

District of Columbia Water and Sewer Authority

Controlling Capital Costs

A Case Study



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Serving the Public • Protecting the Environment

Agenda

- ❑ **DC WASA Introduction**
- ❑ **Background/History**
- ❑ **Challenges**
- ❑ **Response**
- ❑ **Moving Forward**
- ❑ **Upcoming Major Capital Projects**



Introduction

- ❑ Created 1996 – by the District Government and Congress
- ❑ Created to address the disinvestment that had prevailed and to “.... expedite the repair, replacement, rehabilitation, modernization ... of the water distribution, sewage collection and treatment systems”
- ❑ Established as an independent agency within the DC government with unique governance structure, functioning as a regional authority
- ❑ Board of Directors—11 principal members
 - ✓ Six (6) from District of Columbia
 - ✓ Five (5) members from suburban counties
- ❑ Board has financial control, bond issuance, budgetary and rate-setting authority



Background

One of the Largest Water & Sewer Utilities on the East Coast



- ❑ Service area—approx. 725 miles
- ❑ Retail water and sewer services to 570,000 in the District—130,000 locations
- ❑ WASA purchases treated water wholesale from U.S. Army Corps of Engineers Washington Aqueduct
- ❑ Provides wholesale wastewater services to a population of 1.6 million
 - ✓ Montgomery, Prince George's counties, MD
 - ✓ Fairfax, Loudoun counties and Vienna, VA



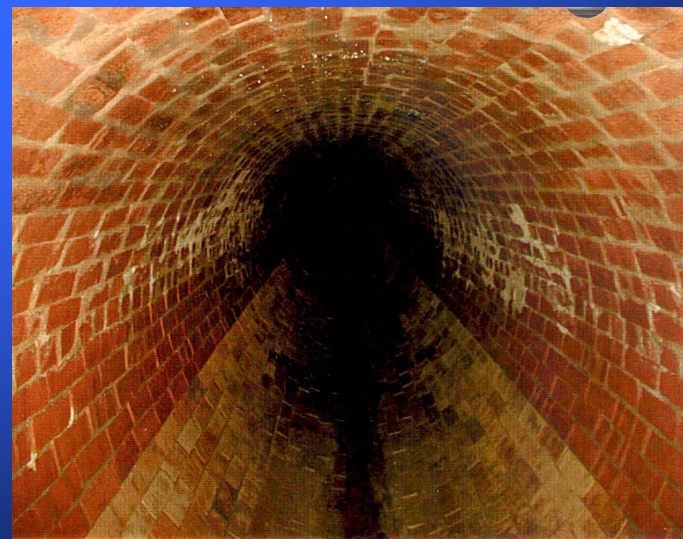
Water & Sewer Systems

Includes Approximately:

- ❑ 1,300 miles of water mains
- ❑ 36,000 valves
- ❑ 9,000 hydrants
- ❑ Four Pumping Stations
- ❑ Eight Storage Facilities
 - ✓ 5 Reservoirs
 - ✓ 3 Elevated Tanks

Includes Approximately:

- ❑ 652 miles of Combined Sewers
 - ✓ 18,240 Manholes
 - ✓ 8,500 Catch basins
- ❑ 675 miles of Sanitary Sewers
 - ✓ 15,447 Manholes
- ❑ 536 miles of Storm Sewers
 - ✓ 15,303 Manholes
 - ✓ 15,500 Catch basins



Blue Plains Wastewater Treatment Plant

- ❑ **Largest advanced wastewater treatment plant in the world**
- ❑ **Capacity:**
 - ✓ **370 mgd annual average**
 - ✓ **1076 mgd wet weather**
 - **740 mgd full treatment**
 - **336 mgd excess flow treatment**
- ❑ **Current average annual flow is 330 mgd**
- ❑ **Serves about 2 million people**



