

Building Strong Collaborative Relationships for a Sustainable Water Resources Future:

DISTRICT OF COLUMBIA

SUMMARY OF DISTRICT WATER PLANNING

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The findings contained in this report are based on the information collected from the literature search and interviews for this initiative and should not be construed as an official Department of the Army position, policy or decision unless so designated by other official documentation.

DISTRICT OF COLUMBIA¹

1. DISTRICT/REGIONAL WATER PLANNING STATUS

Although the District of Columbia currently does not have a comprehensive water resources plan, it does have “a general policy document that provides overall guidance for future planning and development of the city” called *The Comprehensive Plan for the National Capital* [1]. This plan is divided into two sections: the District Elements, which were adopted in 2006 by the D.C. City Council, and the Federal Elements, which were adopted in 2004 by the National Capital Planning Commission (NCPC). The District Elements include planning policies and actions to be implemented by District agencies and organizations. The Federal Elements apply only to land and facilities within the jurisdiction of the federal government. These plans cover all aspects of urban development including land use, zoning, transportation, economic development, etc. There are three sections related to water resources planning:

- *Environmental Protection Elements*
- *Infrastructure Elements*
- *Federal Environment Elements*

The policies described in the Comprehensive Plan address mainly water supply, water quality and stormwater management issues. The District Department of the Environment (DDOE) and the District of Columbia Water and Sewer Authority (DC WASA) are the two primary entities responsible for implementing the District’s water resources-related planning initiatives; the U.S. Environmental Protection Agency is in charge of the Federal Environment Elements.

2. RESPONSIBLE DISTRICT AGENCIES/REGIONAL ENTITIES

Although the Comprehensive Plan was written by the D.C. Office of Planning and the National Capital Planning Commission, the District Department of the Environment (DDOE) is the primary agency that oversees water resources planning in the District. DDOE was created through the *District Department of the Environment Establishment Act of 2005* (D.C. Law 16-51). It assumed the responsibilities formerly appointed to the D.C. Department of Health’s Environmental Health Administration, the D.C. Energy Office, the Tree Management Administration, and the Office of Recycling. The executive director of DDOE is:

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¹ Representatives from the District of Columbia did not participate in an interview.

The District's water supply distribution system, wastewater collection system, and wastewater treatment facilities are the responsibility of the D.C. Water and Sewer Authority (DC WASA). DC WASA was established in 1996 as a semi-autonomous regional entity by *The Water and Sewer Authority Establishment and Department of Public Works Reorganization Act of 1996* (D.C. Law 11-111). Prior to 1996, the responsibilities of DC WASA were held by the District of Columbia Water and Sewer Utility Administration, which was part of the D.C. government. The general manager of DC WASA is:

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3. WATER MANAGEMENT VISION AND GOALS

The mission of DDOE is to:

...to improve the quality of life in the District of Columbia by protecting and restoring the environment. DDOE works to conserve natural resources, and provide energy policy and services (Source: [2]).

DDOE's vision is:

The nation capital will become the model of environmental protection and sustainable practices. DDOE will lead the way through partnerships with other District agencies, business groups, nonprofits and residents (Source: [2]).

In the short term, the DDOE listed four objectives in their FY09 Performance Plan:

- *Objective 1: Establish and continuously maintain regulations that protect and improve the environment for District residents.*
- *Objective 2: Educate District Residents and Businesses about Environmentally Friendly and Energy Efficient Practices and Requirements and Encourage District-wide Environmental and Sustainability Goals.*
- *Objective 3: Enrich, Restore and Protect the Environmental Quality of the District's Natural Resources.*
- *Objective 4: Enforce the District's environmental regulations by increasing the use of enforcement mechanisms and creating incentives for compliance (Source: [3]).*

As stated in the Comprehensive Plan, the overall goal for the District Environmental Protection Element is to:

Protect, restore, and enhance the natural and man-made environment in the District of Columbia, taking steps to improve environmental quality, prevent and reduce pollution, and conserve the values and functions of the District's natural resources and ecosystems (Source: [1]).

The goal of the District Infrastructure Element is to:

Provide high-quality, efficiently managed and maintained, and properly funded infrastructure to serve existing development, as well as future change and growth (Source: [1]).

The goal of the Federal Environment Element is to:

Conduct its activities and manage its property in a manner that promotes the National Capital Region as a leader in environmental stewardship and preserves, protects, and enhances the quality of the region's natural resources, providing a setting that benefits the local community, provides a model for the country, and is worthy of the nation's capital (Source: [4]).

