
Washington Aqueduct

<http://washingтонаqueduct.nab.usace.army.mil>

Description	FY 2004 Actual	FY 2005 Approved	FY 2006 Proposed	% Change from FY 2005
Operating Budget	\$0	\$47,972,000	\$50,512,000	5.3

The mission of the Washington Aqueduct is to collect, purify, and pump an adequate supply of potable water for the District of Columbia, Arlington County, and the city of Falls Church, Virginia.

The agency plans to fulfill its mission by achieving the following strategic result goals:

- Provide an adequate supply of potable water.
- Provide potable water at an equitable, economical rate that covers all costs.
- Protect the drinking water consumer from both microbial risk and adverse health effects due to chemicals in the drinking water.

The **Washington Aqueduct** owns and operates intake facilities on the Potomac River in Great Falls and Little Falls, Maryland. The Aqueduct also owns and operates two 12-mile gravity conduit systems with a combined 200 million gallon per day (mgd) capacity, a 450-mgd raw water pumping station, a 480-mgd finished water pumping station, two major treatment plants with 350-mgd capacity, three booster pumping stations, seven finished storage reservoirs, and many large diameter transmission mains.

The Aqueduct is managed by the U.S. Army Corps of Engineers and is governed by a Wholesale Customer Board. It sells water to three wholesale customers: the District's Water and Sewer Authority (WASA); Arlington County; and the city of Falls Church, Virginia. During FY 2006, the Washington Aqueduct will

pump an estimated 62 billion gallons of purified water to its customers.

The Aqueduct is a division of the U.S. Army Corps of Engineers and does not receive appropriated funding from the District. As a federal entity, the Aqueduct needs Congress to authorize the agency's operations. The agency submits a budget to the District of Columbia, in accordance with legislation, to obtain this authority.

The **District of Columbia Water and Sewer Authority (WASA)** funds the District's portion of the costs of the Washington Aqueduct. As a wholesale customer, WASA purchases potable water and makes payments to the Aqueduct based on the number of gallons provided. The Aqueduct charges a rate based on water sale agreements with the District of Columbia and northern Virginia (which includes Arlington County, and the City of Falls Church). The individual jurisdictions are responsible for water distribution.

Recent Water Quality Issues

The provisions on the Safe Drinking Water Act and its associated regulations are the basis for all operations concerning the production, storage, and transmission of the drinking water produced and sold by the Washington Aqueduct to its wholesale

Funding by Source

Table LB0-1 shows the sources of funding for the Washington Aqueduct.

Table LB0-1
FY 2006 Proposed Operating Budget, by Revenue Type
 (dollars in thousands)

Appropriated Fund	Actual FY 2003	Actual FY 2004	Approved FY 2005	Proposed FY 2006	Change from FY 2005	Percent Change
Special Purpose Revenue Fund	0	0	47,972	50,512	2,540	5.3
Total for General Fund	0	0	47,972	50,512	2,540	5.3
Gross Funds	0	0	47,972	50,512	2,540	5.3

Expenditures by Comptroller Source Group

Table LB0-2 shows the FY 2006 proposed budget for the agency at the Comptroller Source Group level (Object Class level).

Table LB0-2
FY 2006 Proposed Operating Budget, by Comptroller Source Group
 (dollars in thousands)

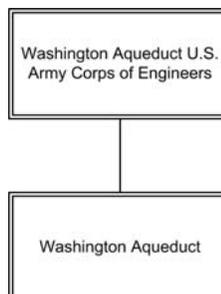
Comptroller Source Group	Actual FY 2003	Actual FY 2004	Approved FY 2005	Proposed FY 2006	Change from FY 2005	Percent Change
50 Subsidies and Transfers	0	0	47,972	50,512	2,540	5.3
Subtotal Nonpersonal Services (NPS)	0	0	47,972	50,512	2,540	5.3
Total Proposed Operating Budget	0	0	47,972	50,512	2,540	5.3

Note: The agency presents its budgeted revenues and expenditures for the purpose of reporting. However, as a proprietary fund, under the current financial accounting structure, the agency's actual revenues and expenditures are not tracked in the District System of Accounting and Reporting (SOAR) and may not have been shown in this chart or in the Comprehensive Annual Financial Report (CAFR).

Expenditures by Program

The Water and Sewer Authority has the following program structure:

Figure LB0-1
Washington Aqueduct



customers. Water is provided from the Potomac River and treated at the Aqueduct's Dalecarlia and McMillan treatment plants in the District.

Prior to the fall of 2000, the treatment consisted of chemically induced sedimentation using aluminum sulfate as the coagulant; filtration in dual media sand and anthracite coal filters; and disinfection using chlorine as the primary and secondary disinfectant. Beginning in November 2000, the Washington Aqueduct switched from using free chlorine as the residual disinfectant in the distribution system and instead introduced chloramines, a combination of chlorine and ammonia. The change was an effort to ensure that Aqueduct's customer distribution systems would be in compliance with the new EPA regulations concerning disinfection by-products. Use of free chlorine as the residual disinfectant was no longer considered feasible because it would create a concentration of disinfection by-products that exceeded the EPA maximum contaminate level.

In the summer of 2002, it was determined from samples taken in accordance with the Lead and Copper Rule at D.C. Water and Sewer Authority that customer taps were above the action level specified by the Environmental Protection Agency (EPA). The high content of lead in the sampled water triggered new operating and capital requirements for WASA, including distribution of public education materials and a program of annual replacement of lead service lines until the action level for lead dropped below EPA standards.

Washington Aqueduct officials announced in early 2004 that they will submit for EPA approval a new treatment technique that will re-optimize optimum corrosion control treatment. Orthophosphate works as a corrosion inhibitor that forms a protective coating inside lead service line pipes and fixtures to prevent lead from leaching into the drinking water. The EPA authorized the addition of orthophosphate to the full water system last August. It is anticipated that this addition will reduce the leaching of lead from service lines and bring the distribution system back below the action level for lead.