**Blue Plains Wastewater
Treatment Plant**



WASA Then and Now

Then - 1996

- ❑ **No rate increases in 10 years**
- ❑ **Less than 50% of fleet operable**
- ❑ **Lost revenue due to inaccurate meter readings, over 15% meter readings estimated**
- ❑ **Virtually no cash in the bank**
- ❑ **No bond rating; never issued debt**
- ❑ **Over \$35 million in delinquent accounts**
- ❑ **Customers had to mail requests for service/transfers**

Now - 2009

- ❑ **FY 2008 Operating budget—\$340.8 million; 10-year CIP budget—\$6.2 billion with annual CIP expenditures ~\$300 million**
- ❑ **94% fleet vehicles operable**
- ❑ **Automated Meter Reading (AMR); real-time, accurate readings.**
- ❑ **Six months operating cash reserves**
- ❑ **Aa3/AA/AA- bond rating**
- ❑ **Delinquent accounts reduced to \$6.3 million**
- ❑ **Consolidated Call Center and Voice Recognition Technology**



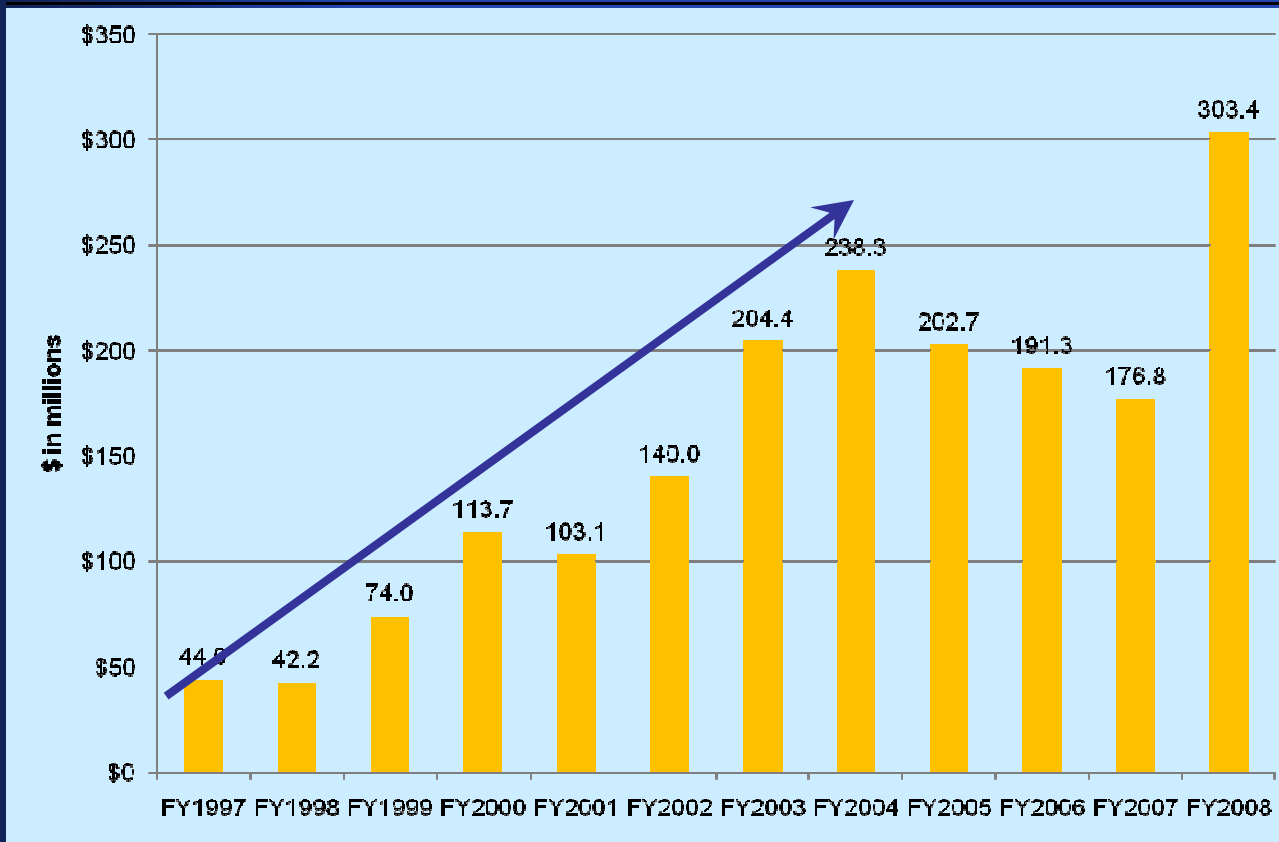
WASA's Challenges

- ❑ **Capital Improvement Program – Increasing Size and Scope**
 - ✓ **Increases/stretches resources – In-House & Contracting community.**
 - ✓ **Increasing Regulatory Requirements**
 - ✓ **The Business Development Plan**
 - **M/WBE Requirement of 32% and 6% (Construction)**
 - **M/WBE Requirement of 28% and 4% (A/E)**
