \$60 annual fee in Maryland for those using central sewer services and those using septic systems.

At Marlay-Taylor, it's now just a matter of finding the right balance and efficiencies in daily operations in the new system, Potter said.

"We want to get the best treatment we can for the best price for our users," he said.

With work in its last days, Potter said, "It's been a long, drawn-out process. We're glad to be at the end of it," he said.

"A couple of odds and ends to clean up there, and then we'll be ready to go," Ichniowski said.

Potter is one of 13 staffers who work at the Marlay-Taylor plant, which serves about 23,000 connections in Lexington Park, California, Great Mills, St. Mary's City, Callaway, Piney Point and St. George Island.

Twitter: @JasonEntNews