
**UTILITIES FUND
DEPARTMENT OF ENVIRONMENTAL SERVICES
WATER POLLUTION CONTROL BUREAU**

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PROGRAM MISSION: To safely and economically process wastewater and hazardous waste material for a healthy environment.

The primary objective of the Water Pollution Control Plant (WPCP) is to protect the public health and the environment through the cost-effective treatment and disposal of wastewater generated in Arlington County. The WPCP also treats a portion of the wastewater from Fairfax County and the Cities of Falls Church and Alexandria, as well as wastewater from Ronald Reagan Washington National Airport, the Pentagon and other federal facilities. Virginia's Departments of Environmental Quality (DEQ), Health (VDH) and Occupational Safety and Health (VOSH) and the U.S. Environmental Protection Agency (EPA) regulate the activities of the WPCP.

In the WPCP's pursuit of becoming a high-performance organization it has adopted cutting-edge technological advances to improve its efficiency, automated and streamlined processes, and implemented cost-savings measures such as the automation of chemical feeding systems and the upgrading of equipment to meet new efficiency requirements. Process modifications have resulted in more efficient processing, a significant reduction of odors, and lower biosolids disposal costs.

The WPCP continues to focus on performing scheduled preventive and predictive maintenance to minimize costly, unplanned equipment failure and replacement, ensure the lowest net 20-year life-cycle costs and improve regulatory compliance. The WPCP has implemented several pay-for-skill pilot programs such as the Certified Control System Technicians, Licensed Electrical Power Technicians, Multi-skilled Wastewater Plant Operator Pilot program and the Wastewater Maintenance Technician pilot pay programs. These programs will address anticipated high employee turnover due to retirements over the next ten years, improve maintenance skill levels, and are expected to stabilize long-term staffing requirements at the current levels and attract and retain quality staff.

The above initiatives coupled with the Master Plan 2001 Update (the long-range infrastructure plan) will bring the WPCP much closer to model facility status.

Household Hazardous Material Program (HHM) is directly related to the WPCP's mission of protecting the public health and the environment. HHM are household products that contain hazardous ingredients requiring special waste management because of their hazardous characteristics (i.e., flammable, corrosive, reactive, toxic), which otherwise could pose a potential threat to human health and the environment if disposed of improperly. The HHM program provides safe collection of unwanted HHM material and ensures its proper disposal as part of a comprehensive strategy that:

- Promotes citizen awareness regarding proper handling of HHM;
- Reduces the amount of HHM mixed with municipal solid wastes;
- Reduces the amount of HHM which is discharged into sanitary or storm sewer systems; and
- Helps to reduce the risk of injuries to sanitation workers, the community at large, and the environment.

The HHM program maintains a permanent collection facility on the grounds of the WPCP where County residents may drop off HHM every Saturday from 9 AM to 3 PM on a walk-in, drop-off basis, or by appointment with the HHM Coordinator during weekdays. In addition, the HHM program promotes and manages two off-site, regularly scheduled (bi-annual) special collection and recycling events.

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	FY 2004	FY 2005	FY 2006	% Change:
	<u>Actual</u>	<u>Adopted</u>	<u>Proposed</u>	'05 to '06
Personnel	\$6,305,626	\$6,832,469	\$7,046,750	3%
Non-Personnel	7,077,689	7,615,497	8,000,542	5%
Total Expenditures	\$13,383,315	\$14,447,966	\$15,047,292	4%
Authorized FTEs	92.6	92.6	92.6	
Funded FTEs	92.6	92.6	92.6	

SIGNIFICANT BUDGET HIGHLIGHTS:

- ↑ Personnel increases include annual salary step adjustments, and position reclassifications (\$214,281).
- ↑ Non-personnel increases (\$385,000) include higher electricity costs (\$176,940), security guard contract for increasing to three security guards during construction (\$28,552), increase in the cost of wastewater treatment chemicals and maintenance supplies (\$60,000), and higher costs for hauling of bio-solids (\$56,000) and household hazardous material (\$41,000).

PERFORMANCE MEASURES:

	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2006
	<u>Actual</u>	<u>Actual</u>	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Goal</u>
<i>Mission Outcome Measures</i>						
Notices of violations (NOVs)	0	0	0	0	0	0
Preventive maintenance percent completed on time	62%	97%	90%	100%	100%	100%
Number of bypass events per year	1	8	9	3	2	2
Bypasses/volume (mg)	18.9	200.8	81.0	15.0	10.0	10.0
<i>Customer Measures</i>						
Odor complaints	57	39	14	50	25	0
<i>Workload Measures</i>						
Total average flow (MGD: million gallons per day)	29.3	31.6	31.6	31.0	31.0	31.0
<i>Efficiency Measures</i>						
Cost per million gallons of actual total average flow	\$1,019	\$1,079	\$1,155	\$1,227	\$1,279	\$1,279
Cost per million gallons of rated capacity (30 MGD)	\$995	\$1,137	\$1,216	\$1,268	\$1,321	\$1,321

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- ❖ FY 2003 was one of the wettest years in the history of the state. The bulk of the bypasses occurred during two storms in February and March 2003. The temporary repair efforts for the lime reaction tanks also caused operational challenges that impacted the number and volume of bypasses.
- ❖ The installation of the equalization tank in FY 2001 and the addition of other process modifications significantly reduced the number of bypass events and gallons bypassed compared to making no improvements. While the Master Plan 2001 (when completed in 2012) should allow the WPCP to eliminate virtually all bypasses, the WPCP remains vulnerable to bypasses in the interim.
- ❖ Installation of infrastructure for odor control is an ongoing focus of the WPCP. The goal is to record no complaints throughout the year. The WPCP Master Plan 2001 Update will install additional odor control capability.
- ❖ The total average flow measure is the total amount of sanitary sewage (actual) entering the Water Pollution Control Plant in million gallons per day (MGD). Rated flow capacity is 30 MGD according to design specifications.
- ❖ The cost per million gallons (MG) of capacity as measured by actual total average flow includes total personnel and operating costs, minus the payment that the County makes to Fairfax County to treat part of Arlington's wastewater per an inter-jurisdictional agreement.
- ❖ The cost per million gallons (MG) of total rated flow capacity includes total personnel and operating costs minus the payment that the Count makes to Fairfax County to treat part of Arlington's wastewater, per an inter-jurisdictional agreement.

Household Hazardous Material (HHM)

	FY 2002 <u>Actual</u>	FY 2003 <u>Actual</u>	FY 2004 <u>Actual</u>	FY 2005 <u>Estimate</u>	FY 2006 <u>Estimate</u>	FY 2006 <u>Goal</u>
<i>Workload Measures</i>						
Total number household hazardous material drop-offs	2,700	2,995	3,378	4,000	4,500	5,175
Number of pounds of household hazardous material received	147,236	195,958	245,650	280,000	285,000	313,500

- ❖ The WPCP management is evaluating how to expand the program to increase the amount of harmful material channeled into safe disposal methods.

FUTURE BUDGET CONSIDERATIONS:

- ❖ The WPCP Master Plan 2001 Update final draft was completed in November 2002 concerning future capital requirements. The upgrade and expansion of the facility will have an impact on out-year operating budgets due to the pending requirements to meet lower total nitrogen in the effluent.
- ❖ There is potential for significant long-term impact on costs from the implementation, approximately within five to ten years, of the DEQ Potomac Tributary strategies.
- ❖ Out-year costs for biosolids handling are anticipated to increase as more stringent regulations for Class B biosolids increases the disposal costs. Additional disposal cost increases are expected when Class A biosolids become required by regulatory action.