

# PATUXENT 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 mg/L to 0.3 mg/L.

The current treatment process employed at the Patuxent WRF is an oxidation ditch process modified to perform nitrogen removal followed by effluent filtration. The oxidation ditch uses diffused aeration and separate larger-diameter mixers. 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 7.5 million gallons per day (mgd). Current average daily flows are approximately 5.2 mgd.

The new process at the Patuxent WRF will modify the existing oxidation ditches to ensure nitrification and provide new denitrification filters. Additional air diffusers and new aeration controls will be used in the existing oxidation ditches to optimize and ensure nitrification. New denitrification filters will be constructed to optimize nitrogen removal and also provide 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 Grants (under negotiation)
- County Bonds

## Project Status

- Design nearly complete
- State Grant eligibility determination in progress



## Project Information

Project Manager	George Heiner (410) 222-4128
Design Consultant	PBSJ
Contractor	TBD
Inspection Manager	TBD
Estimated Total Project Cost	\$20M
Design Notice to Proceed	November 2008
Construction Notice to Proceed	April 2011
Projected Completion Date	October 2012

*For more information contact Customer Relations at 410-222-7582 or email us at [customer@aacounty.org](mailto:customer@aacounty.org)*