THE DISTRICT OF COLUMBIA
WATER QUALITY ASSESSMENT

2008 INTEGRATED REPORT TO THE ENVIRONMENTAL PROTECTION AGENCY
AND U.S. CONGRESS PURSUANT TO
SECTIONS 305(b) AND 303(d) CLEAN WATER ACT (P.L. 97-117)

District Department of the Environment
Natural Resources Administration
Water Quality Division

Government of the
District of Columbia
Adrian M. Fenty, Mayor

PREFACE

The Water Quality Division of the District of Columbia's District Department of the Environment, Natural Resources Administration, prepared this report to satisfy the listing requirements of §303(d) and the reporting requirements of §305(b) of the federal Clean Water Act (P.L. 97-117). This report provides water quality information on the District of Columbia's surface and ground waters that were assessed during 2008 and updates the water quality information required by law. Various programs in the Natural Resources Administration contributed to this report including the Fisheries and Wildlife Division and the Watershed Protection Division.

Questions or comments regarding this report or requests for copies should be forwarded to the address below.

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ACRONYMS

ACE	Army Corps of Engineers
AOC	Architect of the Capitol
AWS	Anacostia Watershed Society
BMP	Best management practice
BNR	Biological nutrient removal
BOD	Biochemical oxygen demand
CAC	Citizens Advisory Council
CBF	Chesapeake Bay Foundation
CBP	Chesapeake Bay Program
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System (non-NPL)
CHAMPS	Capitol Hill Association of Merchants and Professionals
CMP	Correlated Metal Pipe
CSGWPP	Comprehensive State Ground Water Protection Program
CSO	Combined Sewer Overflow(s)
CWA	Clean Water Act
C&O	Chesapeake and Ohio
DC	District of Columbia (the District)
DCPS	District of Columbia Public Schools
DDOE	District of Columbia Department of the Environment
DDOT	District Department of Transpotation
DO	Dissolved oxygen
DOE	Department of Energy
DOD	Department of Defense
DOH	Department of Health
DOJ	U.S. Department of Justice
DPR	Department of Parks and Recreation
DPW	Department of Public Works
EPA	Environmental Protection Agency
FUDS	Formally Used Defense Sites
FWD	Fisheries and Wildlife Division
FY	Fiscal year
GIS	Geographic information system
GWPP	Ground water protection program
HBI	Hilsenhoff Biotic Index
ICPRB	Interstate Commission on the Potomac River Basin
IEB	Integrated Environmental Planning
LID	Low impact development
LTCP	Long Term Control Plan
LUST	Leaking underground storage tank
MAB	Monitoring and Assessment Branch
MD	Maryland
MDE	Maryland Department of the Environment

MOS	Margin of safety
MS4	Municipal Separate Stormwater Sewer System
MWCOG	Metropolitan Washington Council of Governments
NE	Northeast
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NPS	National Park Service
NSMP	Non-point Source Management Plan
NRCS	Natural Resources Conservation Service
NW	Northwest
NWP	Nationwide Permits Program
OP	Office of Planning
OPM	Office of Property Management
OWOW	Office of Wetlands, Oceans & Watersheds
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyl
PIT	Passive integrated transponder
RBP	Rapid bioassessment protocol
RCRA	Resource Conservation and Recovery Act
SAV	Submerged aquatic vegetation
SW	Southwest
SWAP	Source water assessment program
SWCD	Soil and Water Conservation District
SWQS	Surface water quality standards
TMDL	Total maximum daily load
TSS	Total suspended solids
U.S.	United States
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground storage tanks
VA	Virginia
WAL	Waste load allocation
WASA	Water and Sewer Authority
WMATA	Washington Metropolitan Area Transit Authority
WBID	Waterbody identification number
WIP	Watershed Implementation Plan
WPD	Watershed Protection Division
WQD	Water Quality Division
WQS	Water quality standards
WWTP	Wastewater treatment plant

PART I: EXECUTIVE SUMMARY

The District of Columbia 2008 Integrated Report provides information on the quality of the City's water. The Integrated Report combines the comprehensive biennial reporting requirements of the Clean Water Act's Section 305(b) and the Section 303(d) listing of waters for which total maximum daily loads are required.

District of Columbia Water Quality

Thirty-six waterbody segments were monitored for the goals of the Clean Water Act that apply to the District of Columbia. Each of the waterbodies have been assigned designated uses in the D.C. water quality standards. The standards also outline numeric and narrative criteria that must be met if a waterbody is to support its uses. Various types of water quality data collected during the period of 2003 to 2007 were evaluated to assess use support by the waterbodies. The evaluation found that the designated uses which directly relate to human use of the District's waters were generally not supported. The uses related to the quality of habitat for aquatic life were not supported. No waterbody monitored by the Water Quality Division fully supported all of its designated uses. The District of Columbia's water quality continues to be impaired.

Tables 1.1 to 1.3 show the degree to which the waters of the District of Columbia supported their designated uses. Appendices 3.5 to 3.9 are maps showing the degree to which those waters met their uses.

Ground water is not monitored on the same basis as surface water. This is partly due to the fact that surface water north of the city's boundary, and not ground water, is the drinking water source for the District of Columbia. However, ground water quality is scrutinized via compliance monitoring and on-going studies.

TABLE 1.1
DESIGNATED USE SUPPORT BY RIVERS OR STREAMS

Waterbody Type: River, Streams	Degree of Use Support			
	Supporting (mi)	Not Supporting (mi)	Insufficient Information (mi)	Not Assessed (mi)
Overall Use *		38.4		
Swimmable Use		38.4		
Secondary Contact Recreation Use	2.80	35.6		
Aquatic Life Use		34.1	4.3	
Fish Consumption Use		36.4		2

	Supporting (mi)	Not Supporting (mi)	Insufficient Information (mi)	Not Assessed (mi)
Navigation Use	9.50			28.9*

* = not a designated use

TABLE 1.2
DESIGNATED USE SUPPORT BY LAKES

Waterbody Type: Lake, reservoir	Degree of Use Support			
	Supporting (ac)	Not Supporting (ac)	Insufficient Information (ac)	Not Assessed (ac)
Overall Use *		238.4		
Swimmable Use		238.4		
Secondary Contact Recreation Use	108.4	130.0		
Aquatic Life Use	130	108.4		
Fish Consumption Use		238.4		
Navigation Use	238.4			

* = not a designated use

TABLE 1.3
DESIGNATED USE SUPPORT BY ESTUARIES

Waterbody Type: Estuary	Degree of Use Support			
	Supporting (mi^2)	Not Supporting (mi^2)	Insufficient Information (mi^2)	Not Assessed (mi^2)
Overall Use *		5.93		
Swimmable Use		5.93		
Secondary Contact Recreation Use	3.75	2.18		
Aquatic Life Use	4.15	1.78		
Fish Consumption Use		5.93		
Navigation Use	5.93			

* = not a designated use

Causes and Sources of Water Quality Impairment

The major causes of impairment to D.C. rivers are pathogens. Lakes are impaired by organic enrichment/low dissolved oxygen (D.O.) and pathogens. While the estuaries are impaired by pathogens, and organic enrichment/low D.O.

The sources with major impacts on D.C. waters are combined sewer overflows, urban runoff/storm sewers. Municipal point sources on the estuaries also have a major impact. Rivers and streams are also impacted by habitat modification and unknown sources.

Programs to Correct Impairment

Several programs within the District Department of Environment's, Natural Resource Administration are involved in activities to correct water quality impairment. The water pollution control program implements the water quality standards, monitors and inspects permitted facilities in the city, and comprehensively monitors D.C. waters to identify and reduce impairment. The water pollution control program is involved in the search for solutions that will provide maximum water quality benefits.

Given the District's urban landscape, nonpoint source pollution has a large impact on its waters. The sediment and stormwater control program regulates land disturbing activities, stormwater management, and flood plain management by providing technical assistance and inspections throughout the city. The nonpoint source program also provides education and outreach to residents and developers on pollution prevention to ensure that their actions do not further impair the city's water quality.

Several activities are coordinated within the ground water protection program. Those activities include underground storage tank installation and remediation, and ground water quality standards implementation.

Water Quality Trends

Both of the main waterbodies, the Potomac and Anacostia rivers do support fish and other wildlife populations. But the small streams' aquatic communities are increasingly stressed. The Potomac River continues to benefit from the CSO improvements and implementation of improvements and biological nutrient removal at the Blue Plains wastewater treatment plant. However, the Anacostia River remains aesthetically and chemically polluted. Much remains to be done. While submerged aquatic vegetation in the Anacostia and Potomac Rivers continues to struggle; there was a slight improvement from previous years.

Highlights

Low impact development projects to improve the quality and reduce the quantity of stormwater runoff are being implemented throughout the city. Projects such as rain gardens, green roofs, rain barrels, school yard conservation sites continue to be installed or planned.

Stream survey activities occurred during 2007. Information gathered will help to track trends for the streams. Real-time monitoring of the rivers are also set to commence. This monitoring activity will allow web-based viewing of water quality parameters by the general public on an on-

going basis.

2006 observations revealed 7 different species of SAV. This is indicative of SAV recovery, as the SAV diversity has improved over each of the last three observation periods.

Work on the fish passage in Rock Creek has been completed. In March 2007, the fish ladder was opened for the very first time. Four sampling sites located above Pierce Mill Dam yielded on average twenty species. No anadromous fish were collected at sites above the dam; but two species of gamefish, largemouth bass and smallmouth bass, were collected at a sampling site located just above the dam. The barrier removal was implemented to restore upstream fish migration for anadromous species and to allow existing resident fish to benefit from improved access to additional forage and habitat. This is a promising sign of things to come with this major change that has occurred in the creek.

PART II: BACKGROUND

The D.C. Government's environmental protection responsibilities are delegated to the District Department of the Environment. The Department's Natural Resources Administration is comprised of the Fisheries and Wildlife Division, the Storm Water Division, the Water Quality Division, and the Watershed Protection Division.

Atlas and Total Waters

Table 2.1 is a general view of the resources of the District of Columbia. Figure 2.1 is the monthly and yearly total rainfall graph. To give an idea of how much precipitation occurred in 2006 the normal yearly rainfall total is also included in Figure 2.1 (The National Weather Service, Washington National Airport is the source for the rainfall totals). Figures 2.2 and 2.3 present monthly and yearly mean flow data for the Anacostia and Potomac Rivers, from 2006-2007.

TABLE 2.1
ATLAS

State population: 572,059 (2000 Census)
State surface area: 69 square miles
Number of water basins: one
Total number of river miles: 39 miles
Number of perennial river miles: 39 miles
- Number of intermittent stream miles: none
- Number of ditches and canals: none[1]
- Number of border miles: none
Number of lakes, reservoirs, ponds: eight
Acres of lakes/reservoirs/ponds: 238 acres
Square miles of estuaries/harbors/bays: 6.1 square miles[1]
Acres of freshwater tidal wetlands: 180 [2]
Names of border waterbodies: Potomac River estuary
Number of border estuary miles: 12.5 miles

[1]Impoundments are classified according to their hydrologic behavior. The District of Columbia classifies the C&O Canal as a lake. The estuary estimate includes the Washington Ship Channel, the Channel Lagoon, and Little River.
[2] This total is compiled from the District of Columbia Watershed Protection Division.

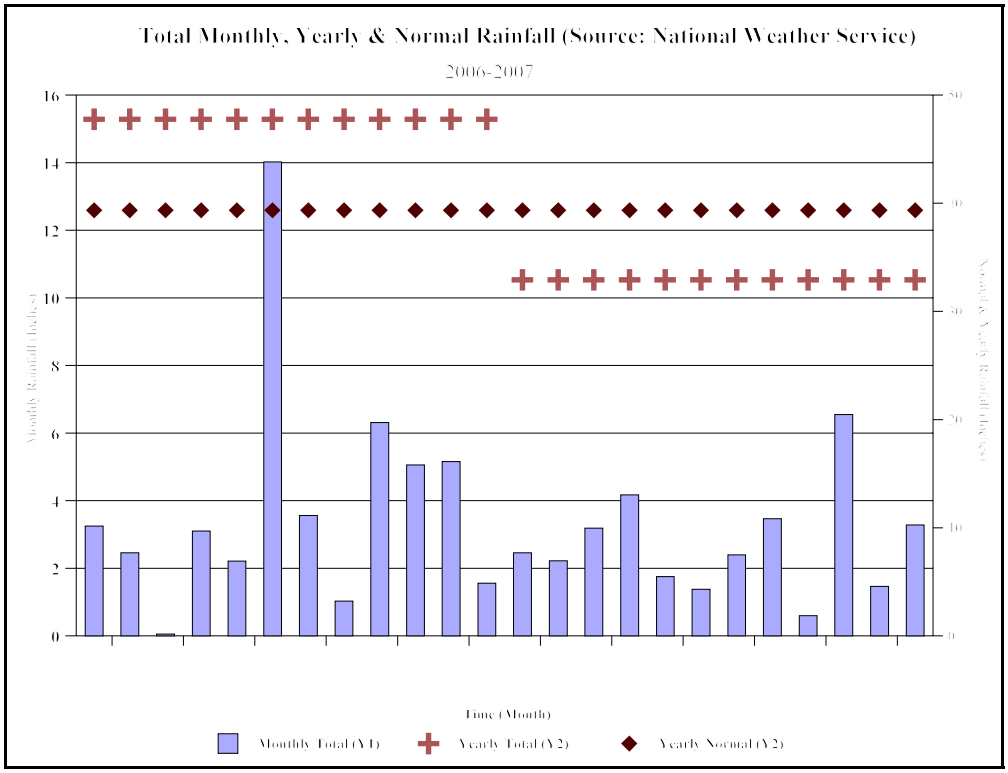

Figure 2.1: Monthly, yearly and normal total rainfall (inches), 2006-2007

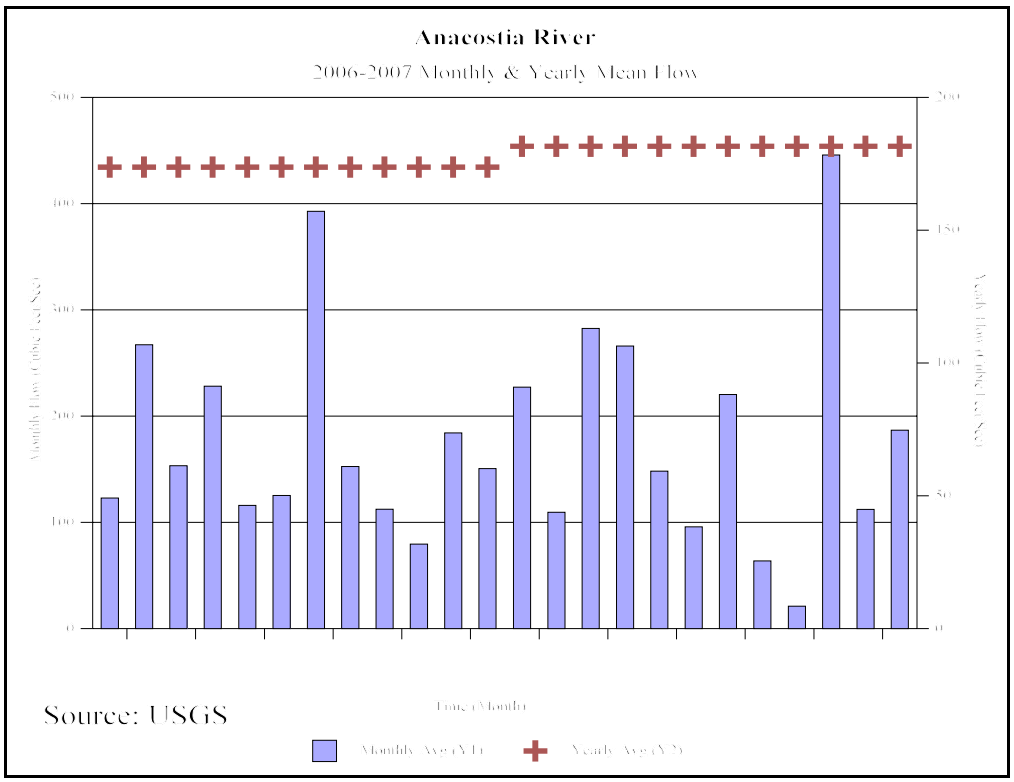

Figure 2.2: Monthly and yearly mean flow on the Anacostia River, 2006-2007

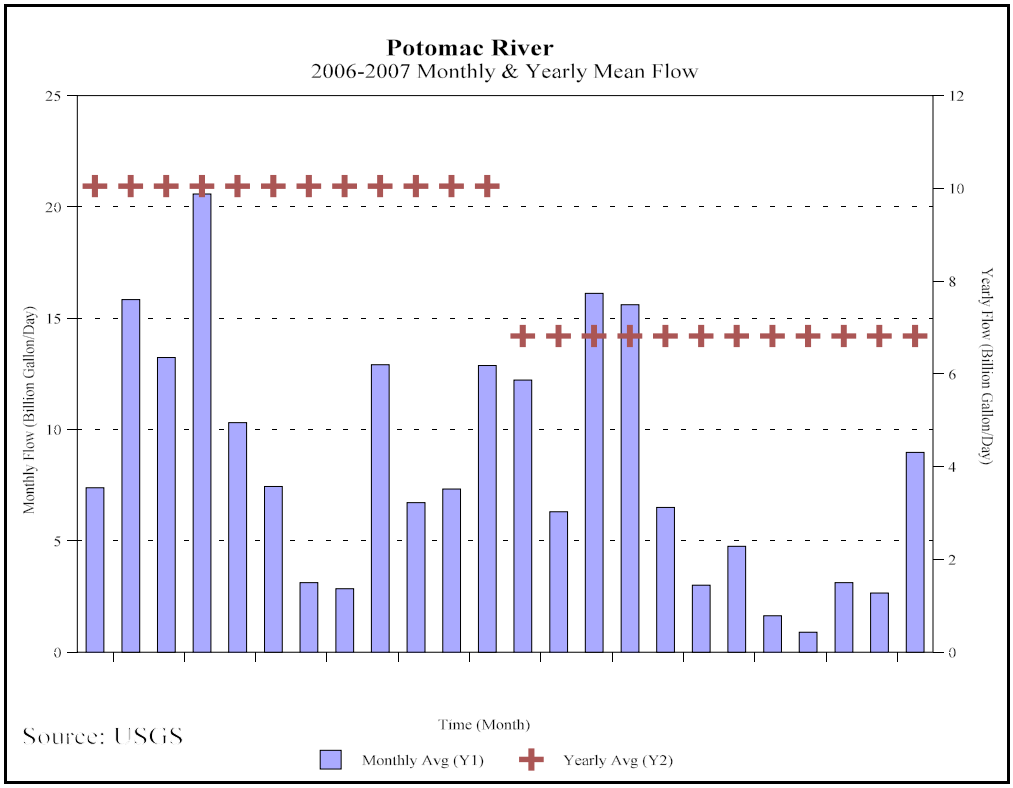

Figure 2.3: Monthly and yearly mean flow on the Potomac River, 2006-2007.

Maps

Appendix 2.1 is a map outlining the major watersheds within the District of Columbia.

Water Pollution Control Programs

Watershed Approach

The District of Columbia's major watersheds originate outside its borders. As a result, the District must use a watershed approach that involves cooperation from the surrounding jurisdictions to carry out its water pollution control activities. The District is an ultra-urban setting where land is in short supply and costly. Our metropolitan environment requires the deployment of unique approaches to meet the pollution control regulations within the confines of available land. The Watershed Protection Division (WPD) develops and implements programs to prevent and control nonpoint source pollution. WPD oversees the regulation of land disturbing activities, stormwater management, and flood plain management. WPD also sponsors projects that demonstrate innovative technologies to control nonpoint source pollution, particularly from urban runoff and that restore degraded streams and local habitat. WPD coordinates its activities

with other state, regional, and federal programs involved in nonpoint source pollution prevention and control. Through these programs, WPD conducts extensive community outreach to educate city residents, businesses, and visitors on how they can help prevent environmental pollution to the District's neighborhood watersheds. WPD carries out these functions using what the Environmental Protection Agency calls a watershed approach. This approach calls upon all the stakeholders in an identified watershed to participate in identifying pollution problems, in prioritizing those problems, and in solving them. WPD is committed to assisting the construction industry of the District in identifying best management measures that are technically feasible and that meet our pollution control needs.

The District has been using an inter-jurisdictional approach to solve its water quality problems for more than 20 years, before the watershed approach concept became the standard. The restoration of the Potomac River in the 1980's was made possible by working with the States of Virginia and Maryland, both at the state and local government levels. Development of the Potomac Estuary Model and the subsequent waste load allocation was carried out in cooperation with these responsible parties in the river's watershed. Out of necessity, the model included the pollutants entering the District's portion of the river from upstream, and from both point and nonpoint sources. Another reason for using a multi-jurisdictional approach is related to the Blue Plains Wastewater Treatment Plant's (WWTP) operation. Although the plant discharges into DC waters, it is a regional facility that treats waste from the District, Maryland and Virginia. Accordingly, a multi-jurisdictional approach is necessary, rather than optional.

The watershed approach is central to the current effort to restore the Anacostia River. Although the tidal portion of the river is within the District, it is fed by two major tributaries in Maryland, the Northeast and Northwest Branches, which are the main sources of fresh water to the river. The branches drain Montgomery and Prince George's Counties in Maryland. The Anacostia River watershed approach began with the signing of the Anacostia Watershed Restoration Agreement in1987 by the Mayor of the District of Columbia and the Governor of Maryland. Since 1987, both parties have reaffirmed their commitment to the Anacostia River cleanup on several occasions. The latest agreement was on May 10, 2001. On December 31, 2001, the signatories to this agreement signed a document that sets targets to measure progress for a restored Anacostia River. From these two agreements, the Metropolitan Washington Council of Governments (MWCOG) established the Anacostia Watershed Restoration Committee to help coordinate regional efforts to restore the river. In June 2006 MWCOG in partnership with the Anacostia jurisdictions established a new Anacostia Restoration Partnership. The structure of the partnership includes a Leadership Council, Steering Committee, and Management Committee (revamped Anacostia Watershed Restoration Committee). The partnership is responsible for the development and tracking of a Comprehensive Anacostia Watershed Restoration Plan.

The District of Columbia (DC) uses the watershed approach to address nonpoint source pollution and non-attainment of designated use categories in District water bodies. The WPD has developed Watershed Implementation Plans (WIPs) for 5 Anacostia tributaries that fall entirely or partially within the City's geographic boundaries. These tributaries are Pope Branch, Ft. Dupont, Hickey Run, Watts Branch, and Oxon Run. The WIPs set out the actions that are required to address impaired water quality in the particular watershed. These actions can range from

education and outreach, to stormwater management. These implementation plans serve as planning documents that will direct future efforts in a coordinated and systematic manner. Given the fact that two of the tributaries for which WIPs were written (Oxon Run and Watts Branch) partially fall within Maryland's jurisdiction, efforts made by the WPD will only partially address water quality impairments in those creeks. DDOE currently coordinates closely with these Maryland jurisdictions in all its efforts, and will continue to do so into the future. This approach is most successful if surrounding counties continue to allocate and target funding towards restoration activities.

The WPD also coordinates with several DC stakeholders including the National Park Service (NPS), the District Department of Parks and Recreation (DPR), the District Department of Transportation (DDOT), the District Office of Planning (OP), the Anacostia Watershed Society, and the Casey Trees Endowment, to name a few. Since the inception of the EPA's Chesapeake Bay Program (CBP) the District of Columbia has been an active participant. This program is a public-private partnership consisting of governments in Pennsylvania, Maryland, Virginia, the District of Columbia, the Chesapeake Bay Commission, EPA, citizens, and businesses. Begun in 1983 with the first Chesapeake Bay Agreement, the purpose of the program is to develop and implement coordinated plans to improve and protect the living resources of the Bay.

The District of Columbia Government participates in many of the committees, subcommittees and work groups of the Bay Program. On December 3, 2001, the District of Columbia, along with the other signatories, signed the Chesapeake 2000 Agreement that guides the program until 2010. The District of Columbia sees its participation in the CBP as a way to help restore the Bay and to secure resources and inter-jurisdictional support to clean up its waters which drain into the Bay.

Water Quality Standards Program

The water quality standards in the District of Columbia are developed under the authority of the Federal Clean Water Act (CWA) and the District of Columbia Water Pollution Control Act of 1984. The Water Quality Division in DDOE is responsible for developing and updating water quality standards.

