

# ANNAPOLIS 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 Annapolis Water Reclamation Facility (WRF) is jointly owned by Anne Arundel County and the City of Annapolis. It was originally constructed in the 1970s and has undergone numerous upgrades and expansions since that time. The Biological Nutrient Removal project, completed in 2003, provided for treatment to effluent nitrogen levels of 6 mg/l. The plant was expanded to a capacity of 13 million gallons per day (mgd) in 2007.

The existing aeration tanks will be modified from the current Four Stage Bardenpho process to a Modified Ludzack Etinger process to optimize nitrification. Denitrification and phosphorus removal will take place in a new denitrification filters. A new intermediate pumping station will transfer the flow from the aeration tanks to the denitrification filters.

The upgrade will also incorporate a change from liquid chemical chlorination to Ultra Violet disinfection.

## Benefits

- Meet pollutant load limits set in Bay Restoration Program
- Significantly reduce nitrogen effluent concentration from 6 mg/L to 3 mg/L, and phosphorous effluent concentration for 2 mg/L to 0.3 mg/L.
- Safer disinfection process (UV over chlorine).
- Efficiency in reusing existing tankage resulting in lower project costs

## Funding Sources

- State Grant (85%)
- County Funds (15%)

## Project Status

- Design complete by May 2010
- Construction bid opening August 24, 2010
- Construction to begin January 2011
- Construction to end January 2013



## Project Information

Project Manager	Sharon Cole (410) 222-7976
Design Consultant	Hatch Mott MacDonald
Contractor	TBD
Inspection Manager	Stearns & Wheler
Estimated Total Project Cost	\$27.7M
Design Notice to Proceed	December 2007
Construction Notice to Proceed	TBD
Projected Completion Date	January 2013

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