DC WASA's mission is to "Serve all of its customers with outstanding service by providing reliable and cost-effective water and wastewater services in accordance with best practices" (Source: [5]). Their vision is to "Provide world-class water and wastewater services as a leading steward of the environment" (Source: [5]). According to their 2008-2013 Strategic Plan, DC WASA has five primary objectives:

- *Environmental Stewardship – design and implement environmentally responsible policies, programs, and technologies that protect our region's waterways, air, and lands.*
- *Customer Confidence and Communications – effectively anticipate, respond in a timely manner to, and communicate about the needs of our customers, the public, and other regional stakeholders with honesty, respect and transparency.*
- *Operating Excellence – excel in all aspects of water delivery, wastewater collection and treatment, and customer service.*
- *Financial Integrity – plan and control all financial resources in a manner faithful to our customers, bondholders, and suppliers.*
- *High Performing Workforce – attract, develop and retain staff required to sustain our values, achieve our vision, and execute our mission (Source: [5]).*

4. SCOPE OF WATER RESOURCES PLANNING AND MANAGEMENT

Overall planning in the District of Columbia is guided by *The Comprehensive Plan for the National Capital* (referred to hereafter as the Comprehensive Plan). Because D.C. serves as the nation's capital, this document is comprised of two separate plans: the District Elements and the Federal Elements. The District Elements apply to all land outside the Federal jurisdiction, while the Federal Elements apply only to Federal lands and facilities. The most recent Comprehensive Plan was written by the D.C. Office of

Planning and the Federal government's National Capital Planning Commission (NCPC). The District Elements were adopted in 2006 by the D.C. City Council and the Federal Elements were adopted in 2004 by the NCPC. These plans replaced the original Comprehensive Plan developed in 1984 and last updated in 1998.

Within the District Elements, there are two sections related to water resources planning: the Environmental Protection Element and the Infrastructure Element. The policies described in the District Elements are primarily the responsibility of the District Department of the Environment (DDOE) and the District of Columbia Water and Sewer Authority (DC WASA). The Federal Elements include one section related to water: the Federal Environment Element. The U.S. Environmental Protection Agency (EPA) is the primary Federal agency responsible for implementing this element. The policies outlined in the Comprehensive Plan are intended to guide decision making and planning by local, District and Federal governments.

The water resources policies described in the Comprehensive Plan, as well as additional initiatives pursued by the individual agencies, can be grouped into the following three topics, each of which is discussed in detail below.

- Water Supply
- Water Quality
- Stormwater Management

Water Supply

The primary water supply for the District of Columbia is the Potomac River, which also supplies water to four other states in the region (Virginia, West Virginia, Maryland, and Pennsylvania). The District's water supply is withdrawn from the Potomac through the Washington Aqueduct which is owned and operated by the U.S. Army Corps of Engineers (ACOE) (Figure 1). After treatment, the water is sold to DC WASA, which maintains the water supply distribution system that delivers this water to over 500,000 District customers plus an additional 1.6 million customers in Maryland and Virginia. Current demand is approximately 110 million gallons per day (MGD) (Source: [6]).



Figure 1. Schematic of the Washington Aqueduct Supply System [Source: (1)]

The Environmental Protection Element of the Comprehensive Plan includes two policies related to the District's water supply:

- *Policy E-2.1.1: Promoting Water Conservation* - through the use of water efficient landscaping, irrigation, and plumbing fixtures.
- *Policy E-4.5.1: Drinking Water Safety* - to minimize health risks and ensure a safe drinking water supply and distribution system (Source: [1]).

In addition, water supply policies are also found in the Infrastructure Element and include:

- *Policy IN-1.1.1: Adequate Water Supply* – ensure a reliable and sufficient water supply system for meeting current and future demand.
- *Policy IN-1.2.1: Modernizing and Rehabilitating Water Infrastructure* – work with DC WASA to rehabilitate the water distribution system and ensure that it will meet current and future demands.
- *Policy IN-1.2.2: Ensuring Adequate Water Pressure* – work with DC WASA to ensure that adequate pressure is delivered to all District residents (Source: [1]).

DC WASA is the primary entity responsible for implementing these policies since it operates the District’s water supply distribution system. It promotes water conservation mainly through public outreach campaigns and education. It is also investing over \$300 million in water system improvements through its 10-year Capital Improvement Program (CIP) [6]. This investment will go towards improving water pressure in the service area east of the Anacostia River through pump station rehabilitation, upgrading fire hydrants and valves, replacing lead pipes and aging infrastructure.