Triennial revisions of the surface water quality standards are conducted to incorporate new information on water quality criterion and policy changes to protect the surface waters in the District. The last triennial revision of the District's surface water quality standards was approved by the U.S. EPA on February 15, 2006. The triennial revision included the addition of narrative criteria for Class C waters, updating numeric criteria for over 100 constituents, addition of 34 new constituents and establishment of E. coli as bacterial standard and revision of numeric criterion consistent with the Chesapeake Bay Program published water quality criterion, adding several new definitions and updating references.

The Water Quality Division (WQD) is currently in the process of conducting the next triennial revision of the water quality standards. In its next triennial review, the Water Quality Division will consider any updates or new criteria published by the EPA and resolve the unapproved provisions. Those provisions are:

- Section 1104.8, first sentence of Note 1, Table 1-"This criterion shall apply to E.coli bacteria determined by the Director to be of non-wildlife origin based on best scientific judgment using available information.";

- Section 1199-Modification of the definition for primary contact recreation (second sentence) - "Such uses are not expected during times of high current velocity, floods, electrical storms, hurricanes, tornadoes, winter temperatures, heavy ice conditions and other adverse natural conditions;" and the added definition for "adverse natural conditions."

Point Source Program

NPDES

In the District of Columbia, there are sixteen (16) facilities currently discharging under the National Pollutant Discharge Elimination System (NPDES) industrial permits. The Blue Plains WWTP operated by the Water and Sewer Authority (WASA) continues to be the major discharger. Plant processes continue to operate efficiently and flows are within the design capacity. The Blue Plains facility, along with other industrial NPDES permitted facilities, is inspected, to insure compliance with permit conditions and District of Columbia Water Quality Standards (WQS).

The Water Quality Division conducted compliance evaluation inspections at (8) eight facilities with discharges within DC borders that have been issued NPDES permits. A listing of these is found in Table 2.2. Water Quality Division staff reviewed individual facility permits for discharges. In addition Water Quality Division evaluated the Discharge Monitoring Reports (DMR) for the referenced facilities for any exceedances or deficiencies.

TABLE 2.2
NPDES FACILITY INSPECTIONS

Facility	Permit No	Date	Inspection
Washington Aqueduct – Dalecarlia Plant	DC 0000019	7/16/07 9/12/07 10/29/07	CEI CEI CEI
Walter Reed Army Medical Center	New Permit	7/18/07	New Permit, CEI
Washington District Naval Annex - Anacostia Naval Station	DC 0000159	7/18/07	CEI
PEPCO – Benning Road Generating Station	DC0000094	8/24/07	CEI
Mirant-Potomac, LLC, Electric Power	DC 0022004	9/13/07	CEI

Facility	Permit No	Date	Inspection
Water and Sewer Authority - Blue Plains WWTP	DC0021199	9/14/07	CEI

CEI – Compliance Evaluation Inspection

Table 2.3 indicates the permits reviewed and certified under the National Pollutant Discharge Elimination System (NPDES):

TABLE 2.3
NPDES PERMITS CERTIFIED IN FY 07

NPDES Permitted Facility	NPDES Permit Number
WASA - Blue Plains Advanced Wastewater Treatment Plant	DC0021199
General Services Administration (GSA) - West Heating Plant	DC0000035
The John F. Kennedy Center for the Performing Arts	DC0000248
Mirant Potomac River, LLC	DC0022004

As part of its grant agreement with U.S. EPA, Region III, the Water Quality Division (WQD) reviews and certifies draft NPDES permits prepared by the Region. The District of Columbia is not a delegated state under the NPDES program and cannot, therefore, issue NPDES permits. Draft permits prepared by EPA are reviewed by the WQD for completeness, compliance with both Federal and District laws and WQS. The WQD may require changes in a draft permit so as to more stringently comply with applicable laws/standards. Changes in draft permits may also incorporate comments received from various parties during the public comment period, the announcement of which is made in one or more of the District's local newspapers, and is a joint effort by both U.S. EPA and the District of Columbia. Final certified permits are issued for a five year period, but contain re-opener clauses in case facility conditions and/or water quality standards or regulations change.

The WQD also reviews and certifies permits issued by the U.S. Army Corps of Engineers (ACE), under the Nationwide Permits program (NWP). (See Table 2.4) As with NPDES permits, NWPs are reviewed for compliance with Federal and District water quality laws and standards. Certification of both NPDES and NWP permits by the state water pollution control agency is a requirement of section 401 of the Clean Water Act.

TABLE 2.4
NATIONWIDE PERMITS CERTIFIED IN FY 07

Permittee	Project Description
CSX Transportation	Emergency railway bridge repair over Anacostia River.
District Department of Transportation (DDOT)	Kenilworth and Jay Street bridge repairs.
Bolling Air Force Base	Marina and bank stabilization.
Friends of St. Patrick's Episcopal Day School, LLC	To convert an ephemeral stream into an emergent wetland.

Permittee	Project Description
District Department of the Environment, Watershed Protection Division (WPD)	To restore Watts Branch River in the District of Columbia.
George Washington University	To emplace a race-course in the Potomac River.
DDOT	To rehabilitate a culvert in Pope Branch located at Branch Avenue and Anacostia Road, SE.
Federal Highway Administration, Eastern Federal Lands Highway Division	To remove and replace the existing bridge over the Boundary Channel with a similar structure.
District of Columbia Water and Sewer Authority (WASA)	To drill geotechnical borings by rotary drilling from a spud barge in the Anacostia River.
WASA	To repair the existing sea wall by pressure grouting under and behind the sea wall at Main and O Pumping station in the Anacostia River.
Virginia Department of Public Works and Environmental Services, Construction Management Division	To construct a temporary cofferdam to remove accumulated sediment in C & O Canal adjacent to Potomac River.
CSX Transportation	To repair Bridge No. CFP 114.54 by replacing damaged substructure units (bents) in the Anacostia River.
DDOT	To rehabilitate the existing Northbound and Southbound 14th Street bridges over the Potomac River.
District of Columbia, Office of the Deputy Mayor for Planning and Economic Development (DMPED)	To drill geotechnical borings to 75 feet by a drill rig on a floating barge platform in the Anacostia River.
ENSR/RETEC	To sample surficial sediments to a depth 5 to 10 cm using a ponar dredge in the lower (tidal) Anacostia River.
DDOT	To replace three bridges of 29th, 30th and Thomas Jefferson Streets over the C&O Canal in Georgetown.
City of Alexandria, Transportation and Environmental Services	To perform maintenance dredging of the City of Alexandria's marina located on the Potomac River in the City of Alexandria, Virginia.

MS4

2006 Highlights:

- D.C. WASA continued to administer the District storm water management program
- The District continued to comply with the activities and deliverables required by the District Municipal Separate Storm Sewer System (MS4) NPDES permit.
- Newly formed DDOE assumed all MS4 NPDES permit-related activities previously allocated to the Bureau of Environmental Quality within the Department of Health (DOH).

2007 Highlights:

- February 2007: DDOE assumed responsibility for the storm water administration
- August 2007: Complied with deliverables as specified in the MS4 permit
- September 2007: MS4 task force representatives (including high level officials) went on an official trip to Portland, Oregon to meet with representatives from the Portland Bureau of Environmental Services to learn about Portland's storm water program, one of the best programs in the nation. MS4 task force representatives

shared information and learned about different storm water management techniques, some of which can be applied or adapted within the District.

- October 2007: Representatives from Office of Property Management (OPM) and Office of Planning (OP) begin attending the MS4 task force meetings.
- October 2007 and on-going: As a follow up to the Portland visit, DDOE and the U.S. EPA's Office of Wetlands, Oceans and Watersheds have started to create a forum for sharing information about innovative storm water management techniques that are being used within the District and across the country. DDOE officials have taken the lead in determining the content of the forum and EPA will continue to facilitate and provide technical assistance. The first meeting occurred at the end of October and included District agencies that are not part of the MS4 task force but are considered key players in storm water management in the District such as the Office of Planning and Office of Property Management. Other meetings are planned.
- November 2007: A meeting was convened at Council Member Jim Graham's office that included all members of the Storm Water Advisory Panel, environmental groups, developers and other stakeholders to work on a new approach for funding storm water control activities.
- November/December 2007: An agreement between the District of Columbia and the U.S. EPA was signed to implement what could be the most aggressive green strategies in the nation, to reduce storm water runoff, a major contributor to pollution in the Anacostia and Potomac rivers and the Chesapeake Bay. The District Department of Environment (DDOE), U.S. EPA, and environmental groups had been in mediation since May 2007 to incorporate enhanced and green storm water management practices beyond the basic requirements of the District's current MS4 NPDES Permit.

  Some of the enhancements include:
  - Planting and maintenance of at least 13,500 additional trees
  - Devising a low impact development plan which will include converting paved areas such as median strips and large sidewalks into green space
  - Installing 50 rain gardens and 125 rain barrels
  - Researching the possibility of a tax-incentive program for the installation of green roofs
  - Requiring all new District-owned buildings and, where feasible, all major renovations of District-owned buildings to include green roofs
  - Implementing enhanced street sweeping and trash removal programs .

Nonpoint Source Control Program

Environmental pollution from nonpoint sources occurs when water moving over land picks up pollutants such as sediment, bacteria, nutrients, and toxics and carries them to nearby waters. Sediment and pollutant-laden water can pose a threat to public health. The pollutants may come from both natural sources and human activity. Stormwater

runoff and associated soil erosion are significant causes of lost natural habitat and poor water quality in the District of Columbia and throughout the United States. U.S. EPA and United States Department of Agriculture (USDA) have made the control of soil erosion and the treatment of stormwater runoff important pieces in their strategy to restore the quality of the nation's waters. Nonpoint source pollutants of concern in the District of Columbia are nutrients, sediment, toxicants, pathogens, and oil and grease. For the District of Columbia, the origins of nonpoint pollutants are diverse and include:

- Stormwater runoff due to the high degree of imperviousness of urban areas;
- Development and redevelopment activities;
- Urbanization of surrounding jurisdictions; and
- Agricultural activities upstream in the watershed.

The District of Columbia has shown that urban runoff is one of the more important contributors to surface water impairment. A process to rank watersheds for nonpoint source implementation in DC, conducted by the Nonpoint Source Management Program in 1993, determined that the Anacostia River and its tributaries should receive the highest priority. The control of nonpoint source pollution requires the cooperation of many environmental programs. In 1989, the WPD developed The District of Columbia Nonpoint Source Management Plan (NSMP), (DC, 1989). The NSMP describes the various environmental programs and projects in place to help control nonpoint source pollution. It was the first step by DC to develop a Nonpoint Source Management Program. Since its inception, it has grown and has become institutionalized into a branch within the WPD. The Nonpoint Source Management Program revised its Nonpoint Source Management Plan in FY 2000 to reflect the changes in program activities that had taken place over the previous 10 years and to prioritize future strategies.

1. Nonpoint Source Assessment Update

In 1998, the District of Columbia conducted a unified watershed assessment to characterize the condition of its watershed Potomac watershed and sub-watersheds. The assessment identified so called Category I Watersheds, or, watersheds in need of restoration. The assessment actually was a re-characterization of the condition of its watershed and sub-watersheds, done using existing water body assessments, strategies, surveys, and recommendations to compile an overall watershed assessment and ranking. The outcome of the assessment found the watershed and sub-watersheds to be of Category I, with the tidal Anacostia, Watts Branch, Rock Creek, Hickey Run, and Kingman Lake waterbodies having the highest priority for restoration (WQD). One of the main causes of degradation cited in the assessment was urban runoff. Seeking more specific information regarding the problems associated with its most degraded sub-watersheds, in lieu of habitat restoration, DC commissioned a number of individual assessments. To date, MWCOG has completed watershed assessments of Fort DuPont Tributary and Popes Branch Tributary, and the U.S. Fish and Wildlife service (U.S. FWS) has completed assessments of Hickey Run, Oxon Run, and Watts Branch.

2. Nonpoint Source Program Highlights

WPD protects the health, safety and welfare of DC residents and visitors by protecting watersheds from nonpoint source pollution. WPD activities regulate land disturbing activities, stormwater management, and flood plain management. WPD also sponsors projects that demonstrate innovative ways to control nonpoint source pollution and educate residents about pollution prevention. As the District Department of the Environment, Natural Resources Administration progresses in the 21st century, it envisions an organization that is well-trained, customer friendly, committed to protecting the water and soil resources of the city as well as the health, welfare, and safety of those using those resources. The Department sees itself as a leader in the field of soil resources protection by

- Emphasizing protection over remediation;
- Working smarter by implementing innovative technologies that achieve higher quality results with more efficient use of resources; and,
- Fully integrating a customer-oriented approach that responds to public concerns and that provides a one-stop permitting process.

Washington, DC also sees itself as a champion in watershed protection and environmental justice by increasing stakeholder awareness and involvement in the clean-up efforts in the Anacostia River, Chesapeake Bay, and other neighborhood watersheds and equipping the city residents with the knowledge and tools on how to prevent pollution from entering their neighborhood streams.

There are three branches within the Watershed Protection Division:
- Planning and Restoration Branch,
- Technical Services Branch, and
- Inspection and Enforcement Branch.

The WPD is primarily responsible for managing both the city's Nonpoint Source Management (§319(h)) and Chesapeake Bay Implementation (§117(b)) programs. Both the §319(h) and Bay Programs are non-regulatory programs that strive to achieve the same results. Included under the auspices of the Planning and Restoration Branch are tree plantings and riparian buffer restoration. In 2006 and 2007 citizen volunteers and students planted over two-hundred 1 ½ to 2 ½ inch diameter trees with the help of the Casey Trees Foundation.

To help instill Nonpoint Source Management principles in the consciousness and daily habits of DC residents, the WPD provides support to the District of Columbia Soil and Water Conservation District (SWCD) Citizen Advisory Committee (CAC). In 2007 the committee had a full compliment of Ward representatives. They reviewed the previous plan of action and accomplishments of the SWCD and began crafting a new five-year plan. Through the Storm Drain Marker Program, two-thousand storm drain markers have been installed throughout the city by citizen groups, youth programs, schools, and the

Department of Public Works (DPW). Approximately five-hundred volunteers installed the markers and were educated about stormwater runoff and nonpoint source pollution.

The WPD is committed to student and community education. The annual Anacostia Environmental Fair brings more than four-hundred students in grades 4-8 and their teachers to the banks of the Anacostia River each spring. 2007 was the eleventh year for this educational event. A total of 23 organizations participated as exhibitors conducting environmental activities for the children and environmental education activities for the teachers. WPD conducted the Annual Summer Environmental Education Camp at Camp Brown with eighty students and their counselors participating in a week-long environmental- themed camp. WPD continues to offer outdoor and on-water experiences to as many DC school children as possible through the "Meaningful Bay Experience". The WPD's Nonpoint Source Management Program provides Federal funds to universities and nonprofit organizations to conduct projects that will help the program achieve its overall goals and objectives. One of the primary education goals in 2006 was to institute a 'meaningful watershed experience' teacher training workshop on the Anacostia River and to incorporate the 'meaningful watershed experience' into DC Public School Science Standards.

WPD funded Meaningful Bay Experiences for five thousand-nine hundred and twenty six (5,926) District students by providing grant funds to the Living Classrooms Foundation, Capitol Hill Cluster School, The Student Conservation Association, and Hard Bargain Farm. These organizations provided students with a variety of experiences including field, shipboard, and overnight experiences that teach lessons in water quality and biology. WPD showcased five DC Public Schools (DCPS) with schoolyard conservation practices. WPD's Greener Schools, Cleaner Water Program completed another year of systematically developing and piloting schoolyard gardens. The focus was on supporting DCPS mandated science curriculum through schoolyard habitats. The garden projects emphasized youth involvement and increase the educational value of the site. The goal is to make it easy for teachers to use gardens as an "outdoor classroom." Trainings allow teachers and school staff to utilize the site for various garden-based lessons. All sites were centered on increasing native biodiversity by planting native species. The habitat improvement projects include butterfly gardens, a wetland, a nesting platform and watering station, designing and building feeding stations, tree plantings, and green roofs.

A. *LaSalle Elementary School*

LaSalle School is working to become one of the most environmentally friendly schools in the District of Columbia. A 6,300 square foot green roof project is demonstrated on the DCPS property. The native butterfly garden along the front of the school boasts communities of plants which are all native to the Chesapeake Bay Region. A memorial garden space provides shade and outdoor interactive classes. The construction of a French drain system allows stormwater to runoff from the sidewalks' impervious surfaces. The stormwater runoff is treated, naturally, by the constructed wetland. This

area is accessible to the students for an outdoors classroom that supports many of the Life Science standards of learning.

B. *Whittier Elementary School*

Whittier School is located in a NW residential neighborhood within the combined sewer overflow (CSO) system. With the help of Whittier teachers and students, volunteers created an outdoor wildlife habitat that can be utilized by children and viewed from classrooms as well. The habitat provides unique experiences, complete with a butterfly garden, rain gauge, bird feeders, bird baths, benches for students, and an interpretive stepping stone trail. The gardens are also used by the community and afterschool programs. This hands-on outdoors habitat stimulates students' interest in nature and discovery.

C. *Cesar Chavez Public Charter School*

Chavez Public Charter School is a good example of what can be done to transform an outdoor learning space at a new or renovated school. The project was implemented in several stages. The first was executed by planting a small number of trees, shrubs, and perennials that attract birds and butterflies. At a community action day, volunteers amended the soil for native perennial plantings. The group installed a stone trail from the walkways to the garden. The benches and picnic tables in the space encourage students and staff to use them for observation and journaling.

D. *Kamit Institute Charter School*

At Kamit School invasive plants and trees were first removed by the students and AmeriCorp volunteers. Through the building of new garden boxes and soil amendment a wet-bed and container garden in the courtyard now provides an outdoor environmental education experience for the students.

E. *Amidon Elementary School*

WPD assisted the Natural Resource Conservation Service in creating a wildlife habitat in front of the school by providing mulch and planting trees and shrubs. A rain garden was also planted in the rear of the school. The rain gardens teach students about managing stormwater runoff and improving water quality.

3. Low Impact Development

Another stormwater management tool is Low Impact Development (LID). LID is an innovative technical micro-scale approach to stormwater management and protection. Table 2.5 estimates the pollution abatement from BMP demonstration projects in 2006-2007. LID Demonstration projects implemented include:

A. *Human Rights Campaign*: WPD funded the installation of a small, roughly two thousand square foot (2,000 sq.ft.), green roof at the Human Rights Campaign headquarters building on Rhode Island Avenue, NW. The green roof sits above the first floor lobby and is visible from upper floors.

B. *US National Park Service*: A roughly four thousand square foot (4,000 sq.ft.) parking lot in the NPS administrative complex in the Anacostia Park was retrofitted with a small rain garden primarily for water quality control.

C. *Rain Barrel Program*: WPD, in partnership with Shaw EcoVillage and DC Greenworks, initiated a downspout disconnection, combined sewer overflow (CSO) education, and rain barrel retrofit program in the NW Shaw neighborhood. This program resulted in the installation of one hundred rain barrels.

D. *Ross Elementary School*: WPD funded the implementation of two Best Management Practices (BMPs) at this school. The first is a groundwater recharging subterranean STORMTECH (brand) chamber, which was donated by the manufacturer. The chamber accepts stormwater from a 6,000 square foot synthetic grass playfield and play area with perimeter drains. The play area previously drained into an undersized combined sewer and contributed to regular flooding of the surrounding neighborhood. The second BMP is a new pervious parking area, which holds approximately twelve cars and has significant subterranean storage capacity via a stone sub-base.

E. *Bancroft Elementary School*: The WPD, in partnership with the 21st Century Fund, subsidized the retrofit of an existing one hundred foot long by seven foot wide (100 ft. x 7 ft.) drainage trench into an above ground sand-filter pre-treatment device that drains into a rain garden. This innovative BMP drains at least twenty thousand square feet (20,000 sq.ft.) of impervious play area and roof leaders. The rain garden controls stormwater quality to Rock Creek; and is an aesthetically pleasing addition to the largely asphalt play area.

F. *Ketcham Elementary School:* Two 100 square foot rain gardens drain existing roof leaders at the main entrance of the school and serve to beautify with lush vegetation and act as educate the students. The two rain gardens are enclosed and separated from the surrounding soil in order to protect the building's foundation.

G. *River Terrace Elementary School*: A 6 by 20 foot rain garden drains one large roof leader. As with Ketcham School, the rain garden is enclosed and separated from the surrounding soil to protect the building's foundation.

H. *Backus Elementary School*: A small rain garden of roughly 4 by 10 feet drains a large parking lot on the campus and acts a small oasis in a sea of asphalt at 5171 South Dakota Avenue, NE.

I. *Casey Trees Endowment Fund Green Roof*: This three thousand five hundred square feet (3500 sq.ft.) extensive (shallow) green roof on the 13th floor of 1425 K Street, NW, occupied by the Casey Trees Endowment is located in the heart of downtown DC. This demonstration was funded through a collaborative effort of WPD and the National Fish and Wildlife Foundation.

J. *Chesapeake Bay Foundation (CBF) Green Roof Grant Program:* The CBF green roof grants were made possible by a 2003 lawsuit settlement with WASA, which provided CBF with $300,000 to generate green roof projects within the combined sewer area of the Anacostia River watershed. CBF's Anacostia River office established a small grants program, and CBF requested commercial green roof proposals from private and public entities. This was supplemented by a $60,000 award from the WPD in 2005 which allowed a 20% subsidization of two green roof projects:

- American Society of Landscape Architects headquarters at I Street, NW, totaling 3,000 square feet;
- JBG Companies office building at 51 Louisiana Ave., NW plans to install 12,000 square foot green roof at an annex in late 2007 or early 2008.

K. *Architect of the Capitol - Capitol Hill Rain Garden*: Located at the corner of First and D Street, N.E., this project is the first LID BMP installed on Architect of The Capitol (AOC) property. This premier rain garden on AOC grounds was championed by Senator Richard J. Durbin (D-IL) with funding and the great enthusiasm of the AOC and its landscape architect. WPD provided technical assistance and oversight for the project. The 65 ft. by 15 ft. rain garden drains a 4,500 square foot portion of a U.S. Senate parking lot located in a section of the city serviced by the combined sewer system. The site was chosen for its wide educational potential and high traffic use. The entire facility was funded, contracted, designed and constructed within two months thanks to the expedient and diligent efforts of all the parties involved.

L. *Minnesota Avenue Metro Station:* Two large rain gardens were retrofitted at the end of a large and heavily used twenty thousand square feet (20,000 sq. ft.) Washington Metropolitan Area Transit Authority (WMATA) parking lot, which drains directly into the Anacostia area. Not only do small rain events now drain into the rain gardens, but larger events which bypass into the storm drains are also filtered through catch basin inserts with filtering media. This project represents an aggressive series of stormwater control measures for a heavily used public parking lot.

M. *Benning Road:* The WPD funded the design of a bioretention cell, on Kingman Island, that handles stormwater from an approximate 18,000 square foot stretch of

Benning Road and the Benning Road Bridge. filtered stormwater drains directly into the Anacostia River from the bioretention cell.

N. *Columbia Heights Recreation Center:* DC Department of Parks and Recreation received funds via a WPD grant to build a 946 square foot green roof on its new recreation center at 180 Girard Street, NW.

O. *Trinidad Recreation Center:* DC Department of Parks and Recreation received funds via a WPD grant to build a 4,360 square foot green roof on its new recreation center at 1380 Childress Street, NE.

TABLE 2.5
ESTIMATIONS OF POLLUTION ABATEMENT RESULTING FROM 2006-2007 LID PROJECTS

Location (District of Columbia)	**BMP**	**Treatment Area (sq. ft.)**	**Treatment Area (acres)**
Human Right Campaign, 1640 Rhode Island Avenue NW	Green roof	2000	0.0459
Ketcham Elementary School, 1919 15 St, SE	Bioretention Cell Draining Roof	2000	0.0459
River Terrace Elementary School, 420 34th St NE	Bioretention Cell Draining Roof	1200	0.0275
Casey Trees Endowment Fund, 1425 K street NE	Green roof	3500	0.0803
American Society of Landscape Architects, 636 Eye St, NW	Green roof	3000	0.0689
JBG Office Building, 51 Louisiana Avenue NW	Green roof	12000	0.2755
Columbia Heights Recreation Center, 180 Girard Street, NW	Green roof	946	0.0217
Trinidad Recreation Center, 1380 Childress Street, NE	Green roof	4360	0.1001
US National Park Service HQ, Anacostia Drive, SE	Bioretention Cell	4000	0.0918
Ross Elementary School, 1730 R Street, NW	Parking Pavers	6000	0.1377
Bancroft Elementary School, 1755 Newton St NW	Bioretention Cell	20,000	0.4591
Peabody Elementary School, 425 C St NE	Parking Pavers	400	0.0092
Backus Middle School, 5171 South Dakota Ave, NE	Bioretention Cell	7000	0.1607
Architect of the Capitol, 1st and D St., NE.	Bioretention Cell	4,500	0.1033
Minnesota Avenue Metro Station	2 Large Bioretention Cells	20,000	0.4591
Benning Road Bridge LID	Bioretention Cell	18,000	0.4132
TOTAL		**112,906**	**2.6**

Demonstration Projects Slated for Construction

Ft. Dupont: In the Ft. Dupont subwatershed, the Ice Rink parking lot and the Ft. Dupont Activities Center parking lot are the two largest parking lots. Both lots will be retrofitted with bioretention features. One half of Ridge Road will also be retrofitted with bioretention trenches to treat runoff from this road. When complete, these retrofits will treat approximately 3.95 acres of impervious surface.