- ❑ **Perception of Government Bureaucracy**
 - ✓ **Contracting community knew the reputation**
 - ✓ **Cumbersome process involving multiple agencies and political oversight**
- ❑ **Improve the Predictability of Contracting processes**
 - ✓ **Remove the yoke of large bureaucracy**
- ❑ **Expand the Bidder pool**
 - ✓ **Maintain the existing Bidder pool**
 - ✓ **Attract new Bidders**



Capital Improvement Program

Historical Capital Spending (FY1997 - FY2008)



Source: DC WASA Operating Budgets, FY2004 – FY2009

- \$1.8 billion spent between FY1997 – FY2008
- Proven ability to manage large projects. For FY2008, \$303.4 million allocated to the following projects:
 - \$85.3 million wastewater treatment
 - \$70.1 million water
 - \$38.6 million CSO LTCP
 - \$76.4 million Washington Aqueduct
 - \$18.3 million sanitary and stormwater sewer projects
 - \$14.6 million capital equipment

DC WASA has effectively managed large capital spending over the past decade.



Capital Improvement Program

Increasing Regulatory Compliance:

- ❑ **Over 52%, (\$1.7B) of WASA's total 10 year Capital Spending (\$3.2B), is mandated by Consent Order or Permit.**

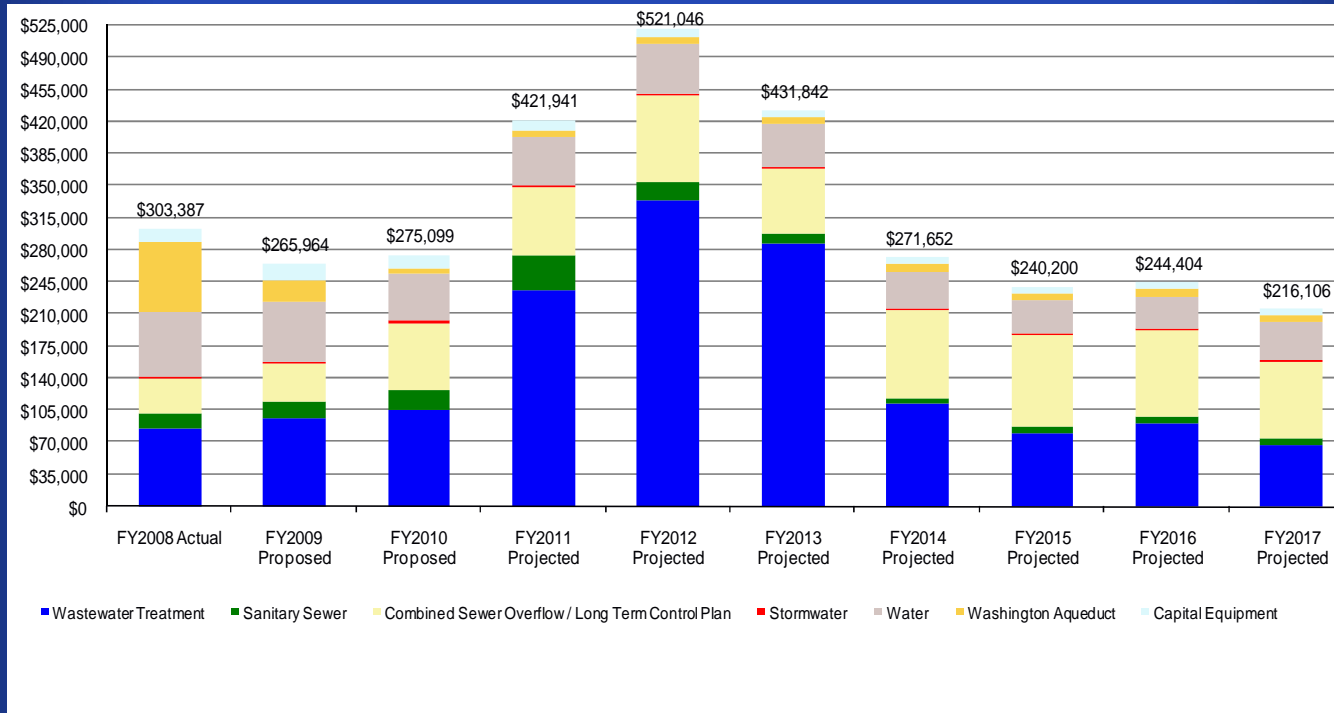
Business Development Plan Goals:

