

BROADWATER WRF ENR

Background

This is one of seven Enhanced Nutrient Removal (ENR) projects that the County is pursuing in compliance with the State's Bay Restoration Program. When complete, nitrogen concentrate levels will be reduced from 8mg/L to 3 mg/L and phosphorus from 2 m/L to 0.3 mg/L.

The current treatment process employed at the Broadwater WRF is the Virginia Initiative Process (VIP) for biological phosphorus and nitrogen removal. The process design was based on the earlier biological nutrient removal (BNR) goals of a seasonal total nitrogen (TN) level of 8 mg/L. The facility is rated to process 2.0 million gallons per day (mgd). Current average daily flows are approximately 1.1 mgd.

The new process design will use a step-feed process followed by denitrification filters. The existing reactors will be modified to be able to introduce wastewater into several different locations within the reactors and to improve the reliability of the process during maintenance shutdowns. A new intermediate pumping station will convey flow to new denitrification filters, which will optimize nitrogen and phosphorus removal.

Benefits

- Meet pollutant load limits set in Bay Restoration Program
- Significantly reduce nitrogen effluent concentration from 8 mg/L to 3 mg/L, and phosphorous effluent concentration from 2 mg/L to 0.3 mg/L.

Funding Sources

- State Grant
- County Bonds

Project Status

- Design 85% complete
- State Grant eligibility determination in progress



Project Information

Project Manager	George Heiner (410) 222-4128
Design Consultant	KCI
Contractor	TBD
Inspection Manager	TDB
Estimated Total Project Cost	\$13.6M
Design Notice to Proceed	November 2008
Construction Notice to Proceed	February 2011
Projected Completion Date	February 2013

For more information contact Customer Relations at 410-222-7582 or email us at customer@aacounty.org