Pope Branch: Retrofits slated for the Pope Branch subwatershed have been designed and construction started in 2007. Two high visibility sites along Pope Branch Park treating runoff from M Place SE and another site located at the DC Therapeutic Recreation Center have been identified. Approximately one acre of impervious surface will be treated though these retrofits.

Watts Branch: Washington Parks and People (WPP) was the recipient of a sub-grant to install four LID retrofits in Watts Branch. Plans have been completed for these retrofits and will be integrated into the park redesign that is being undertaken by WPP and the Anacostia Waterfront Corporation. These retrofits will treat over half an acre of impervious surface.

Historic Anacostia Gateway Project: This project will create a raingarden/bioretention cell in the underserved Ward 8 where the city is working to improve the Historic Anacostia neighborhood. Starting in 2006 through a grant award to the Anacostia Watershed Society education and design components of the project were initiated. Construction by DDOT is anticipated to reach completion in 2008.

4. Stormwater Management and Sediment Control Regulatory Programs

In conjunction with its voluntary activities to control nonpoint source pollution through its Nonpoint Source Management and Chesapeake Bay Implementation programs, the WPD also supports activities to regulate land disturbing activities, stormwater management, and flood plain management. The major regulatory actions of the WPD in the area of nonpoint source pollution control include enforcing the provisions of the following:

- DC Law 2-23, The District of Columbia Erosion and Sedimentation Control Act of 1977,
- DC Law 10-166, The Erosion and Sedimentation Control Amendment Act of 1994,
- DC Law 5-188 (§509-518, Storm Water Management Regulations- 1988) of The District of Columbia Water Pollution Control Act of 1984,
- DC Law 1-64, The District of Columbia Applications Insurance Implementation Act of 1976.

Implementation of the above laws will have DDOE conducting the following activities (and more):

- Reviewing and approving construction plans for stormwater runoff control measures, flood plain intrusion, unstable soils, topography compatibility, erosion sediment control measures, and landscaping;
- Conducting routine and programmed inspections at construction sites;
- Developing and revising regulations, design standards and specifications;
- Preparing technical manuals;
- Providing technical assistance to developers and DC residents; and,
- Conducting investigations of citizen complaints related to drainage and erosion and sediment control.

Consistent with the above statutes, the WPD reviews building permit applications for compliance with the soil erosion and sedimentation control regulations. In FY 2006, 2,289 plans were reviewed and 2,150 plans were approved. In FY 2007, 1,914 plans were reviewed and 1,711 were approved. An integral part of this regulatory compliance program is the type of best management practices (BMPs) DC approves for installation. For stormwater management in particular, the District of Columbia requires developers to control both the quantity and quality of stormwater runoff. Management of stormwater has evolved in the past decade. As a part of that evolution, DC has begun to encourage, where applicable, the use of "greener" BMPs and low impact development techniques such as wetlands, vegetated biofilters, and bioretention facilities. Table 2.6 provides the number and type of BMPs approved for installation in DC in 2006 and 2007.

TABLE 2.6
NUMBER AND TYPE OF STORMWATER MANAGEMENT BMPS APPROVED FOR INSTALLATION

BMPs	No. of Plans Approved	Area Served by BMP (Sq. ft.)	No. of Plans Approved	Area Served by BMP (Sq. ft.)
	2006	2006	2007	2007
Exfiltration/Infiltration System	32	533,654	49	1,039,210
Sandfilter	45	3,324,493	17	1,841,532
Water Quality Inlets	7	1,415,025	24	1,690,287
Oil/Grit Seperator	1	0	0	0
Pond	3	85,200	1	59,242
Hydrodynamic Filtration Devices	56	3,158,102	31	4,140,080
Low Impact Development	31	2,383,988	34	2,435,840
Underground Retention/Detention	6	0	5	0
Totals	181	10,900,462	161	11,206,191

* Note: Some BMPs are installed in a series. In these cases the area served by the BMPs is counted towards the first BMP only therefore some BMPs may appear to have no treatment area.

Inspection and Enforcement

The District of Columbia recognizes that an effective erosion and sediment control and stormwater management enforcement program is essential to mitigate damage to the aquatic resources caused to its streams and rivers by sedimentation and polluted runoff. In late 2007, DDOE created a separate Office of Enforcement and Environmental Justice to address enforcement in a more focused manner. There are plans for this Office to grow and expand in 2008 and beyond.

The WPD created a separate inspection and enforcement program for erosion and sediment control and stormwater management. Prior to this realignment, technical plan reviews, environmental permit issuance, inspections, and enforcement were administered under the same program. However, since 1998 a separate program has conducted the inspection and enforcement components of the soil erosion and sediment control and stormwater management regulations.

In an effort to streamline enforcement of these regulations and ensure compliance, new standards operating procedures were developed and implemented. The standard operating procedures provide a consistent framework for conducting inspections, issuing notices of violations, civil infraction fines, and stop work orders or violations of the regulations. Civil infraction fines range from one hundred to two thousand dollars ($100-$2,000), depending on the nature of the infraction or whether the violator is a repeat offender. In FY 2006, 7,367 inspections were conducted of constructions sites for compliance with approved plans and regulations. In FY 2007, 6,924 inspections were performed. In addition to the imposition of a civil fine or penalty, any one convicted of violating the storm water management regulations is guilty of a misdemeanor, and subject to a fine of at least two thousand five hundred dollars ($2,500), but no more than twenty-five thousands dollars ($25,000).

Since the promulgation of stormwater management regulations in 1998, over 2000 stormwater best management practices or BMPs have been installed throughout the city at new development and redevelopment projects for nonpoint source pollution control. Hundreds more have been approved for ongoing development projects. Due to the high cost of land and lack of space, most of these stormwater management BMPs are installed beneath impervious surfaces such as parking lots and sidewalks, and are generally not visible. Consequently, this exacerbates the challenge of effectively maintaining these facilities in an urban setting. However, the District has also begun emphasizing LID practices (for the management of stormwater) as the first option for land development projects. LID techniques utilize a less invasive method of stormwater management where the treatment and management of the stormwater is distributed and re-introduced into the hydrologic cycle where possible.

The DDOE has developed and implements an aggressive Storm Water Management Facilities Maintenance Inspection Program. The program assures compliance with the regulations by inspecting the maintenance and operation of stormwater BMPs to ensure

that permanently installed stormwater management BMPs continue to function properly throughout their design life. Inspectors have the same enforcement tools for BMP maintenance as they do for the construction process. Since the development of the Integrated Environmental Planning (IEB) maintenance enforcement program more than 5,000 enforcement actions have been completed for enforcement of the Districts stormwater regulations regarding BMP maintenance.

The enforcement program has evolved into a very effective stormwater management maintenance program. An instructional video and guidance manual highlighting all the important elements of maintaining DC stormwater sand filters were produced and disseminated to sand filter owners, persons responsible for maintaining them and stormwater maintenance contractors. The IEB maintenance program has also developed qualification protocols and a list of contractors working in the District who maintain stormwater facilities. In FY 2006, twenty-two (22) contractors were qualified to perform these types of services.

As a result of WPD's increased enforcement activities, the Division receives fewer citizen complaints relating to sediment control, indicating that the regulated community is starting to respond in a positive manner to increased enforcement of the erosion control and stormwater management regulations in the District of Columbia.

Coordination with Other Agencies

Information on coordination with other local, regional, and federal agencies is included throughout this report.

Cost/Benefit Assessment

Cost

The District of Columbia has and continues to commit significant amount of resources to improve the quality of its waters. Effective waste water treatment, storm water management and non-point source pollution control programs are the principal elements in water pollution control. The cost of each of these areas and the benefits is presented below. Table 2.7 summarizes the costs.

Waste Water Treatment

The District of Columbia Water and Sewer Authority (WASA) provides waste water services to over two million customers in the District of Columbia and the surrounding jurisdictions of Maryland and Virginia. WASA operates the Blue Plains Waste Water Treatment Plant (WWTP), one of the largest treatment plants in the nation. The WWTP operates under the most stringent NPDES permit. The current cost for waste water treatment, including solids processing, is over $13 million. The WWTP is slated for

further nitrogen removal under the Chesapeake Bay pollutant reduction efforts. It is estimated that an additional $600 million to $1 billion will be needed for the implementation of projects to achieve the nitrogen removal requirement.

Sanitary Sewer System

The bulk of the cost of the waste water collection system is associated with the assessment, rehabilitation and replacement of the aging infrastructure in the city. Projects that will address capacity, system integrity, and expansion of the system for new areas continue to be developed.

Combined Sewer Overflow Long-Term Control Plan

WASA completed the CSO Long Term Control Plan (LTCP) report in 2002. The plan involves the construction of large underground tunnels that will serve as a collection and retention system for combined sewer during high flow conditions. Under a 2005 agreement with the federal government, the LTCP is to be implemented over a 20 year period. The plan will reduce combined sewer overflows to D.C. waters by 96 percent. The lifetime budget for the combined sewer overflow reduction is estimated at over $2.6 billion.

Capital Equipment

The capital equipment cost constitutes a portion of the waste water collection and treatment expenditures in the areas of acquisition and maintenance of information technology and large equipment. It accounts for about 12 percent of the waste water treatment cost.

Storm Water Management

The 2008 cost for storm water pollution control activities is over $56 million. The cost covers a whole array of storm water management activities including monitoring and control of various types of pollutants from various sources, enforcement and public education. The cost may not reflect some capital construction costs, and the costs associated with operation and maintenance of structural controls such as the rehabilitation/replacement of storm sewers and inlets.

Other Best Management Practices

The cost of other Best Management Practice structures and activities incurred by both government and private entities is difficult to estimate. Installation of various BMP devices such as sand filters, infiltration trenches, and oil/water separators have been required for new construction in the District of Columbia since the early eighties. Other BMPs such as green roofs are being actively promoted.

TABLE 2.7
COST SUMMARY OF WATER POLLUTION CONTROL ACTIVITIES

Activity Area	Cost*
Waste Water Treatment**	13,781
Sanitary Sewer System**	110,503
Combined Sewer System**	98,675
Capital Equipment**	30,668
Storm Water Management**	56,898
Other Best Management Practices***	830

*Dollars in thousands,
**Source – Agencies' 2008 Budget Request/Commitment
*** Estimated

Benefits

The benefits to clean rivers and streams are increasingly being realized in the District of Columbia. In particular, the Anacostia River waterfront development which gained prominence in recent years, promotes recreational use of the waters. The Anacostia Waterfront Framework Plan, adopted by the District of Columbia in 2003, has set out to achieve the following goals:
- Charting a course for the environmental healing and rejuvenation of water-dependent activities on the Anacostia River;
- Rethinking transportation infrastructure to improve access to waterfront lands and better serve waterfront neighborhoods;
- Creating a system of interconnected and continuous waterfront parks, joined together by the Anacostia Riverwalk and Trail;
- Enlivening the waterfront to celebrate and explore the cultural heritage of our city and the nation;
- Promoting sustainable economic development by reconnecting the city across the river and to a vital waterfront that offers opportunities to live, work and play.

The D.C. Comprehensive Plan lays the foundation for the policies in support of waterfront development that is ecologically sound. Among the key elements of the Plan is to "create and enhance relationships between the rivers and District residents, develop urban waterfronts and water-related recreation in appropriate locations, and establish attractive pedestrian connections from neighborhoods to activities along the waterfronts".

In 2007, the Office of the Deputy Mayor for Planning and Economic Development was charged with the implementation of the Anacostia Waterfront Initiative Framework Plan, the guiding document for the waterfront development. The plan calls for revitalization and development of the area to accommodate new housing units, office space, public park space and a network of riverside trails.

Development and rehabilitation of 42 acres of waterfront property to include 2,800 residential, 300,000 square feet of retail, 1.8 million square feet office space and significant green space area begun in 2007. The first occupancy of this urban mixed use

waterfront development is expected to occur in 2009.

A quantitative assessment of benefits resulting from water pollution control expenditures over the years is difficult to make. Qualitatively, improvements continue to be seen. Recreational fishing is active in the city. Annual surveys by the Fisheries and Wildlife Division (FWD) document the general stability of the resident and migratory fish populations in District of Columbia waters. The sale of fishing licenses in D.C. support the findings of the annual surveys and is an indicator of recreational use. Since 1988, the District of Columbia has required the purchase of licenses to fish in D.C. waters. Table 2.8 is a summary of the number of licenses sold from 2003 to 2007.

TABLE 2.8
SALES OF FISHING LICENSES IN THE DISTRICT OF COLUMBIA
(2003 TO 2007)

Year	Non-Resident	Resident	Total
2003	6758	2510	9268
2004	7814	1184	8998
2005	7448	2434	9882
2006	6985	1983	8968
2007	6316	2035	8351

PART III: SURFACE WATER ASSESSMENT

Current Surface Monitoring Program

Changes

The Water Quality Division began monitoring the Anacostia River continuously in 1997. That is, hourly readings are taken seven days a week. The WQD began with one station, ANA13, located at the Conrail bridge just upriver from the Pennsylvania Avenue bridge. The Pennsylvania Avenue bridge is the dividing line of the upper and lower segments of the Anacostia River. The first continuous monitor device (sonde unit) was deployed to assess the feasibility of using a sonde unit to determine the dissolved oxygen (DO) cycle of the river. In 2004 another Potomac station was added as were two more stations on the Anacostia (Appendix 3.1). In April of 2008 the WQD will begin a real time monitoring program available via the DDOE web site. Initially two stations are planned, the upper and lower Anacostia. Real time readings of the river will show current temperature, DO, pH, specific conductivity, turbidity, and chlorophyll. Appendix 3.2 are percent violation tables for the continuous monitors.

Starting in January 2008, E.coli will be the bacteriological indicator in D.C. waters.

Plan for Achieving Comprehensive Assessments

The Water Quality Division has a monitoring strategy based on EPA's 2003 guidance, *Elements of a State Water Monitoring and Assessment Program.* The strategy will continue the practice of comprehensive monitoring of the District of Columbia waters. The strategy describes a monitoring program that will move towards allowing water quality resource managers to know the overall quality of D.C. waters, the extent of water quality change, problem areas, the level of protection needed and the effectiveness of projects to correct impairments. The approved monitoring strategy includes language to continuously update the document as new areas or issues of concern arise.

Assessment Methodology and Summary Data

Assessment Methodology

The WQD uses the D.C. SWQS as one way of evaluating its surface waters. The percentage of time a selected standard is out of compliance at a monitoring station or group of monitoring stations over a selected span of time determines whether a waterbody supports a particular use. For the 2006 reporting cycle, physical, chemical, and bacterial data collected from January 2003 to December 2007 were used to make many of the use support decisions. Biological data collected during 2002-2003 was also

used.

Fish consumption use determinations (Class D) are based on known fish consumption advisories in effect during the assessment period, and not water quality standards. The District of Columbia developed its fish consumption advisories from fish tissue contamination data collected in recent years. The following points should be noted for the fish consumption use support determinations. Fish tissue contamination data used to issue advisories are collected at stations on the Anacostia and Potomac Rivers. If no barrier for fish movement exists, it is assumed that fish move freely to the smaller streams and other waterbodies. The criteria for the fish consumption use (Class D) support determination is presented in Table 3.1. SWQS were not used to make fish consumption support decisions.

TABLE 3.1
CRITERIA FOR FISH CONSUMPTION USE SUPPORT CLASSIFICATION

Support of Designated Use	Criteria for Fish Consumption
Fully Supporting	No fish/shellfish advisories or bans are in effect.
Not Supporting	"No consumption" fish/shellfish advisory or ban in effect for general population, or a subpopulation that could be at potentially greater risk, for one or more fish species; commercial fishing/shellfishing ban in effect.
Not Assessed	"Not assessed" is used when fish consumption is not a designated use for the waterbody.
Insufficient Information	Data to determine if the designated use is fully supporting/not supporting is not available.

To help to compare D.C. water quality and national water quality, the District of Columbia applies national criteria, where possible, in determining use support of its waterbodies. However, a modified version of the criteria established by U.S. EPA had to be used in certain use support decisions because D.C. did not collect the data as specified in the national criteria. For example, in many cases D.C. collected monitoring data less frequently than indicated by U.S. EPA criteria. The majority of monitoring stations are only sampled once-a-month. The District of Columbia, therefore, had to modify the criteria for determining primary and secondary contact recreation (Class A and B) as well as aquatic life use determinations using physical/chemical data to accommodate the sampling frequency. Fecal coliform bacteria data were used to make use support decisions about pathogens. The criteria used for these uses may be found in Table 3.2.

TABLE 3.2
CRITERIA FOR USING CONVENTIONAL POLLUTANTS AND PATHOGENS
WHEN MAKING USE SUPPORT DECISIONS

Support of Designated Use	Criteria for using Conventional Pollutants and Pathogens
Fully Supporting	For any pollutant, standard exceeded in ≤ 10% of measurements. Pollutants not found at levels of concern.
Not Supporting	For any one pollutant, standard exceeded in > 10% of measurements. Pollutants found at levels of concern.
Not Assessed	Not assessed
Insufficient Information	Data to determine if the designated use is fully supporting/not supporting is not available

[1] Conventional pollutants are defined here as dissolved oxygen (DO), pH, and temperature.

In some cases, D.C. relies on biological/habitat data, instead of chemical/physical standards, to make aquatic life use (Class C) decisions. When streams with both conventional pollutant data and biological data are evaluated, the biological data are the overriding factor in aquatic life use decisions. The District Columbia's biological data were used in this report. Rapid bioassessment data were only used for aquatic life use support decisions (Class C waters) on the District's smaller streams. All but one of DC's small streams were re-evaluated from 2002-2003 for the Aquatic Life Use attainment category using biological assessment methodologies. These tributary assessments were based on the Maryland 2001 Biological Stream Survey (MBSS) for benthic macroinvertebrates which was used as a reference.

Aquatic life use support is based on the relationship between observed stream biological condition as compared to the reference stream condition producing a percent of reference stream biological condition. This scale rates "impaired" at 0-79%, and "non-impaired at 80-100%" of reference condition. U.S. EPA 305(b) guidelines on criteria for aquatic life use support classification recommend designation of "not supporting" if impairment exists, and "fully supporting" if no impairment exists. Piedmont and Coastal Plain tributaries were assessed using reference condition data from Montgomery and Prince George's Counties, Maryland.

Biological Integrity Class scores were determined using scoring criteria adapted from Montgomery County. These scoring ranges were also used for Coastal Plain values. Habitat assessments were compared directly to each ecoregions' corresponding reference condition habitat evaluation.

The following tributaries were assessed for the Aquatic Life Use category using data collected during 2002-2003:

Coastal Plain		Piedmont	
TDU01	Fort Dupont Tributary[1]	TFB02	Foundry Branch[1]
TFC01	Fort Chaplin Run[1]	TLU01	Luzon Branch[1]
TFD01	Fort Davis Tributary[1]	TMH01	Melvin Hazen Valley Branch[1]
THR01	Hickey Run[c]	TPO01	Portal Branch[1]
TOR01	Oxon Run[1]	TPY01	Piney Branch[1]
TWB01	Lower Watts Branch[c]	TSO01	Soapstone Creek[1]
TWB02	Upper Watts Branch[c]	TDA01	Dalecarlia Tributary[2]
TTX27	Texas Avenue Tributary[1]	TFE01	Fenwick Branch[2]
TFS01	Fort Stanton Tributary[2]	TNS01	Normanstone Creek[2]
TNA01	Nash Run[2]	TDO01	Dumbarton Oaks Tributary[2]
TPB01	Popes Branch[2]	TPI01	Pinehurst Branch[2]
		TKV01	Klingle Valley Creek[2]
		TBR01	Broad Branch[2]
		RCRH01	Lower Rock Creek[c]
		RCRH05	Upper Rock Creek[c]

1 - First round streams (monitored on the even number year)
2 - Second round streams (monitored on the odd number year)
c - Core streams (monitored every year)

In 2007 habitat assessments were performed on all core and second round streams. The findings from the habitat assessment are included in the individual assessments (Appendix 3.3).

The District also determines overall use support for waterbodies with multiple uses according to EPA guidance (Table 3.3). A waterbody fully supports its designated uses when **all** its uses are fully supported. When one or more uses are **not** supporting, then the waterbody is not supporting.

TABLE 3.3
CRITERIA FOR OVERALL USE SUPPORT CLASSIFICATION

Overall Designated Use for Multiple-Use Waterbodies	Criteria for Overall Use Support
Fully supporting	All uses are fully supported.
Not supporting	One or more uses are not supported.
Not Assessed	Not assessed
Insufficient Information	Data to determine if the designated use is fully supporting/not supporting is not available.

Appendix 3.4 includes the tables of percent violations and statistical summary reports for the waterbodies assessed for this reporting cycle.

Maps

Appendices 3.5 through 3.9 display use support data in map form for the surface waters of the District of Columbia. The maps were generated by DDOE's GIS using ArcGIS software. These maps should help the reader interpret the water quality information given in this report on a geographic basis. Appendix 3.5 shows the degree of support for primary contact recreation, while Appendix 3.6 depicts the degree of support for secondary contact recreation and aesthetic enjoyment. In comparison, Appendix 3.7 shows the degree of support for the protection and propagation of fish, shellfish, and wildlife. In addition, Appendix 3.8 present the degree of support for the consumption of fish, and finally, Appendix 3.9 presents the degree of support for navigation.

Section 303(d) Waters

Background

Section 303(d) of the Federal Clean Water Act and regulations developed by U.S. EPA require states to prepare a list of waterbodies or waterbody segments that do not meet water quality standards even after all the pollution controls required by law are in place. Waterbodies may be divided into segments. Waterbodies or waterbody segments not meeting the appropriate water quality standards are considered to be impaired. The law requires that states place the impaired waterbody segments on a list referred to as the 303(d) list and develop Total Maximum Daily Loads (TMDLs) for the waterbodies on the list. The Potomac and Anacostia Rivers, Rock Creek and Watts Branch are divided into segments for the assessment purposes of this list.

In October 2006, EPA distributed additional information for the assessment, listing, and reporting requirements for Section 303(d) and 305(b) of the Clean Water Act for the

2008 reporting cycle. The product of the EPA guidance is called the Integrated Report. The current guidance requires the categorization of all state waters into 5 assessment categories. Category 1 should include waters with the status that all designated uses are being met. Category 2 should include waters that meet some of their designated uses, but there is insufficient data to determine if remaining designated uses are met. Category 3 should include waters for which insufficient data exists to determine whether any designated uses are met. Category 4 should include waters that are impaired or threatened but a TMDL is not needed. Category 5 should include waters that are impaired or threatened and a TMDL is needed. Categories can be subcategorized.

EPA regulations require that the 2008 Integrated Report (305(b)/303(d) list) and methodology used to categorize the waters be submitted to EPA by April 1, 2008. The public must also be given the opportunity to comment on a draft list.

Basis for Consideration of Data

Various data sources were considered for use in the preparation of the draft 2008 303(d) List. As the 303d list is a tool of the regulatory TMDL process, D.C. wants to ensure that the 303(d) list produced and eventually approved is based on data that utilized unbiased, scientifically sound data collection and analytical methods. The D.C. Water Quality Monitoring Regulations (Title 21, Chapter 19 - District of Columbia Municipal Regulations) were developed to provide for accurate, consistent, and reproducible water quality monitoring data for decision making purposes. Data used must have been collected in the actual waterbody that is being assessed. Data that did not satisfy the above mentioned monitoring regulations is not reviewed for the development of the 2008 303d list.

Like the 2006 303(d) list, the draft 2008 list enumerates specific pollutants of concern in various waterbodies or waterbody segments. The draft 2008 DC 303(d) List is based on the following data:

- 2006 303(d) list
- DC Ambient Water Quality Monitoring data for 2003-2007 used to make use support determinations for the 2008 305(b) report
- DC Municipal Separate Storm Sewer System 2006-2007 Monitoring Data
- Draft Tributary Assessment Report, 2004 (Biological Data collected between 2002-2003) being used to make aquatic life use support determinations for the 2008 305(b) report
- DC Fish Tissue Contamination Report, 2001

A request for data was sent to organizations that may have data for the waters of the District of Columbia. Data received will be reviewed and considered during preparation of the final 303(d) list.