- ❑ **WASA has set High Standards through it's Business Development Plan.**
 - ✓ **50% of Discretionary spending to LSDBE's (established by the Board of Directors).**
 - ✓ **The highest MBE/WBE Fair Share objectives (set by EPA Region III).**
- ❑ **Over \$500 million in commitments since October 2004, of which over 50% was to LSDBE/MBE/WBE firms (Achieved or exceeded goals).**



Capital Improvement Program

Projected Capital Spending By Year and By Category
 Projected CIP Spending Begins to Decrease Substantially after FY2013
 FY2008 – FY2017 (\$'000s)



Source: DC WASA Revised FY2009 and Proposed FY2010 Operating Budgets

- Total FY2008 – FY2017 capital spending proposed at \$3.2 billion
- Two-thirds of projected capital spending over the next decade will be for wastewater projects, including the Blue Plains Total Nitrogen Program and the Combined Sewer Overflow Long-Term Control Plan



Perception of Bureaucracy

Prior Culture:

- ❑ Contracting community had low expectations.
- ❑ Lack of timely decision making.
- ❑ Multiple agency / political burden.
- ❑ Slow and unpredictable.

How we changed perception:

- ❑ Total control of Finances and Procurement.
- ❑ No Politics / Just Technical Compliance and Cost value.
- ❑ Open and Honest Relationships.
- ❑ Streamline Contract Bidding & Award Process.
- ❑ Timely & Fair Change Negotiation.
 - ✓ In 12 years – only 2 claims (~ \$1.5M in \$1.8B)



Expand Bidder Pool

Develop Contractor Relationships:

- ❑ General and Project specific Outreach Programs.
- ❑ Contractor Interviews.
- ❑ Educate Contractor Community (WASA Processes).
- ❑ Added predictability to the contracting process.
- ❑ Payments on time.
- ❑ Reputation as a Fair owner.

Attracting New Bidders:

- ❑ National / Local Advertising
- ❑ Contracting opportunities @ WASA Website (www.dcwasa.com)
- ❑ Owner Controlled Insurance Program (OCIP)
- ❑ Involve Sureties early in Major Project Planning.
- ❑ Flexible Risk Allocation
 - ✓ Cap on Liquidated Damages.
 - ✓ Flexibility in risk w/Hazmat & Environmental Impact issues.
 - ✓ Permit Compliance risk capped.
- ❑ Package (Size) Contracts to Enhance Competition