DC WASA also works in collaboration with the Interstate Commission of the Potomac River Basin (ICPRB) Section for Cooperative Operations for Water Supply on the Potomac (CO-OP). The ICPRB was established by congress in 1948 to facilitate cooperation between the four states (Maryland, Virginia, Pennsylvania, and West Virginia), the District of Columbia, and the federal government which all depend on the Potomac River. In addition to DC WASA, DDOE also works with the ICPRB, in particular their Watershed Protection Division to protect water quality of the Potomac River.

The ICPRB’s CO-OP Section was created “to coordinate water supply operation of the three independent water suppliers [Fairfax County Water Authority, Washington Suburban Sanitary Commission, and Washington Aqueduct Division of the U.S. Army Corps of Engineers] in the Washington D.C. area during times of drought” (Source: [7]). Since DC WASA receives water from the Washington Aqueduct, it is also a key player in CO-OP’s initiatives. CO-OP plans for droughts through annual Drought Exercise Simulations whereby a simulated drought situation is conducted involving all three water suppliers to prepare for real-time operations in the case of a drought.

Drinking water quality has been a concern in the district, especially potential lead contamination. DDOE formed the Drinking Water Quality Task Force in September 2008 to identify the potential threats due to lead levels and other contaminants in the District’s drinking water supply, and to provide recommendations on how DDOE should address

these issues. DC WASA has recognized this issue and is working to replace lead pipes in its distribution system.

Water Quality

Water quality of the Potomac and Anacostia Rivers, Rock Creek, and their tributaries has been degraded due to Combined Sewer Overflows (CSOs), urban stormwater runoff, and other point and non-point sources. Because these rivers are highly visible and an integral part of the District's landscape, it is important they are restored for both economic and environmental reasons. Additionally, these rivers ultimately discharge to the Chesapeake Bay, which has undergone significant degradation due mainly to high nutrient loads over the past few decades.

The Environmental Protection Element of the Comprehensive Plan includes the following policies aimed at improving the water quality of these rivers:

- *Policy E-4.2.1: Improving Water Quality* – to meet public health and water quality standards
- *Policy E-4.2.2: Wastewater Treatment* – to reduce sewage overflows and improve treated effluent quality
- *Policy E-4.2.3: Control of Urban Runoff* – to implement Best Management Practices (BMPs) to reduce stormwater flow and pollutant loads from urban runoff
- *Policy E-4.2.4: Riverbed Sediment* – to reduce toxic chemical levels in the sediment of the Potomac and Anacostia Rivers
- *Policy E-4.2.5: Groundwater Protection* – to protect groundwater resources from contamination due to urban development
- *Policy E-4.2.6: Control of Illicit Discharges* – provide public outreach and enforcement procedures to control illicit discharges
- *Policy E-4.2.7: Regional Coordination* – promote watershed-level planning and coordinate efforts with other regional agencies, particularly with Maryland to improve the Anacostia River (Source: [1]).

Implementation of these policies is primarily the responsibility of the DDOE Watershed Protection and Water Quality Divisions. The Watershed Protection Division is devoted to sediment and stormwater technical services, inspection, enforcement, and watershed planning and restoration. The purpose of the Water Quality Division is to “to restore and protect the surface and ground waters of the District of Columbia” (Source: [8]). Current activities include drinking water testing, water quality certification, biological and chemical monitoring of surface waters, and policy planning and regulatory control of water quality regulations. DDOE also provides a number of public outreach and education events and programs to improve awareness and stimulate voluntary pollution prevention.

Recent accomplishments of the Water Quality Division include the adoption of Total Maximum Daily Load (TMDL) plans for Polychlorinated Biphenyls (PCBs) in the Potomac and Anacostia Rivers. These TMDL plans were developed in conjunction with

the Maryland Department of the Environment and the Virginia Department of Environmental Quality with support from the ICPRB.

DC WASA also plays an important role in improving water quality since wastewater overflows and effluent discharge contribute to water quality problems in the Potomac and Anacostia Rivers, and Chesapeake Bay. According to the 2007 Annual Report, DC WASA is investing in a number of projects to reduce the impact of treated and untreated wastewater on receiving water bodies (Source: [6]).