Data Interpretation for Listing

If a designated use is not supported, then a waterbody or waterbody segment is listed for the pollutant associated with the applicable criteria. In order for a waterbody to be listed the data evaluated for water quality standard attainment must have been collected from that specific waterbody. Only relevant data should be used to make the attainment determination. This stipulation is necessary as development of a TMDL is a major time and monetary investment for the parties involved. The Water Quality Division must ensure that the funds expended for TDML purposes are used in an efficient manner and will result in maximum water quality benefits. For example, the Anacostia River cannot be listed for copper if there is no copper data available from water samples collected in a segment of the Anacostia River to indicate that impairment. MS4 data from an outfall to a tributary of the Anacostia River cannot be used to list a segment of the Anacostia River.

Use Support Determination

-Ambient Monitoring Data and Draft Tributary Assessment Data
The Water Quality Division uses the D.C. Surface Water Quality Standards (WQS) to evaluate its surface waters. The designated uses for the surface waters of the District of Columbia are delineated in the October 2005 Water Quality Standards. The designated uses are:

- primary contact recreation (swimmable),
- secondary contact recreation and aesthetic enjoyment (wadeable),
- protection and propagation of fish, shellfish, and wildlife (aquatic life) ,
- protection of human health related to consumption of fish and shellfish (fish consumption), and
- navigation.

For the draft 2008 303(d) list determination, physical, chemical, and bacterial data collected from January 2003 to December 2007 are being used to make the use support decisions for primary contact, secondary contact, and aquatic life support uses for the rivers. A waterbody or waterbody segment is included on the draft 303(d) list if its designated use was not supported, i.e.- greater than 10% exceedance of the measurements taken with the data period of study. It is listed on Category 5 of the list if it is a new instance of non-support of a parameter.

Biological/habitat data collected during 2002-2003, habitat data collected during 2007, in addition to physical/chemical data is used to determine aquatic life use support for the small D.C. streams. Biological/ habitat data for small streams was evaluated using the U.S. EPA stressor identification guidance. If a stream's aquatic life use is not supported based on the biological information found in the D.C. Tributary Assessment Report (draft internal document) it is listed under Category 4C of the list, if a TMDL has not been completed.

- The District has adopted water quality standards for dissolved oxygen, water clarity and chlorophyll a in accordance with the Chesapeake Bay Water Quality Criteria Guidance Document published in 2003 (EPA, 2003). DDOE WQD worked with the Chesapeake

Bay Program to assess the tidal waters in the District using the 2003 guidance document and all the addendums published through 2007. For the 2008 listing, the tidal waters were assessed for the 30-day DO attainment. For DO determination, as a signatory to the Chesapeake Bay Agreement, DDOE has agreed to interpret DO data in this fashion for 303d list purposes.

Fish Tissue Contamination Data

Fish consumption use determinations (Class D) are based on known fish consumption advisories in effect during the assessment period. Surface Water Quality Standards (SWQS) were not used to make fish consumption support decisions. Fish tissue contamination data used to issue advisories are collected at stations located on the Anacostia and Potomac Rivers. If no barrier for fish movement exists, it is assumed that fish move freely to the smaller streams and other waterbodies. A fish consumption advisory remains in place in the District of Columbia. In addition, the EPA guidance on using fish advisories for Integrated Report categorization indicates that fish and shellfish consumption advisories demonstrate non-attainment when the advisory is based on fish and shellfish tissue data.

Municipal Separate Storm Sewer (MS4) Data

The MS4 data used is the result of wet and dry weather samples collected from the stations monitored during the MS4 monitoring cycle. Only parameters for which numeric criteria was listed in the DC WQS were evaluated. The most strict criteria listed was used for comparison with the data results.

Category Placement Methodology

The pollutant causing an impairment in a waterbody or waterbody segment must be identified. With multiple uses associated with each waterbody it is possible for a single waterbody to need more than one TMDL. The guidance allows for a waterbody segment to be listed in one or more categories. Keep in mind that the main goal of this list is to have TMDLs approved and implemented so that water quality standards can be attained. Following is a general description of the categories.

Category 1- Waterbody or segment of a waterbody attained all its designated uses and no use is threatened.

Category 2- Waterbody or segment of a waterbody attained some but not all of their designated uses.

Category 3- Insufficient data or information to determine designated use attainment in a waterbody or segment of a waterbody.

Category 4- Waterbody or segment of a waterbody with at least one designated use

impaired but a TMDL is not needed. This category is subcategorized below.

Subcategory 4A- Waterbody or segment of a waterbody for which TMDLs for pollutants causing impairments have been approved or established by EPA may be placed in this category.

Subcategory 4B- Waterbody or segment of a waterbody for which other pollution controls are expected to result in water quality standard attainment in a reasonable period of time.

Subcategory 4C- Waterbody or segment of a waterbody for which TMDLs are not required. Impairment is not caused by a pollutant.

Category 5- Waterbody or segment of a waterbody with at least one designated use not attained or threatened and a TMDL is needed. A waterbody or segment of a waterbody may be placed in this category even if TMDLs have been approved for some of the pollutants/pollution identified as causing non-attainment. All necessary TMDLs for a waterbody or segment of a waterbody must be approved or established by EPA in order to placed in category 4A.

Priority Ranking

Waterbodies that are first placed in 2008 on the draft list for toxics substances such as metals, pesticides, carcinogens or noncarcinogens, etc. are ranked as high priority for TMDL development on the basis of their risk to human health. Experience with the TMDL development process- data gathering, model development, public participation- the District of Columbia does not foresee the development of TMDL for waterbodies ranked as high priority (on the 2008 list) before the next five years or 2014. Keep in mind that impaired waters listed on the 2006 Section 303 (d) list are scheduled for development until March 2012 and there other segments that must be prepared in the interim.

If a waterbody is first listed in 2008 for fecal coliform due to secondary contact recreation use violations with 50% or more exceedances, that waterbody is ranked as Medium priority waterbodies.(The term “50% or more exceedances” refers to the percentage of time within the 5-year period of study that monitoring data for a waterbody exceeded the water quality standard. For example, if the secondary contact recreation use was being evaluated and there are 60 fecal coliform readings for the Anacostia River during the 5- year study period and 33 of those readings were greater than 1000 MPN/100mL then 55% of the time during that study period the secondary contact recreation use was exceeded and that waterbody would be ranked as a medium priority waterbody.) Bacterial impairment also poses some human health risk, though the effects seen are usually not as severe as toxic substances’ effects. The secondary contact recreation use exceedances (a current use) will take higher priority than the primary contact recreation use exceedances as it is also more a efficient use of resource to address

the existing uses before the designated uses (such as primary contact recreation). Waterbodies listed for trash will be ranked as High priority. Waterbodies listed for pH are also ranked as Medium priority as it is a aquatic life use criterion. The medium priority waterbodies (first listed in 2008) will be scheduled for TMDL preparation in 2014.

If a waterbody is first listed in 2008 for fecal coliform for secondary contact recreation use violations with less than 50% exceedances are ranked as low priority. Waterbodies listed for any other pollutant not previously mentioned will also be ranked low priority. Low priority waterbodies will be scheduled for TMDL preparation in 2015.

The TMDL establishment date for some of the waterbodies listed in category 5 has been adjusted to account for changing priorities related to TMDLs development in the region. Resources are now being partially shifted to address completion of the high priority trash TMDLs and the District of Columbia possible allocations in the Chesapeake Bay TMDL.

Georeferencing

The geographic location codes included in the draft 2008 303(d) List were taken from the National Hydrography Dataset. The District of Columbia has two codes. 02070010 - the Potomac Watershed and 02070008- the Middle Potomac-Catoctin Watershed. Only one D.C. waterbody, Dalecarlia Tributary, is in the Middle Potomac-Catoctin Watershed. All the remaining waterbodies are in the Potomac Watershed. The EPA Assessment DatabaseVersion 2.3 for Access is being used to compile the data for the Integrated Report.

Public Participation

The draft 2008 Section 303(d) list will be available for a 30-day public comment period. The comment period commenced on March 31 and ends on April 30, 2008. A copy of the draft 303(d) list was available at the Martin Luther King, Jr. Public Library's Washingtonian Room starting on March 31, 2008. The notice was also be published in the D.C. Register. The formal required responses to the comments received by the submission deadline will be prepared and sent to U.S. EPA Region 3 when completed.

Categorization of District of Columbia waters

See Appendix 3.10 for Categorization List.

Total Maximum Daily Load (TMDL) Program

Background
Section 303(d)(1)(A) of the Federal Clean Water Act (CWA) states:

> Each state shall identify those waters within its boundaries for which the

> effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) are not stringent enough to implement any water quality standards applicable to such waters. The State shall establish a priority ranking for such waters taking into account the severity of the pollution and the uses to be made of such waters.

Further section 303(d)(1)(C) states:

> Each state shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 304(a)(2) as suitable for such calculations. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

In 1998, the District of Columbia developed a list of waters that did not or were not expected to meet water quality standards as required by section 303(d)(1)(A). The Section 303(d) list is reviewed and revised as needed every two years. As stated in the Clean Water Act (CWA), Total Maximum Daily Loads (TMDLs) shall be developed for those water bodies not attaining water quality standards after application of technology-based and other required controls. A TMDL sets the quantity of a pollutant that may be introduced into a waterbody without exceeding the applicable water quality standard. A TMDL is typically defined as the sum of the wasteload allocations (WLAs) assigned to point sources, the load allocations (LAs) assigned to nonpoint sources, and a margin of safety (MOS). The TMDL is commonly expressed as:

$$TMDL = WLAs + LAs + MOS$$

TMDL Development

Since 1998, the Water Quality Division has developed 357 TMDLs for the District's waters, with all of them approved by the U.S. Environmental Protection Agency (U.S. EPA). WQD has undertaken development of the TMDLs through required monitoring and modeling studies for the Anacostia and Potomac Rivers and their tributaries including Rock Creek. The Section 303(d) list in this report summarizes the TMDLs that are already completed or planned to be developed in the coming years.

DDOE WQD, jointly with Maryland Department of the Environment and Virginia Department of Environmental Quality, has developed a multi-jurisdictional (DC, MD and VA) watershed based PCB TMDL for the tidal Potomac River. Portions of the tidal river have been placed on 303(d) impaired waters lists based on findings of elevated levels of PCBs in the tissue of fish by the three jurisdictions that share the river. WQD staff played key roles in supporting various components of this project, including contracting and

managing a number of monitoring projects and providing necessary data; actively participating in technical and steering committees; attending weekly and biweekly committee meetings; reviewing and commenting on all technical and regulatory matters and issues; holding public meetings; and responding to stakeholder inputs. The public and stakeholders were provided an opportunity to comment on the TMDL before it was finalized. The study was coordinated by the Interstate Commission on the Potomac River Basin (ICPRB) and the U.S. EPA. The TMDL was approved by the U.S. EPA in October 2007. The District continues to partner with watershed states, federal agencies and regional organizations to develop cost effective, scientifically defensible and consensus driven TMDLs.

Because of a ruling by the Court of Appeals for the DC Circuit in April 2006, the District was required to revise its total suspended solids (TSS) TMDL developed in 2002. DDOE partnered with Maryland Department of the Environment (MDE) and developed a watershed wide TMDL for TSS that replaces the original DC TSS TMDL. The new watershed based TMDL addresses TSS/sediment impairments in both jurisdictions. The WQD provided key support, including reviewing, directing and commenting on regulatory and technical matters; data needed to develop the TMDL; conducting meetings with MDE, U.S. EPA and stakeholders; holding public meetings; and responding to stakeholders questions and input. The public and stakeholders were provided an opportunity to comment on the TMDL before it was finalized. A final TSS TMDL was then developed and submitted to the EPA in June 2007. The TMDL was approved by the U.S. EPA in July 2007. Similar to the TSS TMDL, the District is also required to revise its Anacostia biochemical oxygen demand (BOD) TMDL that was established in 2001. DDOE WQD again in partnership with MDE, is in the process of developing a watershed wide TMDL for BOD/nutrients. The TMDL will address BOD/nutrient related impairments in both DC and Maryland.

The District has listed the Anacostia River as impaired for trash in 2006 303(d) list. Maryland also listed the portion of River within the state as impaired for trash in their recent 303d list. Both DDOE and MDE are currently working together to develop consistent methodologies for establishing the trash TMDL. DDOE has a contract to gather necessary data and develop a trash TMDL in the District's portion of the watershed, and will have to devote considerable resources to this trash TMDL effort. In addition to developing a TMDL, DDOE is working on the development of a trash reduction implementation plan. The trash reduction plan when completed will be consistent with the Anacostia Trash Reduction Strategy developed by the Anacostia Watershed Restoration Partnership (AWRP).

As a signatory to the USEPA's Chesapeake Bay Program, the District is also working with U.S. EPA and the other Bay partner jurisdictions (MD, VA, PA, WV and DE) to develop a CBP TMDL. DDOE WQD is regularly participating in the Bay Water Quality Steering Committee and addressing issues that are specific to the District. WQD is also actively participating in a Bay TMDL workgroup to make sure various water quality concerns in the District are properly addressed.

The development of TMDLs is an evolving process. Many of the District's TMDLs were established based on limited data and narrow modeling options available at the time. Most of the District's TMDLs or loading estimates will need to be revised as more data becomes available and our understanding of the natural environmental processes and settings improves, which in turn will allow development of more sophisticated water quality models and better predictions.

TMDL Implementation

Once the TMDLs are established, existing loads in excess of allocated amounts determined in the TMDL calculations need to be eliminated. Various ongoing/planned pollution reduction activities mentioned in this report are geared toward achieving the TMDL goals for the District's waterbodies. Both regulatory and non-regulatory programmatic measures are needed to achieve the reductions set in the TMDLs.

The combined and separate sewer systems in the District are regulated with NPDES permits. The permits must be consistent with any applicable USEPA approved waste load allocation (WLA) component of any established TMDL. The District has developed MS4 TMDL implementation plans for the Anacostia and Rock Creek watersheds in February and August 2005, respectively. The plans delineate specific goals and actions that must be implemented to achieve water quality goals and to attain designated uses in the waterbodies. To reduce pollution from CSO discharges in the combined sewer system, WASA has developed a Long Term Control Plan (LTCP). The LTCP calls for about 96 percent reductions of CSOs in the District and has been approved by the USEPA.

As described in this report, a number of other programs/projects (e.g., low impact developments, wetlands and habitat restoration, storm water BMPs, etc.) are currently in place and being planned to reduce water pollution from nonpoint areas and federally owned lands in the District. As all of the District's major rivers and tributaries are shared with other jurisdictions, it must be recognized that without significant reductions in upstream or boundary loads the water quality goals in the District cannot be achieved and maintained.

Rivers and Streams Water Quality Assessment

Designated Use Support

Twenty-four (24) rivers and streams were assessed for this update. Each of those waterbodies were impaired for one or more uses (Table 3.4). Appendix 3.3 contains individual assessments for each of the waterbodies.

TABLE 3.4
SUMMARY OF FULLY SUPPORTING, THREATENED, AND IMPAIRED RIVERS AND STREAMS

Degree of Use Support	Assessment Category		Total
	Evaluated	Monitored	Assessed Size (miles)
Size Fully Supporting All *Assessed* Uses	0.00	0.00	0.00
Size Fully Supporting All *Assessed* Uses but Threatened for at Least One Use	0.00	0.00	0.00
Size Impaired for One or More Uses	0.00	38.40	38.40
TOTAL ASSESSED	0.00	38.40	38.40

Based on Table 3.5 no stream supported its aquatic life use. The fish consumption use was not supported in any of the streams assessed due to the fish advisory in effect for all D.C. waterbodies. A high number of fecal coliform standard violations resulted in nonsupport of the swimming use by all the city's streams. The secondary contact use for streams in the District of Columbia was not supported, except at Pope's Branch and Ft.Dupont. The navigation use was fully supported in the streams and rivers.

TABLE 3.5
INDIVIDUAL USE SUPPORT SUMMARY FOR RIVERS AND STREAMS

Type of Waterbody: Rivers and Streams (miles)

Goals	Designated Use	Total in State	Total Assessed	Supporting-Attaining WQ Standards	Not Supporting-Not Attaining WQ Standards	Insufficient Data & Information	Size Not Assessed
Protect & Enhance Ecosystems	Aquatic Life	38.4	34.1	0.00	34.9	4.3	0.00
Protect & Enhance Public Health	Fish Consumption	38.4	36.4	0.00	36.4	0.00	2.0
	Shellfishing	-		-	-	-	-
	Swimming	38.4	38.4	0.00	38.4	0.00	0.00
	Secondary Contact	38.4	38.4	2.80	35.6	0.00	0.00
	Drinking Water	-	-	-	-	-	-
Social & Economic	Agricultural	-	-	-	-	-	-
	Cultural or Ceremonial	-	-	-	-	-	-

Goals	Designated Use	Total in State	Total Assessed	Supporting-Attaining WQ Standards	Not Supporting-Not Attaining WQ Standards	Insufficient Data & Information	Size Not Assessed
	Navigation	38.4	9.5	9.5	0.00	0.00	28.9

- = not applicable

Relative Assessment of Causes/Stressors

The causes of impairment to streams and rivers are varied. For example, Dalecarlia and Ft. Dupont have occasional problems with low D.O. Pathogens play a major role in impairing Nash Run and Oxon Run; both streams have an 100% exceedance of the standard (200 MPN/100mL). While all the other streams are at least moderately impacted by pathogens. Many of the streams have poor biological integrity. Table 3.6 lists the causes of impairment to D.C. streams and rivers.

TABLE 3.6
TOTAL SIZES OF WATER IMPAIRED BY VARIOUS CAUSE CATEGORIES FOR RIVERS AND STREAMS

Type of Waterbody: Rivers and Streams (miles)

Cause Category	Total Size of Water Impaired
PATHOGENS	**37.6**
Fecal Coliform	37.6
BIOLOGIC INTEGRITY (BIOASSESSMENTS)	**32.4**
Benthic-Macroinvertebrate Bioassessments (Streams)	4.5
Combination Benthic/Fishes Bioassessments (Streams)	32.4
Combined Biota/Habitat Bioassessments (Streams)	13
Fishes Bioassessments (Streams)	4.5
Habitat Assessment (Streams)	1
FLOW ALTERATIONS	**17.9**
Other Flow regime alterations	17.9

Cause Category	Total Size of Water Impaired
HABITAT ALTERATIONS (INCLUDING WETLANDS)	**10.6**
Alteration in stream-side or littoral vegetative covers	5.1
Alterations in wetland habitats	6.2
Physical substrate habitat alterations	0.7
SEDIMENTATION	**28**
Particle distribution (Embeddedness)	28
Total Suspended Solids (TSS)	3.7
OIL AND GREASE	**1.7**
OTHER	**14.8**
Debris/Floatables/Trash	14.8

Relative Assessment of Sources

A source of impairment that is common to D.C. rivers and streams is urban runoff/storm sewers from residential districts. Battery Kemble and Portal Branch are highly impacted by runoff. Habitat modification still has an impact on many of the streams as riparian vegetation is removed and stream banks are destabilized due to heavy runoff. Combined sewer overflow continues to affect Klingle Valley Creek, Rock Creek and Piney Branch. Table 3.7 lists the sources of impairment.

TABLE 3.7
TOTAL SIZES OF WATER IMPAIRED BY VARIOUS SOURCE CATEGORIES FOR RIVERS AND STREAMS

Type of Waterbody: Rivers and Streams (miles)

Source Category	Total Size of Water Impaired
Site Clearance (Land Development or Redevelopment)	5.3
Landfills	0.6
Channelization	5.6
Impacts from Hydrostructure Flow Regulations/modification	12.2
Loss of Riparian Habitat	1.2
Hydrostructure Impacts on Fish Passage	15.4

Source Category	Total Size of Water Impaired
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO, or CSO)	17
Illegal Dumping	9.9
Illegal Dumps or Other Inappropriate Waste Disposal	11.4
Cercla NPL (Superfund) Sites	1.6
Combined Sewer Overflows	9.5
Discharges from Municipal Separate Storm Sewer Systems (MS4)	23.5
Municipal (Urbanized High Density Area)	5.8
Post-development Erosion and Sedimentation	8.5
Residential Districts	30.9
Wet Weather Discharge (Non-Point Source)	17
Above Ground Storage Tank Leaks (Tank Farms)	0.9
Source Unknown	15.1

Lakes Water Quality Assessment

Three waterbodies were monitored for designated use support. The waterbodies classified as lakes are Kingman Lake, C&O Canal, and the Tidal Basin. All of these waterbodies were impaired for one or more of their designated uses. Table 3.8 is a summary of the degree of support by lakes in the District of Columbia. Individual water quality assessments may be found in Appendix 3.3.

TABLE 3.8
SUMMARY OF FULLY SUPPORTING, THREATENED, AND IMPAIRED LAKES

Degree of Use Support	Assessment Category		Total
	Evaluated	Monitored	Assessed Size (miles)
Size Fully Supporting All *Assessed* Uses	0.00	0.00	0.00
Size Fully Supporting All *Assessed* Uses but Threatened for at Least One Use	0.00	0.00	0.00
Size Impaired for One or More Uses	0.00	238.40	238.40
TOTAL ASSESSED	0.00	238.40	238.40

Designated Use Support

Lakes in the District of Columbia supported the goals of the CWA to various degrees. Based on physical/ chemical data, the aquatic life use was fully supported in the C&O Canal and Kingman Lake. It was not supported in the Tidal Basin. Due to the fish consumption advisory currently in effect in the District of Columbia, the fish consumption use was not supported in any of the lakes. The swimming use was not supported by lakes. While the secondary contact use was supported in the Tidal Basin, but not supported in Kingman Lake and the C&O Canal. Navigation was fully supported in all the lake waterbodies. Table 3.9 is the use support summary for D.C. lakes.

TABLE 3.9
INDIVIDUAL USE SUPPORT SUMMARY FOR LAKES

Type of Waterbody: Lakes (acres)

Goals	Designated Use	Total in State	Total Assessed	Supporting-Attaining WQ Standards	Not Supporting-Not Attaining WQ Standards	Insufficient Data & Information	Size Not Assessed
Protect & Enhance Ecosystems	Aquatic Life	238.40	238.40	130.0	108.4	0.00	0.00
Protect & Enhance Public Health	Fish Consumption	238.40	238.40	0.00	238.40	0.00	0.00
	Shellfishing	-	-	-	-	-	-
	Swimming	238.40	238.40	0.00	238.40	0.00	0.00
	Secondary Contact	238.40	238.40	108.40	130.0	0.00	0.00
	Drinking Water	-	-	-	-	-	-
Social & Economic	Agricultural	-	-	-	-	-	-
	Cultural or Ceremonial	-	-	-	-	-	-
	Navigation	238.40	238.40	238.40	0.00	0.00	0.00

- = not applicable

Relative Assessment of Causes

All the lakes are highly impacted by pathogens. Table 3.10 lists the causes of impairment to D.C. lakes.

TABLE 3.10
TOTAL SIZES OF WATER IMPAIRED BY VARIOUS CAUSE CATEGORIES FOR LAKES
Type of Waterbody: Lakes (acres)

Cause Category	Total Size of Water Impaired
PATHOGENS	**238.4**
Fecal Coliform	238.4
OIL AND GREASE	**102.7**

Relative Assessment of Sources

There are two sources of impairment to D.C. lakes, combined sewer overflow and urban runoff/storm sewers. The three waterbodies are at least moderately impacted by combined sewer overflow. Urban runoff/storm sewers is a source with moderate impact on the C&O Canal and the Tidal Basin, but a high impact on Kingman Lake. Table 3.11 shows the sources of impairment.

TABLE 3.11
TOTAL SIZES OF WATER IMPAIRED BY VARIOUS SOURCE CATEGORIES FOR LAKES
Type of Waterbody: Lakes (acres)

Source Category	Total Size of Water Impaired
Combined Sewer Overflow	102.7
Discharges from Municipal Separate Storm Sewer Systems (MS4)	238.40

Estuary and Coastal Assessment

The Anacostia River, the Potomac River, and the Washington Ship Channel are classified as estuaries due to their tidal influences. The Potomac River and the Anacostia River are divided into segments for assessment purposes. Individual water quality assessments for the waterbodies can be found in Appendix 3.3.

Designated Use Support

All of the estuary waterbodies were impaired for one or more of their designated uses. The total square miles monitored and assessed are shown in Table 3.12.