During the last six months of 2004, lead levels in all of the compliance samples taken by WASA averaged 19.2 parts per billion (ppb). However,

from October to the end of December, the average lead concentration plummeted to 10.6 ppb, which is below the EPA action level of 15 ppb.

Since 10 percent of the samples are still above the action level, WASA is still considered to be in non-compliance. This may be attributable to the fact that orthophosphate could take up to a year or more to provide maximum protection from lead leaching.

The Aqueduct has fully committed itself to work with the EPA, WASA, and the District of Columbia Department of Health to quickly and safely reduce the corrosiveness of water and formed a technical expert-working group comprised of teams to address the water treatment process, the distribution systems, and the communication of potential risks to the public.

Gross Funds

The proposed budget is \$50,512,000 representing an increase of \$2,540,000 or 5.3 percent from the FY 2005 approved budget of \$47,972,000. This budget is comprised entirely of Special Purpose Revenue funds. There are no District FTEs for the agency, unchanged from FY 2005.

General Fund

Special Purpose Revenue Funds. The proposed budget is \$50,512,000, representing a net increase of \$2,540,000 or 5.3 percent from the FY 2005 approved Special Purpose Revenue budget of \$47,972,000. There are no District FTEs for the agency, unchanged from FY 2005.

The net increase is primarily due to:

- An increase of \$1,900,000 in pay-as-you-go capital financing primarily to fund the conversion to sodium hypochlorite at the Dalecarlia and McMillan Water Treatment plants as well as continued residuals design and replacement of filter media and valves at the McMillan plant.
- A decrease of \$1,353,000 in debt service resulting from WASA's refinancing of Little Seneca debt as well as lower interest rates on U.S. Treasury loan borrowings.
- A net increase of \$1,993,000 in operations and maintenance costs primarily due to expected electrical cost increases due to deregulation.

Programs

The **Water Supply** program sells water to three wholesale customers: WASA ; Arlington County; and the city of Falls Church, Virginia. The Aqueduct is managed by the U.S. Army Corps of Engineers and governed by a Wholesale Customer Board represented by the three jurisdictions. The Wholesale Board also approves the Aqueduct's budget. During FY 2005, the agency will pump an estimated 62 billion gallons of purified water to its customers.

Agency Goals and Performance Measures

Goal 1: Provide an adequate supply of potable water

Citywide Strategic Priority Area(s): Building Safer Neighborhoods; Making Government

Manager(s): Lloyd D. Stowe, Chief, Plant Operations, Washington Aqueduct, U.S. Army Corps of Engineers

Supervisor(s): Thomas P. Jacobus, Chief, Washington Aqueduct, U.S Army Corps of Engineers

Measure 1.1: Number of days water is provided as demanded by Washington, DC

	Fiscal Year				
	2003	2004	2005	2006	2007
Target	N/A	365	365	365	365
Actual	N/A	365	-	-	-

Note: New measure FY 2004.

Measure 1.2: Number of days water is provided as demanded by Arlington County, VA

	Fiscal Year				
	2003	2004	2005	2006	2007
Target	N/A	365	365	365	365
Actual	N/A	365	-	-	-

Note: New measure FY 2004.

Measure 1.3: Number of days water is provided as demanded by Falls Church, VA

	Fiscal Year				
	2003	2004	2005	2006	2007
Target	N/A	365	365	365	365
Actual	N/A	365	-	-	-

Note: New measure FY 2004.

Measure 1.4: Days Average Filtered Water Turbidity is less than .1 NTU

	Fiscal Year				
	2003	2004	2005	2006	2007
Target	N/A	346	346	346	346
Actual	N/A	358	-	-	-

Note: New measure FY 2004.

Goal 2: Protect the drinking water consumer from both microbial risk and adverse health effects due to chemicals in the drinking water

Citywide Strategic Priority Area(s): Building Safer Neighborhoods; Making Government

Manager(s): Elizabeth Turner, Chief, Laboratory Section, Washington Aqueduct, U.S. Army Corps of Engineers

Supervisor(s): Thomas P. Jacobus, Chief, Washington Aqueduct, U.S Army Corps of Engineers

Measure 2.1: Percentage of treated water samples in compliance with regulatory requirements

	Fiscal Year				
	2003	2004	2005	2006	2007
Target	N/A	100	100	100	100
Actual	N/A	100	-	-	-

Note: New measure FY 2005.

Measure 2.2: Number of chemical substances investigated for presence in the water supply system-wide

	Fiscal Year				
	2003	2004	2005	2006	2007
Target	181	163	163	163	163
Actual	181	181	-	-	-

Note: FY 2004 and 2005 targets decreased from 181 to 163 at the request of the agency (1/04). FY 2006 target decreased from 182 to 163 at the request of the agency (1/04)

Measure 2.3: Number of months per year EPA water quality report is completed by the tenth of the month

	Fiscal Year				
	2003	2004	2005	2006	2007
Target	N/A	10	10	10	10
Actual	N/A	11	-	-	-

Note: New measure FY 2005.

Measure 2.4: Number of months per year required bacteriological samples are analyzed within holding times and with appropriate quality control

	Fiscal Year				
	2003	2004	2005	2006	2007
Target	N/A	12	12	12	12
Actual	N/A	12	-	-	-

Note: New measure FY 2005.

Measure 2.5: Number of months per year required chemical samples are analyzed within holding times and with appropriate quality control

	Fiscal Year				
	2003	2004	2005	2006	2007
Target	N/A	12	12	12	12
Actual	N/A	12	-	-	-

Note: New measure FY 2005.