Combined sewers serve about one third of the District population and have had a major impact on the water quality of the Potomac and Anacostia Rivers (Figure 2). DC WASA is in the process of implementing a \$2.1 billion Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP), which will reduce CSO discharges by 96 percent by 2025 (Source: [6]). DC WASA is also upgrading its Blue Plains wastewater treatment facility to reduce nitrogen levels of the treated effluent as part of the Chesapeake Bay restoration.

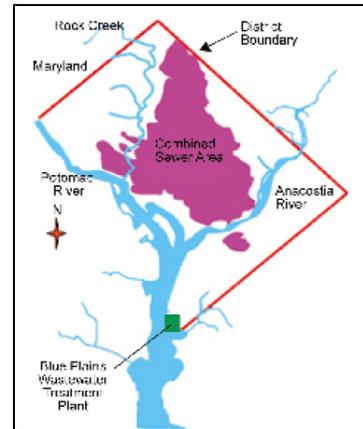


Figure 2. Combined Sewer Service Area
(Source: [1])

Stormwater Management

Flooding in the District has been a significant issue in recent years. Extreme flooding in 2006 prompted the DDOE to create a Stormwater Management Task Force comprised of representatives from district agencies, local business and environmental groups to “assess and make recommendations regarding the District's stormwater management priorities, the organization of the District's stormwater administration, and the adequacy of the District's funding mechanisms for stormwater management” (Source: [9]).

In June 2008, the task force released a list of recommendations, which included:

- *Update Stormwater Fee Structure* for MS4 Permit implementation, adjusted stormwater fees based on impervious area, mitigation for low-income rate payers.
- *Develop New Incentive Programs* to promote low-impact development (LID), on-site stormwater management in private and public spaces.
- *Coordinate District Agency Activities and Responsibilities* by reorganizing the District Stormwater Advisory Panel, development of an environmental management system for tracking permit compliance, establish citizen's advisory group, and simplify/consolidate reporting requirements (Source: [10]).

In addition to the recommendations of the Storm Water Task Force, the Environmental Protection and Infrastructure Elements of the Comprehensive Plan list a number of policies and actions related to stormwater management including:

- *Action E-4.2.A: Stormwater Management Plan* to create an interagency stormwater management plan to cover all aspects of stormwater management including mitigation strategies, fees, permitting, etc.
- *Policy IN-2.2.1: Improving Stormwater Management* to ensure stormwater is efficiently conveyed and the quality of receiving waters is sustained.
- *Action IN-2.2.A: Stormwater Capital Improvements* to continue implementation of DC WASA stormwater system rehabilitation.
- *Action IN-2.2.B: Stormwater Management Responsibilities* to develop an integrated stormwater management process that enhances interagency communication and cooperation (Source: [1]).

Both DDOE and DC WASA are involved in the implementation of these policies and actions. The reduction of stormwater through LID and “green” development is a common theme in many planning documents and is supported by a number of planning initiatives and various District and federal agencies.

The Federal government’s National Capital Planning Commission (NCPC) also recognizes the importance of sound stormwater management for protection of the Federal lands in the District. In 2008, it released a *Report on Flooding and Stormwater in Washington, D.C.* that described the various issues regarding stormwater that need to be addressed (Source: [11]). It also provided strategies and next steps for the NCPC to follow in addressing stormwater management and flooding issues.

5. PARTNERSHIPS, STAKEHOLDER, AND PUBLIC INVOLVEMENT

Because of its role as the nation’s capital, planning in the District of Columbia requires close collaboration between District and Federal government agencies. In particular, the two main planning agencies, the District’s Office of Planning and the Federal government’s National Capital Planning Commission, work together in developing their individual versions of the Comprehensive Plan. In terms of water resources planning and management, there are a number of partnerships between the DDOE, DC WASA, USGS, USACE, USEPA, the Department of Health and the D.C. Homeland Security and Emergency Management Agency.

Multiple stakeholder collaborations are frequently assembled to address specific environmental issues. Two recent examples of this are the DDOE Water Quality Task Force and the Storm Water Task Force, which are comprised of independent stakeholders.

Regionally, the District is a co-signer of the Chesapeake 2000 agreement and a member of the Interstate Commission on the Potomac River Basin (ICPRB). The ICPRB includes representatives from the four states (Maryland, Virginia, West Virginia, and Pennsylvania), the District of Columbia, and the federal government. The ICPRB coordinates water resources planning between the states. See the ICPRB profile for more information.