TABLE 3.12
SUMMARY OF FULLY SUPPORTING, THREATENED, AND IMPAIRED ESTUARIES

Degree of Use Support	Assessment Category		Total
	Evaluated	Monitored	Assessed Size (miles)
Size Fully Supporting All *Assessed* Uses	0.00	0.00	0.00
Size Fully Supporting All *Assessed* Uses but Threatened for at Least One Use	0.00	0.00	0.00
Size Impaired for One or More Uses	0.00	5.93	5.93
TOTAL ASSESSED	0.00	5.93	5.93

The aquatic life use was fully supported along 4.15 square mile of estuary, and not supported along 1.78 square miles of estuary. The fish consumption use was not supported due to the fish consumption advisory in effect for D.C. waters. The swimming use is not supported in the estuaries. The swimming use support is evaluated based on the number of times the fecal standard of 200 MPN/100ml is exceeded. Table 3.13 shows the secondary contact use fully supported along 5.13 square miles, not supported along 0.80 square miles. The navigation use was fully supported in estuaries as no hazard to users by submerged or partially submerged artificial objects were known to exist in the waterbodies during this study period.

TABLE 3.13
INDIVIDUAL USE SUPPORT SUMMARY FOR ESTUARIES FOR ESTUARIES
Type of Waterbody: Estuaries (square miles)

Goals	Designated Use	Total in State	Total Assessed	Supporting-Attaining WQ Standards	Not Supporting-Not Attaining WQ Standards	Insufficient Data & Information	Size Not Assessed
Protect & Enhance Ecosystems	Aquatic Life	5.93	5.93	4.15	1.78	0.00	0.00
Protect & Enhance Public Health	Fish Consumption	5.93	0.00	0.00	5.93	0.00	0.00
	Shellfishing	-	-	-	-	-	-
	Swimming	5.93	5.93	0.00	5.93	0.00	0.00
	Secondary Contact	5.93	5.93	5.13	0.80	0.00	0.00

Goals	Designated Use	Total in State	Total Assessed	Supporting-Attaining WQ Standards	Not Supporting-Not Attaining WQ Standards	Insufficient Data & Information	Size Not Assessed
	Drinking Water	-	-	-	-	-	-
Social & Economic	Agricultural	-	-	-	-	-	-
	Cultural or Ceremonial	-	-	-	-	-	-
	Navigation	5.93	5.93	5.93	0.00	0.00	0.00

- = not applicable

Relative Assessment of Causes

All the estuaries have a pathogen impairment. It is most pronounced in the Anacostia River. The pathogen impairment is moderate in the Potomac River and the Washington Ship Channel. Table 3.14 lists the causes of impairment to estuaries in D.C.

TABLE 3.14
TOTAL SIZES OF WATER IMPAIRED BY VARIOUS CAUSE CATEGORIES FOR ESTUARIES
Type of Waterbody: Estuaries (square miles)

Cause Category	Total Size of Water Impaired
PATHOGENS	**5.93**
Fecal Coliform	5.93
OXYGEN DEPLETION	**0.3**
BOD, Biochemical Oxygen Demand	0.3
Oxygen, Dissolved	0.3
OIL AND GREASE	**0.8**

Relative Assessment of Sources

The sources of impairment to the estuaries with high impact are combined sewer overflows (along the Anacostia and upper Potomac Rivers), municipal point sources, and urban runoff. A moderate source of impairment to the Potomac River is natural sources. The Anacostia River is impacted by highway runoff and unknown sources in its watershed. The Washington Ship Channel is impacted by urban runoff and other unknown sources. Table 3.15 lists the sources of impairment to D.C. estuaries.

TABLE 3.15
TOTAL SIZES OF WATER IMPAIRED BY VARIOUS SOURCE CATEGORIES FOR ESTUARIES

Type of Waterbody: Estuaries (square miles)

Source Category	Total Size of Water Impaired
Combined Sewer Overflows	5.63
Municipal point sources discharges	4.43
Highway/Road/Bridge Runoff (Non-construction Related)	0.80
Unknown sources	1.38
Discharges from Municipal Separate Storm Sewer Systems (MS4)	5.23
Municipal (Urbanization High Density Area)	0.40

Special Topics

Atmospheric Deposition Study

A study sponsored by the WQD to determine atmospheric deposition of several pollutants was completed in 2007. The study included long-term measurements of four heavy metals (As, Cd, Cr and Pb), seventeen PAH compounds and seven PCB aroclors in wet deposition and ambient air samples collected at a site in Washington, DC (Morris, et. al, 2007).

The major findings of the study are summarized below:

- Observations suggest a high seasonal variability for heavy metal content in both ambient air and wet deposition samples. The heavy metal concentrations in wet deposition and the cadmium in the ambient air samples were found to be higher than the recommended guideline values of national and international regulatory bodies

- The peak values in the concentrations of the heavy metals were typically observed

during the summer months, except for cadmium (in ambient air and wet) and chromium (in ambient air), regardless of the sample type.

- When the heavy metals data were compared to meteorological variables temperature and precipitation, the results indicated a strong dependence on mean temperature and amount of precipitation.

- The gas phase PAHs contributed 76% to the sum of total PAHs and the high molecular weight PAHs contributed 96% of the total PAHs.

- Among the seven measured aroclors, aroclor1254 dominated (85.3%) the ambient air PCB concentrations. For the period between March 2006 and August 2006, the gas phase PCB concentrations in the ambient air samples increased as the temperature increases with a correlation coefficient (r^2) of 0.64.

- The ambient air samples mainly contain less chlorinated biphenyls.

USGS 2007 Long-term SAV Study

The purpose of the study conducted by Rybicki and Landwehr was to determine the species-specific coverage (km^2) of submerged aquatic vegetation (SAV) using a method combining field observations of species-proportional coverage data with congruent remotely sensed coverage and density data in the fresh and upper oligohaline Potomac Estuary from 1985 to 2001. It also sought to determine what effect the exotic invasive macrophytes had on native populations present in the tidal Potomac River, the effects of increased nutrient loads, impaired water quality and waterfowl have on the dynamics of density and coverage. The study was conducted in the tidal Potomac River which extended approximately 40 km from Washington D.C. to Maryland Point. The study area can be defined in greater detail based upon three reaches, the upper and lower tidal region (UTR, LTR), and the upper oligohaline estuary (UOE).

Among the twelve species (which are common members of the freshwater community in North American estuarine, lake, and river systems) observed during the study, focus was placed on two exotic submerged vascular macrophytes commonly referred to as (SAV) species, *H.verticillata* and *M. spicatum*, and one native species *V. Americana*. Not only are they the most prominent species in this study, but they also show two different types of functional traits *H.verticillata* and *M. spicatum* (i.e. competitive and exploitative) versus more conservative survival traits *V. Americana* (i.e. stress tolerant).

SAV diversity and abundance showed a direct negative correlation with increased amounts of nitrogen concentrations and may raise future concerns due to the steady rise of phosphorus loads in this system which appears to play a role in plant species loss. A dense community of SAV was abundant in the UTR up until the 1930s, but disappeared by 1952 as wastewater contributions increased. However, it was noted that following upgrades to sewage treatment plants, including enhanced phosphorous removal, SAV

returned after 1982. Phosphorus reduction at the major wastewater treatment plant on the Potomac was realized in the 1970s and early 1980s and the median total phosphorus changed little during the study period. It was also discovered that under improving water quality conditions, exotic SAV species did not displace native SAV: rather the presence of native species increased over time. These findings are consistent with those of previous studies indicating that native and invading species sometimes do increase together and that factors known to favor exotic species can also promote native species.

Winter waterfowl counts show several significant changes over the period of the study. There was a notable increase in waterfowl following the appearance of *H.verticillata* and the reemergence of SAV in 1983. Since the reemergence of the *H.verticillata* dominated SAV, eight prevalent taxa of waterfowl were observed, of which six taxa that increased are known to consume SAV, while the two other species are known to feed on mollusks or fish which may find refuge in beds of SAV.

Although SAV reproduce from seeds, numerous species in this community also produce over wintering storage organs that receive energy from the previous year's production and carry it over to the next year. It is suggested that the ability to reproduce greater numbers of overwintering propagules provides the exotic species with a stronger carryover effect under the conditions in the study. However, at a local scale, the spread of prolific exotics may alter the local habitat by slowing water velocity, increasing removal (settling) of particulates, and stabilizing sediment, reducing sediment suspension, thus clarifying turbid water which facilitates the spread of natives.

The spread of aggressive exotic macrophytes has been documented worldwide, but rarely has changing community species composition been monitored with water quality over an extended period. It was found in the study that, native populations were not displaced even though the SAV community was dominated by exotics, nor was ecosystem function with respect to waterfowl communities degraded, but rather enhanced. Many methods of eradication, such as harvesting, herbicides, and triploid grass carp, are currently in practice to remove exotic SAV species once they have become established. However it is suggested that an integrated aquatic plant management program that considers nutrient reduction as an additional tool could protect the beneficial aspects of SAV coverage and encourage diversity. Efforts to control exotics without concurrent restoration of natives with similar functions can negatively affect those ecosystem benefits that both natives and exotics provide. Additional like studies on a greater scale can progress the understanding of the process driving species interactions and can enhance the ability to determine the consequences of management decisions about exotic species and eutrophication (Rybicki and Landwehr, USGS, 2007).

Land Use Projects

The WPD is involved in several projects that will have a net positive effect on the water quality and living resources of DC. These include the Watts Branch, Pope Branch, and Hickey Run restoration efforts that are at various stages of implementation as described

below.

Habitat Modification

The Habitat Restoration Program plans, sponsors, and oversees activities that will protect and restore river, stream and wetland habitats in the District of Columbia. The intent of these activities is to improve the ecological diversity and health of the District's natural resources as well the broader Chesapeake Bay watershed. Currently, there are two stream restoration projects, Watts Branch and Pope Branch, that are in the design phase. Wetland restoration efforts are in the Wetlands section of this report.

Habitat Restoration Projects: Stream Restoration

A. Broad Branch Day-Lighting Project - The headwaters of Broad Branch, a tributary to Rock Creek were piped during a roadway project and sewer project done in the 1960s. The uppermost reaches will be day-lighted in a project funded by WPD. Approximately 600ft of currently dry stream channel will be reconnected to the spring fed flow. Additional stormwater will be treated by bioretention features and then directed into the creek, thus restoring some elements of the original hydrology of the creek. WPD will be working with the National Park Service, WASA, and District Department of Transportation (DDOT) to complete this project. Designs and compliance will begin in 2008 and construction in following years.

B. Watts Branch stream restoration - The goal of this project is to restore the in-stream habitat and improve the water quality of Watts Branch, a tributary to the Anacostia River flowing through Northeast DC. Restoration will be achieved through reconstructing stream sections to better accommodate stormwater flows and addressing source control of runoff through implementation of LID projects. DDOE is partnering with the US Fish and Wildlife Service, Chesapeake Bay Field Office for design assistance and the National Resource Conservation Service for construction management. The stream restoration is an integral component of other important efforts to revitalize the District owned park adjacent to the stream and plans to repair aging sanitary sewer infrastructure. DDOE plans to initiate construction in 2008 on this important project. Partners include: WASA, DC Parks and Recreation (DPR), Washington Parks and People, DDOT, and the Deputy Mayor's Office for Planning and Economic Development.

C. Pope Branch Stream and Watershed Restoration - This project has multiple components, all of which will work towards improving the water quality of Pope Branch, a small tributary to the Anacostia River in Southeast DC. DDOE is working closely with WASA and DPR to replace an aging sanitary sewer line and restore a section of the stream from Texas Avenue to Minnesota Avenue. Additionally, DDOE has funded the construction of several LID stormwater retrofits to begin addressing the issue of untreated stormwater runoff in this

subwatershed. DDOE has worked with a small citizens group, the Pope Branch Alliance to assist in coordination of neighborhood activities such as trash clean ups. DDOE expects to begin construction in 2008. Partners include: WASA, DPR, and the Pope Branch Park Restoration Alliance.

D. Hickey Run Stream Restoration - The WPD and US Fish and Wildlife Service are in the process of developing designs for stream restoration for a tributary to Hickey Run (Springhouse Run). These designs will incorporate elements of the USDA National Arboretum's Master Plan and will reforest 5 acres of streamside forest. If the Arboretum agrees to the restoration project, work could begin in 2009.

E. Ft. Dupont Watershed Low Impact Development Retrofits - In 2007, DDOE worked closely with National Capital Parks East to construct several LID retrofits to treat stormwater runoff from parking lots in Ft. Dupont Park. The bioretention cells are located at the Ft. Dupont Activities Center and the Ice Skating Rink parking lot.

Wetlands Assessment

Development of Wetland Water Quality Standards

The development of wetland water quality standards is on going.

Integrity of Wetland Resources

No change.

Extent of Wetland Resources

No change.

Wetland Protection Activities

As of January 2008, three wetland projects sponsored by the Habitat Restoration Program have been completed. The projects are described below.

Habitat Restoration Projects: Wetland Creation

- Kingman Lake Wetland Restoration- This project was completed in 2000 in partnership with the US Army Corps of Engineers (USACE). The goal of this project was to restore over 40 acres of freshwater tidal wetlands in the Kingman Lake area in order to increase plant and animal diversity and improve the filtering capacity of the Anacostia River. Monitoring was conducted by the United States

Geological Survey (USGS) for five years and was analyzed in the context of other wetlands that have been restored in Kenilworth Park. Funding for this project was cost shared by the U.S. ACE and DDOE.

- River Fringe Wetland Restoration - The goal of this project was to restore 17 acres of freshwater tidal wetlands along the shores of the Anacostia River adjacent to Kingman Island. As with the Kingman Lake wetlands, these wetlands will increase the number of beneficial plants and fish in the river and will improve water quality of the Anacostia River. Construction was completed in the fall of 2003. Monitoring is conducted by DDOE and USGS and will continue for a total of five years. The funding for this project was cost shared by the U.S. ACE and DDOE.

- Heritage Wetland Restoration Project - The goal of this project was to create six acres of high to mid freshwater marsh in Kingman Lake. The species of plants planted included a high percentage of shrubs such as Button Bush (*Cephalanthus occidentalis*), Swamp rose (*Rosa palustris*), Marsh mallow (*Hibiscus moscheutos*) and other mid marsh species that are generally non palatable to the high number of exotic, non-native resident Canada geese that reside in the area. An additional goal of this project was to create tidal guts adjacent to the wetland cells for fish and non-motorized water craft passage. This project was completed in 2006 and funding was shared by DDOE and U.S. ACE. Monitoring is being conducted by DDOE and USGS.

Environmental Impact/Economic and Social Benefits of Effective Water Programs

Submerged Aquatic Vegetation

The Fisheries and Wildlife Division of the District of Columbia has been surveying the SAV populations of the Potomac and Anacostia Rivers since 1993. The goal is to monitor the health of the aquatic vegetation found in the District of Columbia and to examine the importance it has on the ecosystem. Surveys include all shorelines in the navigable waters of the Potomac and Anacostia Rivers, contained within the District of Columbia. There have been considerable changes in the SAV attributes from year to year including; SAV species diversity, cover density, and total acreage values for the species that are observed. The one thing that has remained consistent is the direct relationship that exists between the relative abundance of certain fish species, and the presence or absence of viable SAV beds.

Acreage calculations using Global Positioning Systems (GPS) technology began in 2002. The combined total SAV coverage in the waters of the District of Columbia in 2002 totaled just over 699 acres. One year later in 2003, the acreage totals for the same area had plummeted to less than 24 acres! 2004 totals showed a meager increase, covering 28 acres. The SAV recovered in 2005 with 481 acres of coverage in the District of

Columbia. Although the cover density of these beds was relatively low, many of the areas that flourished in 2002 were re-vegetated. 2006 observations revealed a reduction in SAV with 259 acres of coverage. While certain areas expanded and cover density increased, several of the large sparsely covered areas from 2005 simply didn't reveal the presence of SAV.

2006 observations revealed 7 different species of SAV including: *Hydrilla verticillata* (hydrilla), *Heteranthera dubia* (water stargrass), *Ceratophyllum demersum* (coontail), *Vallisneria americana* (wild celery), *Najas guadalupensis, Myriophyllum spicatum* (milfoil) and *Najas minor*. This is indicative of SAV recovery, as the SAV diversity has improved over each of the last three observation periods. Cover density scores will continue to improve over the next several growing seasons as long as there are no catastrophic rain events similar to what was experienced in 2003.

Although the status of the SAV over the past several years has been erratic, it has provided the opportunity to examine the effects that it has on fish species that inhabit these areas. Several of the electrofishing sites utilized by the Research Branch of the Fisheries and Wildlife Division are directly adjacent to the grass beds that were monitored for the SAV shoreline survey. For this reason, it is valuable to examine the data gathered from each independent survey, and analyze it to see if any significant relationships exist between the SAV and fish species in these areas. Using only electrofishing data from May through December (months when SAV presence is ecologically significant) for the years of 1994-2006, relationships were examined in an effort to show how the members of the two Kingdoms interact. Several relationships were identified, but none is as significant as the relationship that exists between SAV cover density and the relative abundance of largemouth bass.

The figure found in Appendix 3.11 illustrates the most "sensitive" site in terms of SAV dependence. This area of the river certainly shows a dependence upon SAV when it comes presence of harvestable largemouth bass. This site has no alternative habitat opportunities for the bass to utilize. Without the presence of SAV; ambush points, and sheltered areas are limited to sparsely scattered isolated rocks and tide dispersed woody debris. This is not only scientifically significant, but economically important to understand, as the largemouth bass is such a highly sought after game fish.

Fish Populations

Sampling conducted over the past 13 years has revealed several interesting trends concerning the relative abundance of several game fish species at eight electrofishing sampling stations in the waters of the District of Columbia. After remaining steady for a period of five years (1999-2003) the relative abundance of all of the closely monitored game fish found in the District of Columbia has declined. Much of this is related to the dramatic decline in SAV cover density at or near several of the electrofishing sites. Although the SAV has started recovering, it sometimes takes the fish species a bit longer to re-populate areas where a significant cover source has been eliminated. With the

continued recovery and development of SAV in the District of Columbia, the game fish relative abundance should eventually increase as well. If continued SAV re-establishment is experienced without an increase in game fish species relative abundance, it will be time to review the effects of other factors that may effect bass populations such as; fishing tournaments, creel limits, sampling methods, and competition from newly introduced invasive species (i.e. Blue Catfish and Snakeheads).

The introduction and expansion of two invasive species has prompted specific protocols for collecting data to establish base line information to track and monitor the situation moving forward. Blue catfish have been positively identified throughout the Potomac River system as they have been showing up in electrofishing samples for several years. A blue catfish tagging program was launched in 2005 whereby, information gathered by anglers and biologist would be used to assess the condition of the growing population and effectively establish creel limits and regulations that will protect this species without negatively impacting the other species that inhabit District waters. Snakeheads have also been confirmed in the waters of the District of Columbia. The population of Snakeheads in the District is presently very low but spawning activity has been observed and the population is expected to increase despite efforts to capture and remove large spawning adults.

Night-time, mark-recapture, black bass population estimates have been performed over the last eight years in July at one site, and in October at up to three sites. Results from the population estimates are consistent with the relative abundance numbers observed during electrofishing at the standard electrofishing sites. Populations have declined over the past 4 years at both the Washington Channel, and Lower Anacostia sites.

Tagging efforts using passive integrated transponder (PIT) tags, continued in 2006. D.C. Fish and Wildlife has been tagging largemouth bass for the past nine years in an effort to determine site affinity, movement patterns, age and growth analysis, and validation of scale age analysis. In all, we have over 1600 recapture records, and many fish have been recaptured multiple times. Approximately ninety percent of the recapture records are from fish which have been recaptured at the same site where they were originally tagged. PIT tag recaptures also indicated our length measurement error to be on average no more than two millimeters.

Icthyoplankton sampling in 2006 indicated peak Alosid spawning on the Potomac and Anacostia Rivers to have occurred around third week of May. Peak larval abundances appeared in the June 2006 sample. This data is fairly consistent with data collected over the past five years.

Table 3.16 shows the yearly relative abundance of select game fish in the District of Columbia.

TABLE 3.16
YEARLY RELATIVE ABUNDANCE OF SELECT GAME FISH FROM 1994 TO 2006 FOR REGULAR ELECTROFISHING SITES

Yearly Relative Abundance for Select Game Fish Species in the District of Columbia														
Species	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**Overall Average**
Largemouth Bass	4.40	3.12	2.77	1.66	2.40	4.30	5.42	6.54	5.90	4.32	1.81	1.81	1.07	3.5
Striped Bass	.73	.17	.50	.96	.67	.74	.41	1.07	.49	.66	1.11	.472	.30	.64
Yellow Perch	4.56	6.20	3.76	5.93	8.18	8.29	8.79	6.31	5.78	3.47	3.73	2.59	1.96	5.35
Smallmouth Bass	.69	.32	.40	.28	.56	.74	.47	.85	.28	.23	.35	.167	.14	.42

Fish Passage

Work on the fish passage in Rock Creek has finally been completed. In March of 2007 the fish ladder was opened for the very first time completing a long and difficult process. The barrier removal was implemented to restore upstream fish migration for anadromous species and to allow existing resident fish to benefit from improved access to additional forage and habitat.

Since the removal of sewer lines and fords in Rock Creek, trap and transport has become somewhat difficult. As an alternative to trap and transport, hatchery raised larvae were released in the upper reaches of Rock Creek to improve alosid populations. Alosids (Blueback herring and Hickory Shad) caught on the Potomac River were strip spawned and brought back to the hatchery located in Anacostia Park. From there eggs were incubated and hatched this process takes anywhere from 5 to 7 days. After all eggs have hatched the larvae were collected and stocked.

Alosid larvae were stocked in Rock Creek on four separate occasions. On May 1st, 2007, 51 Blueback herring were captured, which comprised of 18 females and 33 males. This combination yielded approximately 1.5 liters of eggs. On May 7th roughly 5,000 Bluebacks larvae were released. This process was repeated several times for both bluebacks and hickory shad. In all, a total of approximately 350,000 blueback herring, and 70,000 hickory shad were stocked in Rock Creek. All releases occurred at Picnic Area 8 where trap and transport takes place. In the future FWD looks forward to including American Shad in this restocking. The Fisheries Management Branch hopes to continue aiding alosids in Rock Creek by stocking fry to allow herring to effectively return to their historical spawning grounds

Currently, there are three sampling methods that are done on a monthly or seasonal period. They include backpack electrofishing which is done on a monthly basis, ichthyoplankton survey which is done in the spring to coincide when spawning occurs and the most recent, stocking of alosids. All these surveys will allow the Fisheries Management Branch to follow the improvements and changes that occur in the upper reaches of Rock Creek.

At this time, there are six sites that are sampled for backpack electrofishing. Two of the

sites are located below Pierce Mill Dam and four are above. Species diversity from the two downstream sampling sites is greatest with an average of thirty five species represented. Five species of gamefish were found some anadromous, but most resident. Species included striped bass, largemouth bass, smallmouth bass, channel catfish and alewife. Two non-game anadromous species were collected, white perch and sea lamprey.

The four sampling sites located above Pierce Mill Dam yield on average twenty species. No anadromous fish were collected at sites above the dam; but two species of gamefish, largemouth bass and smallmouth bass, were collected at a sampling site located just above the dam. This is a promising sign of things to come with the changes that have occurred in the creek. With time is it hopeful that more resident and anadromous fish will be seen in the upper reaches. The majority of fish collected above the dam were non-game species. The greater parts of these species are members of the families Cyprinidae, Castostomidae, Ictaluridae and Percidae.

Data collected in ichthyoplankton tows indicated that last year's alosid spawning was successful early on then drop dramatically due to a sustaining cold front. An abundance of alosid larvae and eggs were collected in late March and early April which is peak spawning season for river herring in Rock Creek. No eggs or larvae were collected above the dam the past two years.

PART IV: PUBLIC HEALTH - RELATED ASSESSMENTS

Drinking Water Program Monitoring & Assessments

None of the District of Columbia's waterbodies have been designated for either public water supply or drinking water uses. Though the Potomac River is the source of D.C.'s drinking water, the intakes are located outside the D.C. city limits. The drinking water intakes are located at Great Falls and Little Falls, Maryland. The District of Columbia has completed its Source Water Assessment Project (SWAP). The primary goals of the SWAP were: (a) source delineation, (b) inventory of potential contaminants within the basin, (c) susceptibility analysis of the inventoried contaminants identified in the source delineation and (d) providing documentation to the general public and D.C. describing the source contaminants. Additionally, non-point source modeling was incorporated into the SWAP to enable D.C. to better understand and predict conditions within the basin that might pose a threat to the water supply.