The Future of the Process

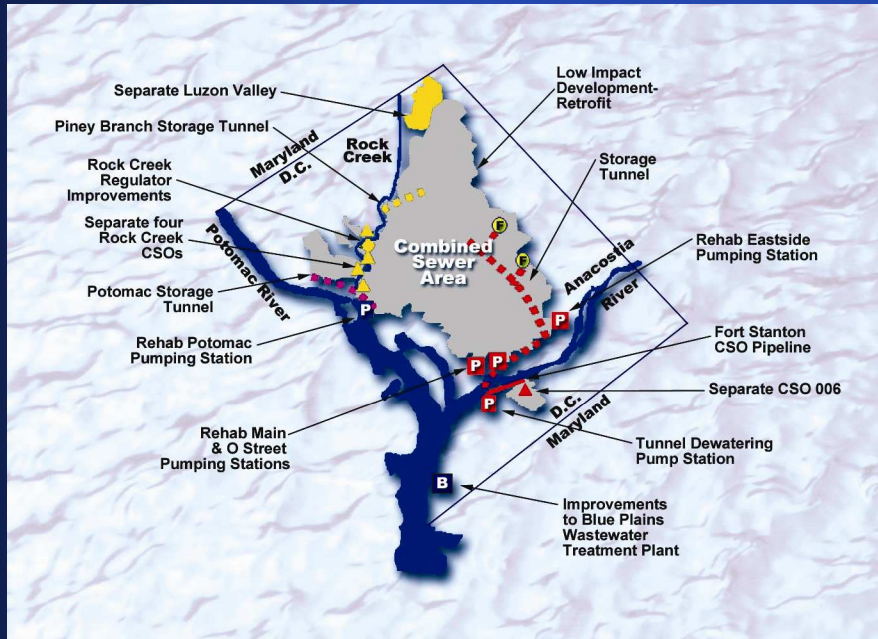
- ❑ **New Procurement Regulations**
 - ✓ Adopting best practices based on national research
 - ✓ Flexibility to use Alternate Delivery Methods
- ❑ **New Front-end Contract Documents**
 - ✓ Processes/Businesses change – Important to stay current
- ❑ **Increase use of Technical Advisory Groups**
- ❑ **Performance Management Planning**
 - ✓ Board Strategic Plan
 - ✓ Departmental Work Plans
 - ✓ Individual Performance Plans
- ❑ **Succession Planning**
 - ✓ Knowledge Capture



Major Capital Projects



CSO Long-Term Control Plan



Background

- **Twenty year program totaling \$1.9 billion (\$2.2 billion including inflation)**
 - ✓ **Consent decree executed in March 2005**
 - ✓ **Facility planning & geotechnical work underway**
- **Projected reduction of 96% of combined sewer overflows**
 - ✓ **98% reduction on Anacostia**
- **Plan includes:**
 - ✓ **3 large storage tunnels**
 - ✓ **Pumping station improvements**
 - ✓ **Targeted separation**
 - ✓ **Consolidation and elimination of several outfalls**
 - ✓ **Low impact development projects**

- ✓ **Nine Minimum Control (NMC) improvements (totaling \$140 million) on track to be completed by 2008**
 - **NMC projects alone will reduce overflows by 40%**
- ✓ **Received federal funding of about \$98 million to date**
 - **Future additional federal funding anticipated but amounts unknown**
 - ❖ **\$6 million approved in FY 2008 federal budget**



Blue Plains Total Nitrogen Program

\$805 million (disbursements from FY 2008-2017)

- ❑ **40% retail/60% wholesale**
- ❑ **Lifetime budget - \$950 million**
- ❑ **Includes the following projects:**
 - ✓ **Enhanced Clarification Facilities**
 - ✓ **Total Nitrogen Removal Facilities**
 - ✓ **Centrate Treatment Facilities**
 - ✓ **Wet Weather Peak Mitigation**

Note: WASA Combined 2 mandated projects, Nitrogen Removal and CSO Controls, into a single solution, (\$500M savings in Capital costs).



Blue Plains Biosolids Management Program

\$390 million (disbursements from FY 2008-2017)

- ❑ **Lifetime budget - \$665 million**
- ❑ **Includes the following:**
 - ✓ **Digestion facilities to reduce volume of biosolids and produce Class A product**
 - ✓ **Biological sludge thickening**
 - ✓ **Gravity thickener upgrades**
 - ✓ **Solids processing building upgrades**

Note: 4 years after completion, the annual savings in operational costs will exceed annual debt service costs.