Public education opportunities are provided by DDOE's Watershed Protection Division. Its Education and Community Outreach Program encourages pollution prevention through its educational activities including teacher trainings such as Project WET, Project WILD, and Project Learning Tree; environmental education camps for elementary and middle school-aged children; and the Watershed Wise DC Fellowship, a three-year program for fourth grade teachers and their students (Source: [12]).

6. PLAN IMPLEMENTATION STRATEGY

Implementation of the Comprehensive Plan: District Elements is the responsibility of the various District agencies and entities, particularly DDOE and DC WASA. The third volume of this plan is the Implementation Element, which "describes how the policies and actions in the Comprehensive Plan should be carried out" (Source: [1]). This element includes three sections that provide guidance on how to successfully implement its policies:

- *Administration of the Planning Process*
- *Strengthening Linkages to Capital Programming and Zoning*
- *Monitoring, Evaluating, and Updating the Comprehensive Plan*

An important component of its implementation is periodic revisions of the Comprehensive Plan. Although the DC law requires that the plan be updated at least once every four years, the original 1984 plan was updated only four times in 20 years. The current plan proposes a new revision cycle that includes amendments to the plan made once every four years, and major revisions once every 12 years. Amendments would undergo public and government review prior to submission. The Implementation Element also includes a table summarizing all the action items described in the first two volumes of the Comprehensive Plan. This table lists the action item, the responsible agency/agencies, the time frame, and whether capital funds are required.

In addition, DDOE achieves its own strategic objectives through its various programs and policies described above, some of which correspond to items in the Comprehensive Plan. DC WASA's implementation strategy is to follow the budget and complete capital improvements projects as outlines in the Capital Improvements Plan.

7. OUTCOMES ASSESSMENT PROCESS

The District has a performance-based accountability program called CapStat modeled after the city of Baltimore's CitiStat. Each District agency is required to participate in the program. The CapStat Director meets regularly with agency directors to discuss needs and opportunities for improvement. Follow-up meetings are held to revisit topics, discuss progress and identify challenges. Agency directors examine their agency's performance measures while CapStat reviews the agencies' performance indicators to ensure that they are accurate and meaningful. To fulfill the requirements of the CapStat program, DDOE issues an annual Performance Plan (Source: [3]) and a Performance Accountability Report (Source: [13]). DDOE's Performance Plan contains the department's water-

related objectives and initiatives, and defines a series of performance measures, which are reported in the Accountability Report. Water-related performance measures include (Source: [13]):

- *Percent of stormwater plans approved that contain low impact designs*
- *Number of low impact design best management practices installed*
- *Percent of District residents reached by DDOE environmental education and outreach efforts*
- *Number of new stormwater best management practices installed annually that protect the Anacostia River*
- *Number of pounds of nitrogen and phosphorous prevented from entering the Potomac and Anacostia River by stormwater best management practices*
- *Number of tons of sediment prevented from entering the Potomac and Anacostia River annually by stormwater best management practices*
- *Percent increase in suitable fish and wildlife habitat acreage*
- *Percent of EBL-case properties achieving lead reduction*

DDOE’s Performance Accountability Report for FY08 (Source: [13]), submitted as part of CapStat, shows that most of the agency’s initiatives have been achieved (Figure 3). For each initiative, the Performance Plan provides an estimated cost and/or source of funding.

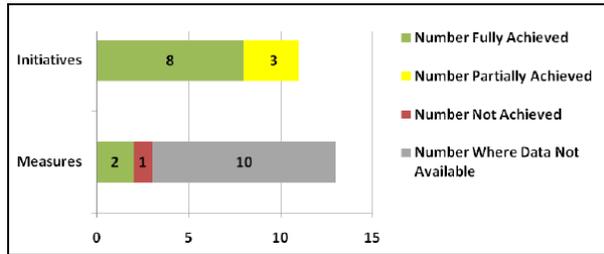


Figure 3. Overview of DDOE Agency Performance in FY08 [Source: (13)]

The water-related initiatives that were completed in 2008 include:

- *Initiative 1.1: Low impact design.* DDOE revised stormwater and sedimentation regulations and pursued LID implementation strategies
- *Initiative 2.1: Outreach and education.* DDOE created a number of public outreach programs including the green.dc website, the Mayor’s Green Summer Job Corps program, among others.
- *Initiative 2.2: Regulatory awareness.* DDOE developed new educational materials and held numerous public outreach meetings.
- *Initiative 4.1: Clean Anacostia River.* DDOE launched a web-based water quality reporting system, adjusted stormwater fees to raise revenue for stormwater reduction, and developed a new public outreach campaign called RiverSmart Homes that provides incentives to homeowners to reduce stormwater pollution from their property
- *Initiative 4.2: Wetlands protection.* DDOE hired an Environmental Protection Specialist to delineate wetlands and evaluate impacts.
- *Initiative 5.1: Lead exposure reduction.* DDOE will prepare biweekly reports on the progress to resolve lead poisoning cases in the District (Source: [13]).