Drinking water is treated by ACE. Drinking water quality is regulated by U.S. EPA Region III. The District of Columbia does not have primacy. Persons seeking information on the status of the lead in drinking water issue in the District of Columbia should consult the U.S. EPA website http://www.epa.gov/dclead.

PART V: GROUND WATER ASSESSMENT

Introduction

This section updates D.C.'s ground water assessment and protection efforts. No significant changes have occurred since the FY 2006 305(b) report except for the availability of additional ground water monitoring data from the expanded monitoring network in the Lower Anacostia River watershed. Physical and chemical results from these wells are provided in a U.S. Geological Survey (USGS) Open File Report (USGS, 2007). The chemical data show that the general background ground water quality is very good. However, the number of sites with confirmed ground water releases is increasing. A significant portion of these cases is attributed to the due diligence investigations being conducted for the continued commercial and residential development in the District. Excavation and associated dewatering during and after construction are expected to result in corrective action at most of these sites.

Summary of Ground Water Quality

The D.C. Department of the Environment, WQD in cooperation with the Unites States Geological Survey (USGS) began a study of the ground water within the Lower Anacostia River Watershed in May 2002. This study has continued over the years and now utilizes a monitoring network (Appendix 5.1) comprised of 25 wells (Table 5.1).

TABLE 5.1
WELL LOCATIONS IN THE ANACOSTIA RIVER WATERSHED

USGS site name	USGS site number	DC DDOE well number	Site location
WE Bb 3	385504076563801	DCMW001-02	New York Ave. (shallow)
WE Bb 4	385504076563802	DCMW004-02	New York Ave. (deep)
WE Cb 5	385443076562801	DCMW002-02	Kenilworth Aquatic Gardens (shallow)
WE Cb 6	385443076562802	DCMW003-02	Kenilworth Aquatic Gardens (deep)
WE Ca 29	385238076581501	DCMW005-02	Anacostia Park
WE Ca 31	385355076575901	DCMW002-03	Langston Golf Course
AC Aa 1	385225076590101	DCMW001-03	Anacostia Park Recreation Center
WE Ca 32	385332076594701	DCMW001-04	Massachusetts Avenue and 7th Street
WE Cb 8	385252076572801	DCMW002-04	Ft. DuPont Park
WE Ca 36	385500076574801	DCMW003-04	U.S. National Arboretum Weather Station
WE Ca 35	385429076583601	DCMW004-04	U.S. National Arboretum Azalea Hill
WE Ca 37	385446076581001	DCMW005-04	U.S. National Arboretum Administration Building

USGS site name	USGS site number	DC DDOE well number	Site location
AX Ac 1	385219077002201	DCMW006-04	Earth Conservation Corps (ECC)
WE Cb 9	385355076555501	DCMW001-05	Lederer Gardens #1
WE Cb 10	385354076555901	DCMW002-05	Lederer Gardens #2
WE Cb 11	385332076564101	DCMW003-05	Clay and Flint (shallow)
WE Cb 12	385332076564102	DCMW004-05	Clay and Flint (deep)
WE Ca 34	385245076583501	DCMW005-05	RFK near Barney Circle
WE Ca 33	385349076592801	DCMW006-05	Reservation 210 (Maryland and F Street)
WE Ba 10	385534076582101	DCMW007-05	Langdon Park
WE Cc 3	385327076544801	DCMW008-05	Watts Branch Park
WW Bc 8	385519077012601	DCMW009-05	Banneker Recreation Center
AC Aa 2	385157076580301	DCMW010-05	28th Street
WW Bc 9	385527077000701	DCMW011-05	Edgewood Recreation Center
WE Ba 9	385606076584101	DCMW012-05	Taft Recreation Center

The wells were sampled in 2005 (USGS, 2007) for an extensive list of analytes-volatiles, semi-volatiles, pesticides, polychlorinated biphenyls, trace metals, major ions and nutrients. Major ion chemistry indicates the presence of mainly calcium-bicarbonate type water. The results show that none of the D.C. Ground Water Quality Criteria were exceeded. Organic compounds usually were not detected and inorganic detections generally were quite low. A relatively new analyte, caffeine, was detected and may indicate the presence of leaking wastewater. Within the District, there are extensive efforts to identify and rectify leaking sewer lines which impact ground water and surface water. This type of analytical data may assist with such efforts. The full report (USGS, 2007) is available at http://md.water.usgs.gov/publications/ofr-2006-1392/. Other ground water data for the District is available at http://ddoe.dc.gov/ddoe/cwp/view,a,1209,q,495456.asp.

Overview of Ground Water Contamination Sources

Table 5.2 lists the major sources of ground water contamination in D.C. No new major sources have been identified within the reporting period.

TABLE 5.2
MAJOR SOURCES OF GROUND WATER CONTAMINATION

Sources	Ten Highest-Priority Sources (✓)	Relative Priority	Factors[a]
Animal Feedlots	NA	--	--
Containers		L	A, B, D, E
CERCLIS Sites	✓	H	A, B, D, E, F, G, H

Sources	Ten Highest-Priority Sources (✓)	Relative Priority	Factors[a]
De-icing Applications	✓	M	A, D, F, G, H
Federal Superfund (NPL)	✓	H	A, B, D, E, F, G, H
Fill		H	A, D, E, F, G, H
Graveyards	✓	M	--
Landfills (permitted)	✓	H	A, B, D, E, F, G, H
Landfills (unpermitted)	✓	U[b]	A, B, D, E, F, G, H
Material Transfer Operations		M	A, B, D, E, F, H
Material Stockpiles		L	A, B
Mining and Mine Drainage	NA	--	--
Pesticide Applications	✓	M	A, B, C, F, G, H
Pipeline and Sewer Lines	✓	M	F, H
Radioactive Disposal Sites	NA	--	--
RCRA Sites	✓	M	A, B, D, E, F, G, H
Septic Tanks	NA	--	--
Shallow Injection Wells		L	F, G
Storage Tanks (above ground)		M	A, B, D, F, G, H
Storage Tanks (under ground)	✓	H	A, B, D, E, F, G, H
Storm Water Drainage Wells		M	I
Surface Impoundments		L	A, B
Transportation of Materials	✓	M	A, B, C, D, G, H
Urban Runoff		M	F, H
Waste Tailings	NA	--	--
Waste Piles	NA	--	--

*Unknown. The locations and nature of the materials disposed in unpermitted landfills are not yet know.
NA - Not Applicable
(-) - Not a Priority
[1]Factors Key:
A. Human health and/or environmental risk (toxicity)
B. Size of the population at risk
C. Location of the sources relative to drinking water sources
D. Number and/or size of contaminant sources
E. Hydrogeologic sensitivity
F. State findings, other findings
G. Documented from mandatory reporting
H. Geographic distribution/occurrence
I. Assigned for pipelines and sewer lines and is a combination of the age and construction material of the lines (in D.C., there still are brick lines at least 100 years old).

[2]Contaminant Key
A. Inorganic pesticides
B. Organic pesticides

C. Halogenated solvents
D. Petroleum compounds
E. Nitrate
F. Fluoride
G. Salinity/brine
H. Metals
I. Radionuclides
J. Bateria
K. Protozoa
L. Viruses
M. Polychlorinated biphenyls

The ten highest priority sources were identified by first comparing the relative importance of the factors associated with each source type. Then, using best professional judgment, the sources were selected.

Overview of Ground Water Protection Programs

DDOE is the primary environmental protection agency in the District of Columbia. The WQD is the body charged with administration of the *District of Columbia Water Pollution Control Act*, which defines the District's waters as both ground water and surface water. There are no significant changes regarding the ground water protection programs since the last 305(b) report.

In 1993, numerical criteria and enforcement standards for forty-seven constituents are established. The regulations also set the guidelines for ground water monitoring supporting preventive as well as remedial activities. Ground water related programs within the DDOE WQD and their functions are as follows:

- Voluntary Cleanup Program: The Voluntary Cleanup Program (VCP) is a part of the DDOE Environmental Protection Administration. Unlike the media-specific programs that require mandatory cleanup of contaminated property, VCP oversees owner or developer initiated voluntary remediation of contaminated lands and buildings that return actual or potentially contaminated properties to productive uses.

- Construction Grants Program: Pursuant to the Clean Water and the Safe Drinking Water Acts and various appropriations acts, the U.S. EPA provides and anticipates providing in the future as authorized, funding through the award of assistance grants to the District of Columbia. These assistance awards enable the District to perform construction and/or improvement of wastewater facilities, drinking water distribution and storage facilities and other water related structures. The overall objective of the grant-funded program is to select and fund projects that will protect the quality of water in the District of Columbia. The projects are identified to meet a variety of needs [i.e., Combined Sewer Overflow Long Term Control Plan (LTCP), Municipal Sanitary Storm Sewer Monitoring Network, and the implementation of pollution control measures, and the protection of the public and safety.]

- Federal Facilities Program: The Federal Facilities Program oversees the cleanup of Formally Used Defense Sites (FUDS) that are contaminated.

- Hazardous Waste Management Program: The program regulates hazardous waste small and large quantity generators.

- Integrated Pest Management Program: The program conducts public education for pesticide use.

- Non-Point Source Program: The program plans and implements BMPs, provides oversight of non-point source studies.

- Pesticide Certification and Enforcement Program: The program processes registration of pesticide products for use in the District of Columbia, certifies applicators and performs application inspection.

- Stormwater Management Program: The program reviews storm water management plans and performs compliance inspection.

- TMDL: The program develops point and non-point source load allocations to meet surface water quality standards in impaired water bodies.

- Underground Storage Tank Management Program: The program provides oversight for installation and removal of underground storage tanks as well as remedial activities for leaking tanks.

- Water Quality Management Planning: The program coordinates water quality planning and research including ground water quality research.

Appendix 5.2 provides additional information regarding the District's ground water protection programs.

Summary of Ground Water Contamination Sources

Table 5.3 summarizes shallow aquifer quality contamination.

TABLE 5.3
GROUND WATER CONTAMINATION SUMMARY

AQUIFER: SHALLOW AQUIFER				
Source Type	**Present in reporting area**	**Number of sites in area**	**Number of sites that are listed and/or have confirmed releases**	**Number with confirmed ground water contamination**
NPL	Yes	1	1	1
CERCLIS (non-NPL)	Yes	29	10	8
DOD/DOE	Yes (a)	47	9	8
UST	Yes	715 (b)	1635	403 (c)
RCRA Corrective Action	Yes	2	2	1
Underground Injection	Yes (d)	23	—	---
State Sites (Voluntary Clean Lands Program)	Yes (e)	14	14	---
Nonpoint Sources	(f)	—	—	---
Other	Yes	15	14	14
Totals		944	1607	415

NPL - National Priority List
CERCLIS (non-NPL) - Comprehensive Environmental Response, Compensation, and Liability Information System
DOE - Department of Energy
DOD - Department of Defense
UST - Underground Storage Tanks
RCRA - Resource Conservation and Recovery Act

(a) Only DOD facilities. The number represents the number of facilities. Within a facility, there are several areas of concern resulting from distinct sources (e.g., LUST, landfill, maintenance shops, etc). Ground water contamination assessment is on going for the majority of the sites. Numbers were provided by the Land Development and Remediation Branch.

(b) Data represent the number of registered tanks not the number of sites. This value includes tanks used for the storage of heating oil and hazardous materials. Numbers were provided by the Land Development and Remediation Branch.

(c) Over 50 percent of the cases have been remediated and closed. For the remaining cases, there is on-going ground water contamination assessment/remediation.

(d) One UIC (underground injection control) site has stormwater injection wells. The remaining 22 UIC sites are operated for ground water remediation wells. The District does not regulate injection wells. Injection well numbers were not updated from 2006 by the USEPA.

(e) Source type data make no distinction between State and non-State sites.

(f) See Nonpoint Source Section

Ground Water/Surface Water Interaction

No change.

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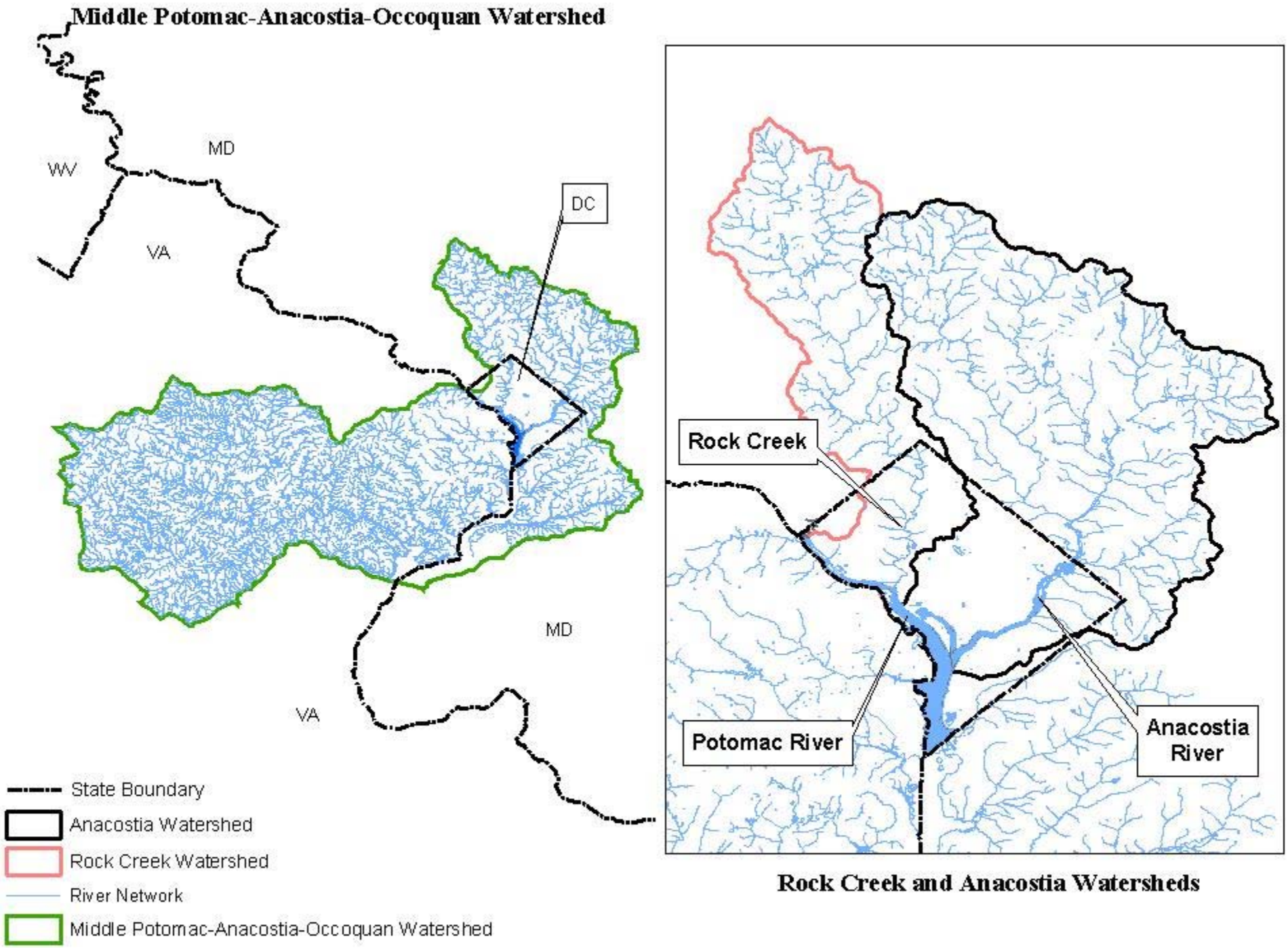
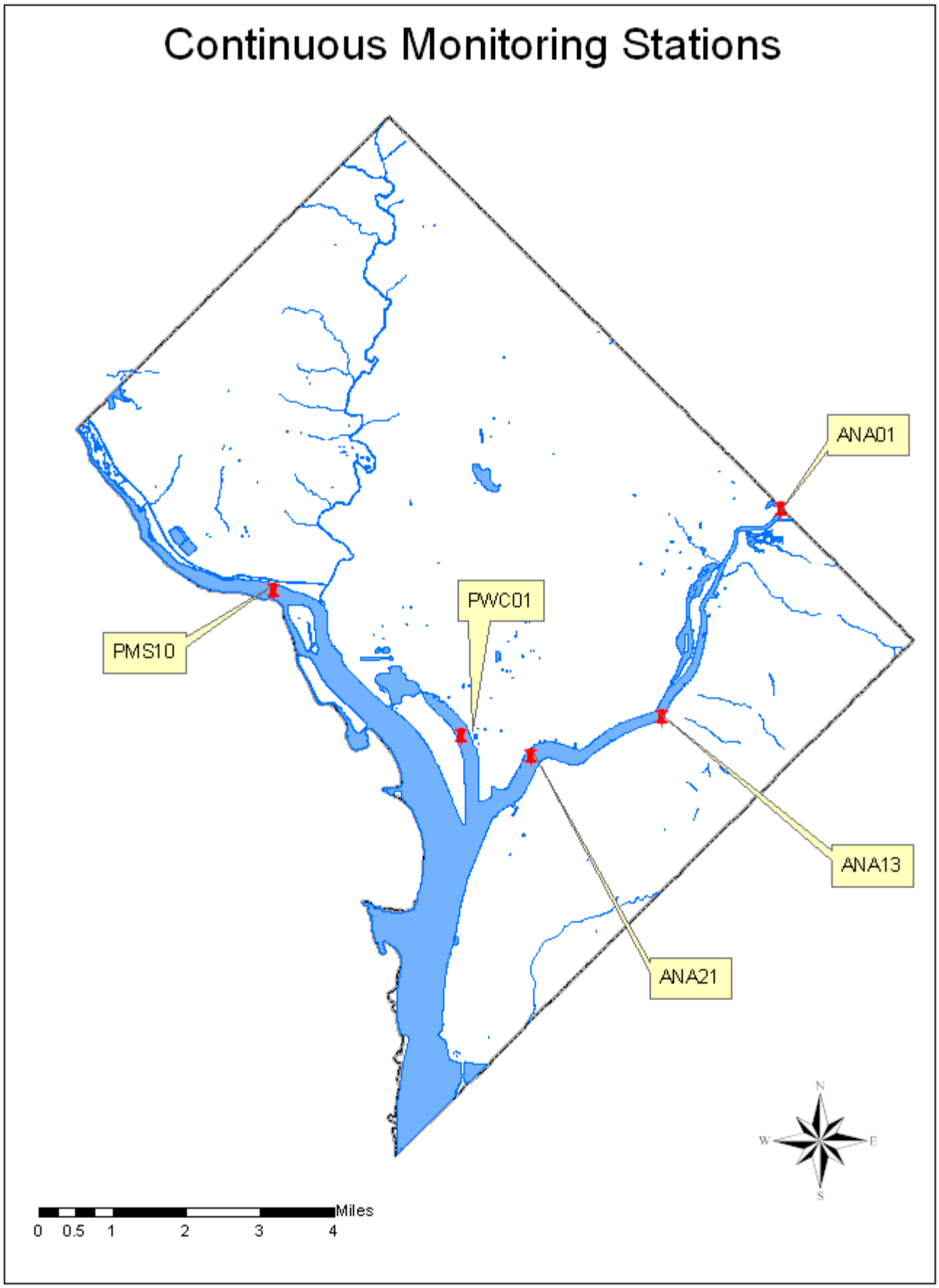
BACKGROUND APPENDIX



Appendix 2.1: Major D.C. Watersheds

SURFACE WATER ASSESSMENT APPENDICES



Appendix 3.1 Continuous Monitoring Stations

APPENDIX 3.2
Percent Violations
Upper Anacostia River
Continuous Monitoring Station ANA01

	2006	**2007**
DO mg/l	17.3%	22.1%
Temperature	0.55%	0%
pH	0%	0%

- based on District of Columbia Register V.52 – NO. 43 p.9628

INDIVIDUAL WATERBODY WATER QUALITY ASSESSMENTS

Detail Report for ANACOSTIA DC

ID: DCANA00E_01 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**ANACOSTIA DC**	
	Location: PENNSYLVANIA AVENUE BRIDGE TO THE MOUTH AT THE POTOMAC (ANA15 TO ANA29), TIDAL FRESHWATER. IT FLOWS THROUGH A HIGHLY URBAN AREA OF MARINAS, COMMERCIAL BUILDINGS AND NATIONAL PARKLAND.	**Water Type:** ESTUARY **Size:** 0.5 SQUARE MILES **Next Scheduled Monitoring Date:** N/A

Use Information

Assessed:	**Attainment Status**	**Uses**
	Fully Supporting	Navigation Protection and Propagation of Fish, Shellfish and Wildlife
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment

Types of Assessment

Assessment Type	Uses	Assessment Confidence
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Fecal Coliform	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment	Yes	
Oil and Grease	Primary Contact Recreation	Yes	

Source Information

Sources	Associated Causes	Confirmed?

Combined Sewer Overflows	Fecal Coliform
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform
Highway/Road/Bridge Runoff (Non-construction Related)	Oil and Grease

Comments On:

Overall Assessment

THE LOWER TIDAL ANACOSTIA EXTENDS FROM THE PENNSYLVANIA RAILROAD BRIDGE TO THE MOUTH OF THE RIVER. THIS SEGMENT SUFFERS FROM OCCASIONAL LOW DISSOLVED OXYGEN, HIGH FECAL COLIFORM LEVELS, AND SEDIMENT TOXICITY. IT ALSO HAS BEEN SUBJECTED TO BOTH SMALL AND LARGE OIL SPILLS. FECAL AMBIENT MONITORING DATA FROM 2001 TO 2006 WERE ANALYZED TO MAKE USE SUPPORT DETERMINATIONS.

A REVIEW OF THE 2003-2007 DIURNAL MONITORING DATA FOR THIS ANACOSTIA SEGMENT SHOWED TEMPERATURE, PH (1.0% VIOLATION) AND DISSOLVED OXYGEN (1.0% VIOLATION) SUPPORT THE AQUATIC LIFE USE. OF THE TOTAL OBSERVATIONS OF FECAL COLIFORM BACTERIA, 64.9% WERE IN VIOATION OF THE PRIMARY CONTACT RECREATION STANDARD (SWIMMABLE) OF 200 MPN/100 ML., AND 24.6% WERE IN VIOLATION OF THE SECONDARY CONTACT RECREATION STANDARD OF 1000 MPN/100 ML. THEREFORE, THESE USES WERE NOT SUPPORTED.

BECAUSE OF A FISH CONSUMPTION ADVISORY, THE LOWER ANACOSTIA DID NOT SUPPORT ITS FISH CONSUMPTION USE. DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15,1994, BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS.

THE LOWER ANACOSTIA FULLY SUPPORTED ITS NAVIGATION USE.

BECAUSE OF THE ABOVE USE DECISIONS, THIS SEGMENT DID NOT SUPPORT THE OVERALL USE SUPPORT CLASSIFICATION.

SOURCES WITH POTENTIAL IMPACT IN THIS ANACOSTIA SEGMENT INCLUDE SEVERAL ACTIVE AND ABANDONED MINES AND INDUSTRIAL FACILITIES LOCATED ON THE WEST BANK OF THE RIVER. THESE FACILITIES INCLUDE STEUART PETROLEUM, AND OIL TERMINAL AND TANK FARM OPERATION, WASHINGTON GAS AND LIGHT, AND AN ABANDONED COAL GASIFICATION FACILITY. OTHER POTENTIAL SOURCES OF POLLUTANTS ARE A LARGE NUMBER OF BOATS IN SEVERAL MARINAS.

RELATIVELY RECENT EVENTS WITH POTENTIAL IMPACT ON THE UPPER ANACOSTIA WATER QUATITY INCLUDE: DREDGING OF THE CHANNEL UPSTREAM, AND PENNSYLVANIA AVE. BRIDGE CONSTRUCTION. A FLOATABLE DEBRIS REMOVAL PROJECT, MANAGED BY THE D.C. WASA, REMOVES A SIGNIFICANT AMOUNT OF TRASH, THEREBY CONTRIBUTING TO THE ENHANCEMENT OF THE QUALITY OF THE ANACOSTIA.

SURVEYS CONDUCTED OVER THE PAST SEVERAL YEARS REVEAL THE PRESENCE OF

TOXICS IN SEDIMENTS. FISH TISSUE OF SAMPLES OF CERTAIN SPECIES SHOW ELEVATED LEVELS OF CONTAMINANTS INCLUDING CHLORDANE AND PCBs. BIOLOGICAL SAMPLES FROM THE SITE SUGGEST A SEVERELY STRESSED BENTHIC COMMUNITY. THE CAUSES OF STRESS COULD BE ATTRIBUTED TO URBAN STORM WATER RUNOFF FROM UPSTREAM AND POLLUTED TRIBUTARY STREAMS, CSO EVENTS AND IMPACT FROM THE ADJACENT INDUSTRIAL FACILITIES.