Initiatives that were partially achieved include:

- *Initiative 1.2: Water and air quality standards.* The Water Quality Division reviews water quality standards triennially and will be complete the revision in 2009.
- *Initiative 3.1: Capital Futures.* The Capital Futures Plan is now part of a new sustainability agenda being developed in conjunction with CapStat (Source: [13]).

Like DDOE, DC WASA issues annual reports based on its strategic plan. However, the strategic plan does not establish performance measures or indicators. The FY07 report indicates that in FY07, \$191.3 was spent on capital improvement projects including rehabilitation of pumping stations, upgrades to fire hydrants, initial construction of the Blue Plains Wastewater Treatment Plan nitrification-denitrification facility upgrade, and construction of a new water storage facility on the eastern side of the Anacostia River (Source: [6]). For several years, lead levels in residential drinking water have declined. In FY07, more than 3,500 lead pipes were replaced with copper pipes.

8. REFERENCES

- [1] D.C. Office of Planning (2007). *The Comprehensive Plan for the National Capital: District Elements*. Retrieved on February 25, 2009 from <http://www.planning.dc.gov/planning/cwp/view,a,1354,q,639789,PM,1.asp>
- [2] District Department of the Environment (DDOE) (2009). *DDOE: Mission Statement*. Retrieved on February 25, 2009 from http://ddoe.dc.gov/ddoe/cwp/view,a,3,q,493888,ddoeNav_GID,1457,ddoeNav,|31026|..asp
- [3] DDOE (2008). *FY09 Performance Plan*. Retrieved on February 25, 2009 from <http://capstat.oca.dc.gov/docs/fy09/DDOE.pdf>
- [4] National Capital Planning Commissions (NCPC) (2004). *Comprehensive Plan for the National Capital: Federal Elements*. Retrieved on February 25, 2009 from <http://www.ncpc.gov/publication/pg.asp?p=comprehensiveplanforthenationalcapitalfederalelements>
- [5] D.C. Water and Sewer Authority (DC WASA). *Strategic Plan 2008-2013*. Retrieved on February 25, 2009 from <http://www.dcwasa.com/news/publications/2008%20Strategic%20Plan.pdf>
- [6] DC WASA. *2007 Annual Report*. Retrieved on February 25, 2009 from http://www.dcwasa.com/news/publications/WASA_Report_Finalx.pdf
- [7] Interstate Commission on the Potomac River Basin (2008). *Water Supply*. Retrieved on February 25, 2009 from http://www.potomacriver.org/cms/index.php?option=com_content&view=article&id=87&catid=47&Itemid=83

- [8] DDOE. *Water Quality Division*. Retrieved on February 25, 2009 from http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,494812,ddoeNav_GID,1486,ddoeNav,|31375|31377|.asp
- [9] DDOE. *Stormwater Management Task Force*. Retrieved on February 25, 2009 from <http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,497143.as>
- [10] Spangler, B.R., and Lewis, R.E. (2008). *Recommendations on Structuring the District of Columbia Storm Water Management Administration in the District Department of the Environment*. Prepared for District Department of the Environment. Retrieved on February 25, 2009 from http://ddoe.dc.gov/ddoe/lib/ddoe/stormwaterdiv/DRAFT_FINAL_REPORT.pdf
- [11] NCPC (2008). *Report on Flooding and Stormwater in Washington, DC*. Retrieved on February 25, 2009 from http://www.ncpc.gov/UserFiles/File/publications_press/Report%20on%20Flooding%20and%20Stormwater%20in%20Washington,%20DC_.pdf
- [12] DDOE. *Environmental Education Programs*. Retrieved on February 25, 2009 from <http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,498515,ddoeNav,|31007|.asp>
- [13] DDOE. *Performance Accountability Report for FY08*. Retrieved on February 25, 2009 from <http://capstat.oca.dc.gov/docs/fy08/DDOE-FY08PAR.pdf>