REPORTS WITH MORE INFORMATION INCLUDE:

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Detail Report for ANACOSTIA DC

ID: DCANA00E_02 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**ANACOSTIA DC**	
	Location: NEW YORK AVE BRIDGE (DC/MARYLAND LINE) TO PENNSYLVANNIA AVENUE BRIDGE (ANA01 TO ANA15), TIDAL FRESHWATER. IT FLOWS THROUGH MOSTLY NATIONAL AND CITY PARK LAND AND PAST A SMALL URBAN AREA OF RESIDENTIAL BUILDINGS, PEPCO, RFK STADIUM AND MARINA.	**Water Type:** ESTUARY **Size:** 0.3 SQUARE MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	**Uses**
Assessed:	Fully Supporting	Navigation Protection and Propagation of Fish, Shellfish and Wildlife
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment

Types of Assessment

Assessment Type	**Uses**	**Assessment Confidence**
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	**Associated Uses**	**Pollutant?**	**Confidence**
BOD, Biochemical oxygen demand	Protection of Human Health related to Consumption of Fish and Shellfish	Yes	
Fecal Coliform	Primary Contact Recreation Secondary Contact Recreation and Aesthetic Enjoyment	Yes	
Oil and Grease	Primary Contact Recreation	Yes	

Source Information

Sources	Associated Causes	Confirmed?
Combined Sewer Overflows	Fecal Coliform	
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Highway/Road/Bridge Runoff (Non-construction Related)	Oil and Grease	

Comments On:

Overall Assessment

THIS SEGMENT OF THE ANACOSTIA INCLUDES THE UPPER TIDAL ANACOSTIA FROM NEW YORK AVE., D.C. BORDER, TO THE PENNSYLVANIA RAILROAD BRIDGE. IT SUFFERS FROM FREQUENT LOW DISSOLVED OXYGEN, HIGH FECAL COLIFORM BACTERIA LEVELS, AND TOXIC SEDIMENTS. FECAL COLIFORM AMBIENT MONITORING DATA COVERING THE PERIOD 2003 TO 2007 WERE ANALYZED TO MAKE USE THE PRIMARY AND SECONDARY CONTACT SUPPORT DECISIONS. DIURNAL MONITORING DATA FROM JANUARY 2003 TO DECEMBER 2007 WAS USED TO DETERMINE THE DO, TEMPERATURE AND pH PERCENT VIOLATIONS FOR THIS SEGMENT.

DURING THE PERIOD UNDER REVIEW, AN AVERAGE OF 6.7% OF D.O. OBSERVATIONS AND 1.2% OF PH OBSERVATIONS VIOLATED THE STANDARD FOR AQUATIC LIFE SUPPORT. WHILE TEMPERATURE OBSERVATIONS WERE IN FULL COMPLIANCE WITH THE AQUATIC LIFE USE STANDARD. SINCE NONE OF THE VIOLATIONS EXCEEDED 10% THE AQUATIC LIFE USE IS SUPPORTED. OF THE TOTAL OBSERVATIONS OF FECAL COLIFORM BACTERIA, 72.5% DID NOT MEET THE STANDARD FOR PRIMARY CONTACT RECREATION (SWIMMABLE) STANDARD OF 200 MPN/100ML AND 24.4% DID NOT MEET THE STANDARD FOR SECONDARY CONTACT RECREATION OF 1000 MPN/100ML. THIS SEGMENT OF THE ANACOSTIA DID NOT SUPPORT EITHER SWIMMABLE OR SECONDARY CONTACT RECREATION USES.

BECAUSE OF THE FISH CONSUMPTION ADVISORY, THIS SEGMENT DID NOT SUPPORT THE FISH CONSUMPTION USE. DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994, BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS.

D.O. VIOLATIONS COULD HAVE BEEN CAUSED BY EITHER HIGH FLOW CONDITIONS OR ORGANIC DEBRIS ACCOMPANYING STORMS OR LOW FLOW CONDITIONS. SEVERAL POLLUTED STREAMS JOIN THIS SEGMENT OF ANACOSTIA. LOWER BEAVER DAM CREEK DRAINS AN INDUSTRIAL AREA AND COULD BE SOURCE OF POLLUTANTS ORIGINATING FROM AUTOMOTIVE RECYCLING AND JUNK YARDS. HICKEY RUN IS A SOURCE OF CHRONIC OIL AND OTHER INDUSTRIAL POLLUTANTS. WATTS BRANCH IS THE LARGEST ANACOSTIA TRIBUTARY IN THE DISTRCT, AND IS A SOURCE OF URBAN RUNOFFS. SIMILARLY, N.E. BOUNDARY, THE LARGEST COMBINED SEWER OUTFALL IN THE DISTRICT, IS LOCATED ALONG THE LOWER PORTION OF THIS SEGMENT.

RECENT EVENTS WITH POTENTIAL IMPACT ON THE UPPER ANACOSTIA WATER

QUALITY INCLUDE: DREDGING OF THE CHANNEL, DEPOSITION OF SPOILS IN KENILWORTH MARSH. A FLOATABLE DEBRIS REMOVAL PROJECT, MANAGED BY THE D.C. WASA, REMOVES A SIGNIFICANT AMOUNT OF TRASH AND CONTRIBUTES TO THE ENHANCEMENT OF THE QUALITY OF THE ANACOSTIA.

SURVEYS CONDUCTED IN PAST SEVERAL YEARS REVEALS THE PRESENCE OF TOXICS IN SEDIMENTS. FISH TISSUE OF SAMPLES OF CERTAIN SPECIES SHOW ELEVATED LEVELS OF CONTAMINATION INCLUDING CHLORDANE AND PCBs. BIOLOGICAL SAMPLES FROM SELECTED SITES SUGGEST A SEVERELY STRESSED BENTHIC COMMUNITY. THE CAUSES OF STRESS COULD BE ATTRIBUTED TO URBAN STORM WATER RUNOFF FROM UPSTREAM POLLUTED STREAMS, CSO EVENTS AND IMPACT FROM THE ADJACENT INDUSTRIAL FACILITIES.

REPORTS WITH MORE INFORMATION INCLUDE:

* "IMPACT OF DREDGING ON THE WATER QUALITY OF THE ANACOSTIA RIVER" BY ICPRB, 1993.
* "SEDIMENT CONTAMINATION STUDIES OF THE POTOMAC AND ANACOSTIA RIVER AROUND THE DISTRICT OF COLUMBIA" BY ICPRB, VELINSKY, 1992.
* "HICKEY RUN SUBWATERSHED ACTION PLAN" BY MWCOG, 1991.
* "HICKEY RUN COMPREHENSIVE POLLUTION ABATEMENT STUDY, PHASE I REPORT" BY MWCOG, 1991.
* "EMERGENT WETLAND ESTABLISHMENT UNDER DIFFERING HABITAT CONDITIONS IN THE ANACOSTIA AND POTOMAC RIVER BASIN"/ HORN POINT ENVIRONMENTAL LABORATORY, CEES AND MWCOG, 1991.
* "STEUART PETROLEUM OIL SPILL" BY VERSAR, PINKNEY, 1993.
* AWRC, 1997, DRAFT ANACOSTIA WATERSHED RESTORATION PROGRESS AND CONDITIONS REPORT 1990-1996, DEPT. OF ENVIRONMENTAL PROGRAM, MWCOG, WASH., DC.

Detail Report for BATTERY KEMBLE CREEK

ID: DCTBK01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**BATTERY KEMBLE CREEK**	
	Location: ORIGINATES AT NEBRASKA AVENUE AND FOXHALL ROAD. THE WATERSHED'S NORTHWESTERN BORDER IS UNIVERSITY TERRACE AND THE WESTERN EDGE OF BATTERY KEMBLE PARK.. THE EASTERN BORDER IS FOXHALL ROAD AND THE SOUTHERN BORDER IS NORTH OF W STREET, NW.	**Water Type:** RIVER **Size:** 1.2 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Benthic-Macroinvertebrate Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife	Yes	

	Secondary Contact Recreation and Aesthetic Enjoyment	
Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Hydrostructure Impacts on Fish Passage	Combination Benthic/Fishes Bioassessments	
Municipal (Urbanized High Density Area)	Fecal Coliform	
Post-development Erosion and Sedimentation	Combination Benthic/Fishes Bioassessments	
Yard Maintenance	Combination Benthic/Fishes Bioassessments	

Comments On:

Overall Assessment

BATTERY KEMBLE CREEK IS A TRIBUTARY OF THE POTOMAC RIVER THAT DRAINS BATTERY KEMBLE PARK. BANTA (1993) MISIDENTIFIED THIS STREAM AS FLETCHERS RUN. THE STREAM ORIGINATES AT NEBRASKA AVENUE AND FOXHALL ROAD. THE WATERSHED IS 230 ACRES IN AREA, OF WHICH 60% IS PARKLAND AND FOREST WITH THE REMAINING AREA HIGH-PRICED RESIDENTIAL PROPERTY. THE WATERSHED'S NORTHWESTERN BORDER IS UNIVERSITY TERRACE AND THE WESTERN EDGE OF BATTERY KEMBLE PARK; THE EASTERN BORDER IS FOXHALL ROAD AND THE SOUTHERN BORDER IS NORTH OF W STREET, NW. IT IS BUFFERED ON EITHER SIDE BY ABOUT 300 FEET OF FORESTED PARKLAND. THIS TRIBUTARY IS CLASSIFIED AS A "SPECIAL WATERS OF THE DISTRICT OF COLUMBIA" UNDER THE WATER QUALITY STANDARDS OF THE DISTRICT.

AT RESERVOIR ROAD, TWO LARGE SEWER LINES CROSS THE STREAM AS WELL AS SEVERAL SMALLER SEWER LINES WHICH TRAVERSE THE STREAM FURTHER DOWNSTREAM. THE STREAM AREA NEAR RESERVOIR ROAD RECEIVES DISCHARGE FROM THREE SMALL STORM DRAINS.

THE WATERSHED LIES MAINLY IN THE SYKESVILLE FORMATION, GRANITE ROCKS OF UNKNOWN AGE. ABOUT 1/4 OF THE AREA DRAINS SOME PLEISTOCENE TERRACE GRAVELS DEPOSITED BY THE POTOMAC.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," BY W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF BATTERY KEMBLE CREEK'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2002. BATTERY KEMBLE CREEK WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. HBI SCORE SUGGESTS THERE MAY BE SIGNIFICANT ORGANIC POLLUTION IN THE STREAM. THERE WERE NO SENSITIVE ORGANISMS FOUND (EPT), WHICH MAY SUGGEST A TOXIC STREAM. HABITAT IS MODERATELY IMPAIRED. DO, PH AND TEMP FULLY SUPPORTED THE ALUS STANDARD.

A GASTROPODA WAS THE ONLY ORGANISM THAT WAS FOUND IN THE 75 METER SAMPLED AREA. THIS MACROINVERTERBRATE IS HIGHLY TOLERANT TO TOXICS.

THE EVALUATION OF BATTERY KEMBLE CREEK SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE-YEAR SPAN 2003-2007. BATTERY KEMBLE CREEK WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 75.0% OF THE TIME. ITS SECONDARY CONTACT USE 56.2% OF THE TIME. AS A RESULT, BATTERY KEMBLE CREEK DID NOT SUPPORT ITS SWIMMABLE OR 2ND CONTACT RECREATION USES.

BATTERY KEMBLE CREEK DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED IN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHS OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE BATTERY KEMBLE CREEK IS A TRIBUTARY OF THE POTOMAC RIVER, FISH MAY MIGRATE FROM THE RIVER INTO THE TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO BATTERY KEMBLE CREEK.

Detail Report for BROAD BRANCH

ID: DCTBR01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**BROAD BRANCH**	
	Location: BROAD BRANCH IS A WESTERN TRIBUTARY OF ROCK CREEK WHICH IS JOINED BY SOAPSTONE CREEK ABOUT 800 FEET BEFORE IT DISCHARGES INTO ROCK CREEK. THE SURFACE PORTION OF THE STREAM BEGINS NEAR NEBRASKA AND CONNECTICUT AVENUES.	**Water Type:** RIVER **Size:** 1.7 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	**Uses**
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	**Uses**	**Assessment Confidence**
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	**Associated Uses**	**Pollutant?**	**Confidence**
Benthic-Macroinvertebrate Bioassessments	Protection of Human Health related to Consumption of Fish and Shellfish	Yes	
Combination Benthic/Fishes Bioassessments	Protection of Human Health related to Consumption of Fish and Shellfish	Yes	
Debris/Floatables/Trash	Protection of Human Health related to Consumption of Fish and Shellfish	Yes	

Fecal Coliform	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment	Yes
Fishes Bioassessments	Protection of Human Health related to Consumption of Fish and Shellfish	Yes
Particle distribution (Embeddedness)	Protection of Human Health related to Consumption of Fish and Shellfish	Yes

Source Information

Sources	Associated Causes	Confirmed?
Impacts from Hydrostructure Flow Regulation/modification	Fishes Bioassessments	
Residential Districts	Fishes Bioassessments	
Wet Weather Discharges (Non-Point Source)	Fishes Bioassessments	
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	Fishes Bioassessments	
Yard Maintenance	Fishes Bioassessments	

Comments On:

Overall Assessment

BROAD BRANCH FLOWS THROUGH A RESIDENTIAL PARK PARALLELING BROAD BRANCH RD. FIFTEEN OUTFALLS FEED INTO THIS STREAM. BROAD BRANCH IS A WESTERN TRIBUTARY OF ROCK CREEK WHICH IS JOINED BY SOAPSTONE CREEK ABOUT 800 FEET BEFORE IT DISCHARGES INTO ROCK CREEK. THE SURFACE PORTION OF THE STREAM BEGINS NEAR NEBRASKA AND CONNECTICUT AVENUES AND IS BORDERED BY PARKLAND AND RESIDENTIAL PROPERTY FOR HALF OF ITS REACH AND A 200 FOOT BUFFER OF TREES AND SHRUBS FOR THE REST OF ITS REACH. THE WATERSHED ENCOMPASSES ABOUT 1120 ACRES.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF BROAD BRANCH'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT PERFORMED 2003. AN AQUATIC LIFE USE DESIGNATION OF NOT SUPPORTING WAS DETERMINED. NO MACROINVERTEBRATES WERE FOUND IN THE SAMPLE COLLECTED. TOXICS ARE MOST LIKELY THE SOURCE OF DEGRADATION. HABITAT WAS MODERATELY IMPAIRED.

THE 2007 HABITAT ASSESSMENT REVEALED THE OVERALL HABITAT QUALITY HAS BEEN DEMINISHED FROM THE 2003 ASSESSEMENT. LARGE QUANTITY OF ALGAE WAS PRESENT IN THE STREAM DURING THE 2007 ASSESSMENT AND STREAM REACH IS PARTIALLY CHANNELIZED.

THE TRIBUTARY VIOLATED THE pH STANDARDS 10.5% OF THE TIME DURING THE 2003-2007 AMBIENT DATA STUDY PERIOD. THE TEMPERATURE AND D.O. STANDARDS WERE NOT VIOLATED. THE PRIMARY CONTACT STANDARD WAS VIOLATED 93.39% OF THE TIME, THE PRIMARY CONTACT USE IS NOT SUPPORTED. THE SECONDARY CONTACT STANDARD WAS NOT SUPPORTED VIOLATIONS OCCURED 86.7% OF THE TIME.

Detail Report for CHESAPEAKE AND OHIO CANAL

ID: DCTCO01L_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**CHESAPEAKE AND OHIO CANAL**	
	Location: IMPOUNDMENT RUNNING PARALLEL TO UPPER POTOMAC (TCO01:GEORGETOWN AND TCO06: FLETCHER'S BOATHOUSE).	**Water Type:** FRESHWATER LAKE **Size:** 27.3 ACRES **Next Scheduled Monitoring Date:** N/A **Trophic Status:** N/A **Public Lake:** No

Use Information

	Attainment Status	**Uses**
Assessed:	Fully Supporting	Navigation Protection and Propagation of Fish, Shellfish and Wildlife
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment

Types of Assessment

Assessment Type	**Uses**	**Assessment Confidence**
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	**Associated Uses**	**Pollutant?**	**Confidence**
Fecal Coliform	Primary Contact Recreation Secondary Contact Recreation and Aesthetic Enjoyment	Yes	

Source Information

Sources	**Associated Causes**	**Confirmed?**

Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform

Comments On:

Overall Assessment

THIS WATERBODY IS AN IMPOUNDMENT RUNNING PARALLEL TO UPPER POTOMAC (TCO01: GEORGETOWN AND TCO06: FLETCHER'S BOATHOUSE). USE SUPPORT DETERMINATIONS WERE MADE FROM THE ANALYSIS OF AMBIENT MONITORING DATA FROM 2003 TO 2007.

USE SUPPORT DECISIONS FOR SWIMMABLE AND SECONDARY CONTACT RECREATION WERE MADE USING FECAL COLIFORM DATA. THE C&O CANAL DID NOT SUPPORT EITHER ITS PRIMARY CONTACT RECREATION USE (SWIMMABLE) EXCEEDING THE FECAL COLIFORM BACTERIA STANDARD OF 200 MPN/100ML 46.3% OF THE TIME OR ITS SECONDARY CONTACT RECREATION USE EXCEEDING STANDARD OF 1000 MPN/100ML 14.9% OF THE TIME.

THE C&O CANAL FULLY SUPPORTED ITS AQUATIC LIFE USE DURING THE PERIOD UNDER REVIEW, BASED ON pH VIOLATION OF 7.2%; TEMPERATURE AND D.O OBSERVATIONS WERE IN FULL COMPLIANCE DURING THIS PERIOD. HIGH FECAL COLIFORM LEVELS COULD BE CONTRIBUTED TO URBAN/STORM WATER RUNOFFS. OCCASIONAL VIOLATIONS IN PH COULD BE DUE TO EITHER RUNOFF OR FLOW CONDITIONS.

THE C&0 CANAL DID NOT SUPPORT THE FISH CONSUMPTION USE CLASSIFICATION. DETERMINATION OF THE FISH CONSUPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994 BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS.

THERE HAS BEEN NO KNOWN MAN-MADE OBSTRUCTIONS DURING THE PERIOD IN REVIEW; THEREFORE, IT FULLY SUPPORTED ITS NAVIGATIONAL USE.

BECAUSE OF THE ABOVE USE SUPPORT DECISIONS, THE C&O CANAL DID NOT SUPPORT THE OVERALL USE CLASSIFICATION FOR WATERS WITH MULTIPLE USES.

Detail Report for DALECARLIA TRIBUTARY

ID: DCTDA01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**DALECARLIA TRIBUTARY**	
	Location: DALECARLIA TRIBUTARY (ALSO REFERRED TO AS DALECARLIA CREEK) IS A STREAM WHICH ORIGINATES IN DC THEN CROSSES INTO MARYLAND CONTRIBUTING TO THE MARYLAND STREAM, LITTLE FALLS RUN. DALECARLIA FORMS AT THE CONFLUENCE OF MILL CREEK AND EAST CREEK, UNNAMED STRE	**Water Type:** RIVER **Size:** 1.7 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Fecal Coliform	Primary Contact Recreation	Yes	

Source Information

Sources	Associated Causes	Confirmed?
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	

Source Unknown Fecal Coliform

Comments On:

Overall Assessment

THE STREAM'S WATERSHED IS ALMOST ENTIRELY IN THE DISTRICT OF COLUMBIA. THE WATERSHED MEASURES ABOUT 270 ACRES AND DRAINS SOUTHERN SPRING VALLEY AND NORTHERN KENT. ABOUT 1/4 OF THE WATERSHED IS PARKLAND, WHILE THE REMAINDER IS COMPRISED OF UPSCALE SUBURBAN RESIDENTIAL HOUSING AND POCKETS OF LIGHT COMMERCIAL USE.

THE STORM DRAIN SYSTEM THAT EMPTIES INTO DALECARLIA TRIBUTARY IS PARALLELED BY SEWER PIPE. THE POTENTIAL FOR SEWER LEAKAGE IS HIGH.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF SUPPORT USES ARE BASED ON A FIVE-YEAR STATISTICAL EVALUATION (2003-2007) OF CONVENTIONAL AND BACTERIAL WATER QUALITY DATA COLLECTED BY THE WQMB IN 2003. DO AND TEMPERATURE WERE IN FULL COMPLIANCE WHILE PH VIOLATED 11.8%.

THE EVALUATION OF DALECARLIA TRIBUTARY'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT IN 2003. DALECARLIA TRIBUTARY WAS FOUND TO BE NOT SUPPORTING OF THIS DESIGNATED USE. THE HBI SCORE SUGGESTS SEVERE ORGANIC POLLUTION IN THE STREAM.

NO SENSITIVE ORGANISMS WERE FOUND (EPT). HABITAT IS MODERATELY IMPAIRED. 73 CHIRONOMIDAE (TOLERANT GENERALIST) WERE FOUND. WITH 73 CHIRONOMIDAE BEING PRESENT, THIS MAY POSSIBLY SUGGEST A STREAM THAT IS IMPACTED WITH TOXICS AND ORGANICS. DO, PH AND TEMPERATURE DATA FULLY SUPPORTED THE ALUS STANDARD. MORE THAN 100 ORGANISMS FOUND IN THE SAMPLE.

DURING THE 2007 HABITAT ASSESSMENT THE LEFT BANK RIPARIAN BUFFER WAS IMPROVED FROM 2003. EVIDENCE OF AN ABUNDANCE OF PERIPHYTON ON ROCKS, SUSPECTED OVERLOW FROM FT. RENO RESERVOIR. A PROMINENT ORDER OF CHLORINE WAS ALSO PRESENT.

THE EVALUATION OF DALECARLIA'S SWIMMABLE AND SECONDARY CONTACT USES WERE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND ANALYZED FROM 2001-2005. WITH AN AVERAGE FECAL COUNT OF 4570 MPN/100ML, THIS STREAM DID NOT SUPPORT ITS SWIMMABLE USE OR ITS SECONDARY CONTACT RECREATION USE. IT WAS NOT IN COMPLIANCE FOR ITS SWIMMIABLE USE (200MPN/100ML) 50.0% OF THE TIME AND FOR ITS SECONTARY CONTACT USE (1000MPN/100ML) 21.4% OF THE TIME.

TYPICAL OF STREAMS IN THE DISTRICT OF COLUMBIA, DALECARLIA IS NEGATIVELY IMPACTED BY URBAN NPS STORMWATER RUNOFF. RUNOFF FROM SURROUNDING RESIDENTAL YARDS AND STREETS MAY BE A SOURCE OF PATHOGENS, ORGANICS, AND METALS.

Detail Report for DUMBARTON OAKS

ID: DCTDO01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**DUMBARTON OAKS**	
	Location: THE SURFACE PORTION OF THE STREAM ORIGINATES AT A PAIR OF STORMDRAINS AND FLOWS A LITTLE MORE THAN HALF A MILE SOUTHEAST TO ROCK CREEK.	**Water Type:** RIVER **Size:** 0.6 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Benthic-Macroinvertebrate Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		

	Secondary Contact Recreation and Aesthetic Enjoyment	
Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Cercla NPL (Superfund) Sites	Benthic-Macroinvertebrate Bioassessments Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Fishes Bioassessments	
Hydrostructure Impacts on Fish Passage	Benthic-Macroinvertebrate Bioassessments Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Fishes Bioassessments	

Comments On:

Overall Assessment

DUMBARTON FLOWS THROUGH A RESIDENTIAL PARK ENTERING ROCK CREEK FROM THE WEST BELOW THE ZOO ABOUT 1000 FEET NORTHEAST OF THE MASSACHUSETTS AVENUE BRIDGE. THE SURFACE PORTION OF THE STREAM ORIGINATES AT A PAIR OF STORMDRAINS AND FLOWS A LITTLE MORE THAN HALF A MILE SOUTHEAST TO ROCK CREEK. THE WATERSHED OF 51 ACRES DRAINS MOSTLY PARKLAND AND INCLUDES ABOUT A QUARTER OF THE GROUNDS OF THE US NAVAL OBSERVATORY AND DUMBARTON OAKS GARDENS. DUMBARTON IS BUFFERED FOR ITS ENTIRE LENGTH BY FORESTED PARKLAND. THE STREAM IS PARALLELED BY A COMBINED SEWER/STORM DRAIN. TWO STORMWATER CONDUITS EXIST NEAR THE HEAD OF THE STREAM.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF DUMBARTON OAKS' AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT PERFORMED IN 2003. DUMBARTON OAKS STREAM HAS BEEN DESIGNATED AS NOT SUPPORTING THE AQUATIC LIFE USE. THE HBI SCORE SUGGESTS EXPOSURE TO SOME ORGANIC POLLUTANTS. THE DOMINANT TAXA WAS OLIGOCHAETA (SEWAGE LOVING ORGANISMS).

DO (0.0) AND TEMERATURE (0.0%) OBSERVATIONS GENERALLY FULLY SUPPORTED THE ALUS. PH (5.9%) VIOLATED THE ALUS. THE STREAM'S HABITAT WAS MODERATELY IMPAIRED, WITH THE LEFT BANK MORE IMPAIRED THAT THE RIGHT BANK. 27 ORGANISMS WERE FOUND IN THE ENTIRE SAMPLE. THE ORGANISMS WERE COLLECTED, ALL FELL IN THE TOLERANT CATEGORY. WITH OLIGOCHAETA BEING THE DOMINANT TAXA AND CHIRONOMIDAE MAKING UP MOST OF THE SAMPLE. TOXICS ARE POSSIBLY THE CAUSE OF THE DEGRADATION .

THE 2007 ASSESSMENT SHOWED AN IMPROVEMENT IN THE RIGHT BANK RIPARIAN ZONE FROM THE 2003 ASSESSMENT; THUS LEADING TO AN INCREASE IN BANK STABILITY. ALTHOUGHT THIS IMPROVEMENT WAS NOTICED THE RIPARIAN ZONE IS IN MARGINAL CONDITION.

THE SWIMMABLE AND SECONDARY CONTACT RECREATION USES WERE NOT SUPPORTED DURING THE 2003-2007 STUDY PERIOD. THE SWIMMABLE STANDARD WAS VIOLATED 53.3% OF THE TIME. THE SECONDARDY CONTACT RECREATION STANDARD WAS VIOLATED 26.7% OF THE TIME.

DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994 BY THE D.C. COMMISSIONER OF PUBLIC HEALTH ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATER. THE FISH CONSUMPTION USE IS NOT SUPPORTING.

Detail Report for FENWICK BRANCH

ID: DCTFE01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**FENWICK BRANCH**	
	Location: THE STREAM ORIGINATES AS A DISCHARGE FROM A STORM DRAIN A FEW FEET OUTSIDE THE DC BORDER IN MARYLAND SOUTH OF EAST-WEST HIGHWAY.	**Water Type:** RIVER **Size:** 1 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Alteration in stream-side or littoral vegetative covers	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Benthic-Macroinvertebrate Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	

Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Fecal Coliform	Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and Aesthetic Enjoyment	Yes
Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Habitat Assessment (Streams)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Impacts from Hydrostructure Flow Regulation/modification	Alteration in stream-side or littoral vegetative covers Benthic-Macroinvertebrate Bioassessments Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Fishes Bioassessments Habitat Assessment (Streams) Particle distribution (Embeddedness)	
Residential Districts	Alteration in stream-side or littoral vegetative covers Benthic-Macroinvertebrate Bioassessments Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Fishes Bioassessments Habitat Assessment (Streams) Particle distribution (Embeddedness)	
Wet Weather Discharges (Non-Point Source)	Alteration in stream-side or littoral vegetative covers Benthic-Macroinvertebrate Bioassessments Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Fishes Bioassessments Habitat Assessment (Streams) Particle distribution (Embeddedness)	
Wet Weather Discharges (Point	Alteration in stream-side or littoral	

Source and Combination of Stormwater, SSO or CSO)	vegetative covers
	Benthic-Macroinvertebrate Bioassessments
	Combination Benthic/Fishes Bioassessments
	Combined Biota/Habitat Bioassessments
	Debris/Floatables/Trash
	Fecal Coliform
	Fishes Bioassessments
	Habitat Assessment (Streams)
	Particle distribution (Embeddedness)
Yard Maintenance	Alteration in stream-side or littoral vegetative covers
	Benthic-Macroinvertebrate Bioassessments
	Combination Benthic/Fishes Bioassessments
	Combined Biota/Habitat Bioassessments
	Debris/Floatables/Trash
	Fecal Coliform
	Fishes Bioassessments
	Habitat Assessment (Streams)
	Particle distribution (Embeddedness)

Comments On:

Overall Assessment

FENWICK BRANCH FLOWS FROM A COMMERCIAL AREA IN MARYLAND TO A RESIDENTIAL PARK IN THE DISTRICT AND THEN INTO ROCK CREEK. FENWICK BRANCH IS A TRIBUTARY OF ROCK CREEK WHICH INCLUDES THE NORTHERN CORNER OF THE DISTRICT OF COLUMBIA. THE WATERSHED IS ABOUT 500 ACRES BUT ONLY ABOUT 90 ACRES OF IT ARE IN THE DISTRICT. PORTAL BRANCH JOINS FENWICK BRANCH ABOUT 120 FEET NORTH OF ITS MOUTH. THE SURFACE PORTION OF THE STREAM RUNS ALMOST COMPLETELY WITHIN THE DISTRICT. THE STREAM ORIGINATES AS A DISCHARGE FROM A STORM DRAIN A FEW FEET OUTSIDE THE DC BORDER IN MARYLAND SOUTH OF EAST-WEST HIGHWAY. WITHIN THE DISTRICT, SEVEN STORM DRAINS DISCHARGE INTO FENWICK BRANCH. THROUGHOUT ITS LENGTH THE STREAM IS BORDERED ON EITHER SIDE BY 100 FEET OF PARKLAND. BEYOND THAT THE STREAM IS ENTIRELY URBAN WITH RESIDENTIAL DEVELOPMENT INSIDE THE DISTRICT AND LIGHT INDUSTRIAL DEVELOPMENT IN MARYLAND.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

DURING THE 2007 ASSESSMENT IT WAS NOTICE THAT THE RIGHT BANK RIPARIAN ZONE HAD IMPROVED FROM THE 2003 ASSESSMENT.

THE EVALUATION OF FENWICK BRANCH'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT PERFORMED IN 2003. FENWICK BRANCH HAS BEEN DESIGNATED AS 'NOT SUPPORTING'. THE HBI SCORE SUGGESTS SOME ORGANIC POLLUTION. NO SENSITIVE ORGANISMS WERE FOUND (EPT). THE STREAM'S HABITAT IS SEVERELY IMPAIRED WITH A DOMINANT TAXA OF CHIRONOMIDAE (TOLERANT GENERALIST). D.O. (0.0%), PH (5.9%) AND TEMPERATURE (0.0%) FULLY

SUPPORTED THE AQUATIC LIFE USE. 55 ORGANISMS WERE FOUND IN THE SAMPLE. ONE OTHER FACTOR THAT MAY CAUSE FENWICK BRANCH HABITAT AND MACROINVERTEBRATES TO SUFFER ARE THE 11 OUTFALLS DOCUMENTED IN THE STREAM. TOXICS ARE POSSIBLY RESPONSIBLE AS WELL.

THE SECONDARY AND PRIMARY CONTACT USES WERE NOT SUPPORTED DRING THE 2003-2007 STUDY PERIOD. THE SECONDARY CONTACT USE WAS VIOLATED 30.8% OF THE TIME AND PRIMARY CONTACT USE 69.2% OF THE TIME.

FENWICK BRANCH WAS NOT ASSESSED FOR FISH CONSUMPTION.

Detail Report for FORT CHAPLIN RUN

ID: DCTFC01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 4A(N/A)

Water Information:	**FORT CHAPLIN RUN**	
	Location: FORT CHAPLIN ORIGINATES AS A 6.5 FOOT DIAMETER STORM PIPE NEAR BURNS STREET AND TEXAS AVENUE, SE.	**Water Type:** RIVER **Size:** 0.6 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		

	Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment	
Oil and Grease	Primary Contact Recreation	Yes
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Physical substrate habitat alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Hydrostructure Impacts on Fish Passage	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness) Physical substrate habitat alterations	
Illegal Dumps or Other Inappropriate Waste Disposal	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness) Physical substrate habitat alterations	
Impacts from Hydrostructure Flow Regulation/modification	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness) Physical substrate habitat alterations	
Landfills	Oil and Grease	
Residential Districts	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness) Physical substrate habitat alterations	
Source Unknown	Fecal Coliform Oil and Grease	

Comments On:

Overall Assessment

FORT CHAPLIN RUN IS A MINOR EPHEMERAL TRIBUTARY OF PINEY RUN, A NOW ALMOST COMPLETELY CANALIZED AND SUBTERRANEAN STORM DRAIN WHICH WAS ONCE A SURFACE TRIBUTARY OF THE ANACOSTIA RIVER. FORT CHAPLIN ORIGINATES AS A 6.5 FOOT DIAMETER STORM PIPE NEAR BURNS STREET AND TEXAS AVENUE, SE. THE SURFACE PORTION OF THE STREAM IS A LITTLE OVER A HALF MILE LONG AND HAS A WATERSHED THAT ENCOMPASES ABOUT 270 ACRES WHICH IS ABOUT 90% RESIDENTIAL AND COMMERCIAL PROPERTY AND ABOUT 10% PARKLAND. MOST OF THE SURFACE STREAM IS BUFFERED BY ABOUT 200 FEET OF FORESTED AREA ON EACH SIDE ALTHOUGH THE STREAM RECEIVES SEVERAL STORM DRAINS AND IS PARALLELED AND CROSSED BY NUMEROUS SEWER LINES.

THE INVERTEBRATE SAMPLE COLLECTED IN FORT CHAPLIN WAS DOMINATED BY OLIGOCHAETE WORMS AND CHIRONOMIDS. THE STREAM IS BUFFERED BY A SUPSTANTIAL RIPARIAN ZONE, ALTHOUGH IT RECIEVES NUMEROUS STORM DRAINS WHICH HAS CAUSED SEVERE EROSION IN SOME PLACES AND IS CROSSED BY SEVERAL SEWER LINES. THE STREAM IS CURRENTLY IN THE PROCESS OF DOWNCUTTING TO SEWER LINES AND SEVERAL STORMWATER OUTFALLS HAVE COLLAPSED INTO THE STREAM. THE EVALUATION OF FORT CHAPLIN RUN AQUATIC LIFE SUPPORT USED IS BASED ON A BIOASSESSMENT CONDUCTED IN 2002. FORT CHAPLIN RUN WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. THE HBI SCORE SUGGESTS FAIRLY SIGNIFICANT ORGANIC POLLUTION. A HIGH PERCENTAGE OF GATHERER-COLLECTOR ORGANISMS SUGGESTS POLLUTANTS, BECAUSE THEY ARE GENERALIST AND CAN THRIVE IN POLLUTED WATERS. THE DOMINANT TAXA WAS OLIGOCHAETA (SEWAGE LOVING ORGANISMS). 47 ORGANISMS WERE FOUND IN THE SAMPLE. THE D.O., PH, AND TEMPERATURE OBSERVATIONS FULLY SUPPORTED THE AQUATIC LIFE USE. THE STREAM'S HABITAT IS SEVERELY IMPAIRED. THE EROSION IS RAPIDLY DESTROYING THIS STREAM. THERE IS A NEED FOR IMMEDIATE ACTION TO SLOW THE EROSION OF THE STEAMS BANKS.

THE EVALUATION OF FORT CHAPLIN RUN SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPLILED FOR A FIVE-YEAR SPAN 2003-2007. FORT CHAPLIN RUN WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 52.9% OF THE TIME OR ITS SECONDARY CONTACT USE 29.4% OF THE TIME. AS A RESULT, FORT CHAPLIN RUN DID NOT SUPPORT EITHER OF ITS SWIMMABLE OR 2ND CONTACT RECREATIONS USES.

FORT CHAPLIN RUN DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED IN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHES OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE FORT CHAPLIN RUN IS A TRIBUTARY OF THE ANACOSTIA RIVER, FISH MAY MIGRATE FROM THE RIVER INTO THIS TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO FORT CHAPLIN RUN.

Detail Report for FORT DAVIS TRIBUTARY

ID: DCTFD01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 4A(N/A)

Water Information:	**FORT DAVIS TRIBUTARY**	
	Location: FORT DAVIS IS A TRIBUTARY OF THE ANACOSTIA RIVER OF WHICH THE SURFACE PORTION PARALLELS PENNSYLVANIA AVENUE BEGINNING AT ALABAMA AVENUE AND SUBMERGES FOR THE REMAINDER OF ITS COURSE AT PENNSYLVANIA AVENUE ABOVE BRANCH AVENUE.	**Water Type:** RIVER **Size:** 1.4 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment Primary Contact Recreation
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Alteration in stream-side or littoral vegetative covers	Secondary Contact Recreation and Aesthetic Enjoyment	Yes	
Alterations in wetland habitats	Secondary Contact Recreation and Aesthetic Enjoyment	Yes	
Combination Benthic/Fishes Bioassessments	Secondary Contact Recreation and Aesthetic Enjoyment	Yes	
Combined Biota/Habitat Bioassessments	Secondary Contact Recreation and Aesthetic Enjoyment	Yes	
Fecal Coliform	Primary Contact Recreation Protection and Propagation of Fish,	Yes	

	Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment	
Other flow regime alterations	Secondary Contact Recreation and Aesthetic Enjoyment	Yes
Particle distribution (Embeddedness)	Secondary Contact Recreation and Aesthetic Enjoyment	Yes

Source Information

Sources	Associated Causes	Confirmed?
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Hydrostructure Impacts on Fish Passage	Alteration in stream-side or littoral vegetative covers Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Impacts from Hydrostructure Flow Regulation/modification	Alteration in stream-side or littoral vegetative covers Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Residential Districts	Alteration in stream-side or littoral vegetative covers Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Source Unknown	Fecal Coliform	

Comments On:

Overall Assessment

FORT DAVIS IS A TRIBUTARY OF THE ANACOSTIA RIVER OF WHICH THE SURFACE PORTION PARALLELS PENNSYLVANIA AVENUE BEGINNING AT ALABAMA AVENUE AND SUBMERGES FOR THE REMAINDER OF ITS COURSE AT PENNSYLVANIA

AVENUE ABOVE BRANCH AVENUE. THE WATERSHED IS ONLY 70 ACRES AND IS ROUGHLY HALF FORESTED AND HALF RESIDENTIAL PROPERTY. THE SOUTHEASTERN SIDE IS BUFFERED BY ABOUT 600 FEET OF FOREST WHILE THE NORTHWESTERN SIDE OF THE STREAM IS PENNSYLVANIA AVENUE. THE STREAM RECEIVES THREE SMALL STORM DRAINS AND IS SURROUNDED BUT NOT CROSSED BY SMALL SEWER LINES.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF FORT DAVIS TRIBUTARY AQUATIC LIFE SUPPORT USE IS BASED ON BIOASSESSMENT CONDUCTED IN 2002. FORT DAVIS TRIBUTARY WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. THE HBI SCORE SUGGESTS SOME ORGANIC POLLUTION.

THE DOMINANT TAXA AND ONLY TAXA FOUND WAS A SINGLE OLIGOCHAETA (SEWAGE LOVING ORGANISM). THE D.O. (5.3%), PH (5.3%) AND TEMPERATURE (0%) FULLY SUPPORTED THE AQUATIC LIFE USE. EROSION ON THE RIGHT AND LEFT BANKS WERE SEVERE. BANK EROSION MAY HAVE BEEN THE WORST OUT OF ALL THE STREAMS IN THE COASTAL REGION. THE ENTIRE STREAM WAS FILLED WITH A REDDISH COLOR THAT IS THE SAME COLOR AS THE SILT OR CLAY IN THE STREAMBED.

THE EVALUATION OF FORT DAVIS TRIBUTARY SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPLIED FOR A FIVE-YEAR SPAN 2003-2007. FORT DAVIS TRIBUTARY WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 35.3% OF TIME. ITS SECONDARY CONTACT USE 11.8% OF THE TIME. AS A RESULT, FORT DAVIS TRIBUTARY DID NOT SUPPORT ITS SWIMMABLE OR 2ND CONTACT RECREATION USES.

FORT DAVIS TRIBUTARY DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED IN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHES OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE FORT DAVIS TRIBUTARY IS A TRIBUTARY OF THE ANACOSTIA RIVER, FISH MAY MIGRATE FROM THE RIVER INTO THIS TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO FORT DAVIS TRIBUTARY.

Detail Report for FORT DUPONT CREEK

ID: DCTDU01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 4A(N/A)

Water Information:	**FORT DUPONT CREEK**	
	Location: THE STREAM AT FORT DUPONT PARK IS A MINOR TRIBUTARY OF THE ANACOSTIA RIVER WHICH ORIGINATES AT FORT DUPONT NEAR ALABAMA AND MASSACHUSETTS AVENUES, SE.	**Water Type:** RIVER **Size:** 1.7 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Fully Supporting	Secondary Contact Recreation and Aesthetic Enjoyment
	Insufficient Information	Protection and Propagation of Fish, Shellfish and Wildlife
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Fecal Coliform	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish	Yes	

Source Information

Sources	Associated Causes	Confirmed?

Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform
Source Unknown	Fecal Coliform

Comments On:

Overall Assessment

THE STREAM AT FORT DUPONT PARK IS A MINOR TRIBUTARY OF THE ANACOSTIA RIVER WHICH ORIGINATES AT FORT DUPONT NEAR ALABAMA AND MASSACHUSETTS AVENUES, SE. THE STREAM FLOWS ENTIRELY WITHIN THE CONFINES OF FORT DUPONT PARK AND THE WATERSHED OF ABOUT 410 ACRES IS DELIMITED BY THE BOUNDARIES OF THE PARK OF WHICH OVER 90% IS PARKLAND. THERE ARE FEW DEVELOPMENTAL PRESSURES THAT CAN IMPACT THE STREAM WITH ONLY TWO SMALL STORM DRAINS FROM U.S. NATIONAL PARK SERVICE FACILITIES. FORT DUPONT FLOWS INTO A LARGE STORM DRAIN AFTER IT PASSES UNDER THE B&O RAILROAD WHERE IT IS SUBVERTED FOR APPROXIMATELY 900 FEET BEFORE DISCHARGING INTO THE ANACOSTIA RIVER.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE WATERSHED OF FORT DUPONT IS ALMOST ENTIRELY ENCOMPASSED BY PARK SERVICE LAND. ONLY TWO STORM DRAINS ENTER THE PARK AND THERE ARE NO SEWER LINE CROSSING UNTIL JUST ABOVE THE STREAM REACH ENTERS THE PIPE FLOWING TO THE RIVER. THE NATIONAL PARK SERVICE BOARDS SEVERAL POLICE HORSES AND HOUSES A FACILITY MATINTAINENCE YARD ON THE SITE.

THE MONITORING SITE WAS VISITED IN SEPTEMBER 2002 AND COULD NOT BE ASSESSED AS IT WAS DRY. THE MONITORING SITE WAS DRY AND NO BIOLOGICAL ASSESSMENT COULD OCCUR. THE EVALUATION OF AQUATIC LIFE SUPPORT USE IS THEREFORE CLASSIFIED AS INSUFFICIENT INFORMATION. NO D.O., OR TEMPERATURE VIOLATIONS OCCURRED DURING THE 2003-2007 AMBIENT STUDY PERIOD. PH WAS VIOLATED 10.0% OF THE TIME FOR THE PERIOD.

THE EVALUATION OF FORT DUPONT CREEK SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE YEAR SPAN 2003-2007. FORT DUPONT CREEK WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 23.5% OF THE TIME. ITS SECONDARY CONTACT USE AT 5.9% THE TIME. FORT DUPONT DID NOT SUPPORT ITS SWIMMABLE. SECONDARY CONTACT RECREATION USES WAS SUPPORTED.

FORT DUPONT CREEK DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED UN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHES OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE FORT DUPONT CREEK IS A TRIBUTARY OF THE ANACOSTIA RIVER, FISH MAY MIGRATE FOR THE RIVER INTO THIS TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO FORT DUPONT CREEK.

Detail Report for FORT STANTON TRIBUTARY

ID: DCTFS01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**FORT STANTON TRIBUTARY**	
	Location: FORT STANTON TRIBUTARY IS A TRIBUTARY OF THE ANACOSTIA RIVER WHICH ORIGINATES NEAR ERIE STREET AND PEARSON PLACE, SE JUST NORTH OF THE SMITHSONIAN'S ANACOSTIA MUSEUM.	**Water Type:** RIVER **Size:** 1.3 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		

	Secondary Contact Recreation and Aesthetic Enjoyment	
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Hydrostructure Impacts on Fish Passage	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Impacts from Hydrostructure Flow Regulation/modification	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Residential Districts	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Site Clearance (Land Development or Redevelopment)	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Source Unknown	Fecal Coliform	

Comments On:

Overall Assessment

FORT STANTON TRIBUTARY IS A TRIBUTARY OF THE ANACOSTIA RIVER WHICH ORIGINATES NEAR ERIE STREET AND PEARSON PLACE, SE JUST NORTH OF THE SMITHSONIAN'S ANACOSTIA MUSEUM. LESS THAN A MILE DOWNSTREAM IT FLOWS INTO A STORMDRAIN WEST OF NAYLOR ROAD ON GOOD HOPE ROAD, SE. WHERE IT IS SUBVERTED FOR THE REST OF ITS JOURNEY TO THE ANACOSTIA. ABOUT HALF OF THE 180 ACRE WATERSHED IS FORT STANTON PARKLAND WITH THE OTHER HALF RESIDENTIAL AND COMMERCIAL PROPERTY. THE STREAM EDGE IS FORESTED AND IT DOES RECEIVE SEVERAL STORM DRAINS.

THE ABOVE DESCRIPTION WAS TAKEN FROM 'BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA,' W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF FORT STANTON TRIBUTARY'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT PERFORMED IN 2003. FORT STATION RECEIVED A USE

DESIGNATION OF 'NOT SUPPORTING.'

A REVIEW OF TEMPERATURE, AND PH DATA COLLECTED OVER FIVE YEARS, 2003-2007, FOUND NO VIOLATIONS IN WATER QUALITY STANDARDS FOR TEMPERATURE AND D.O. PH WAS VIOLATED 15.4% DURING THE PERIOD OF STUDY.

THE BIOASSESSMENT REVEALED A HBI THAT INDICATED NO APPARENT ORGANIC POLLUTION.

NO SENSITIVE ORGANISMS WERE FOUND (EPT). 6 ORGANISMS WERE FOUND IN THE ENTIRE SAMPLE

HIGH % OF GATHERER-COLLECTOR ORGANISMS SUGGEST POLLUTANTS BECAUSE THEY ARE GENERALIST AND CAN THRIVE IN POLLUTED WATER. HABITAT IS SEVERELY IMPAIRED. DOMINANT TAXA OLIGOCHAETA (SEWAGE LOVING ORGANISMS). HABITAT AND TOXICS ARE THE POSSIBLE CAUSES FOR DEGRADATION.

DURING THE 2007 HABITAT ASSESSMENT A NEW HOUSING DEVELOPMENT WAS ON THE LEFT SIDE OF THE BANK FACING UPSTREAM, THERE IS EVIDENCE OF SEVERE EMBEDDEDNESS AND STREAMBANK EROSION. THERE IS A NEW ROAD COVERT. FALLEN TREES ARE PREVALENT.

DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994 BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS. THIS WATERBODY IS NOT SUPPORTING OF FISH CONSUMPTION.

THE EVALUATION OF THIS WATERBODY'S SWIMMABLE AND SECONDARY CONTACT USES IS BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND ANALYZED OVER A FIVE YEAR PERIOD, 2003-2007. FECAL COLIFORM LEVELS VIOLATED SWIMMABLE USE 50.0% OF THE TIME MAKING THIS USE NOT SUPPORTING. SECONDARY CONTACT USE WAS IN VIOLATION 21.4% SUPPORTING OF THE TIME WHICH IS NOT SUPPORTING OF THIS USE.

Detail Report for FOUNDRY BRANCH

ID: DCTFB02R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**FOUNDRY BRANCH**	
	Location: FOUNDRY BRANCH ORIGINATES FROM A 60" STORM DRAIN JUST SOUTH OF VAN NESS STREET, NW, BETWEEN NEBRASKA AND WISCONSIN AVENUES. THE SURFACE PORTION OF THE STREAM FLOWS THROUGH GLOVER ARCHIBALD PARK. A LARGE PORTION OF THE STREAM IS SUBTERRANEAN AND EMPTIES	**Water Type:** RIVER **Size:** 0.8 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Insufficient Information	Protection and Propagation of Fish, Shellfish and Wildlife
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	

Source Information

Sources	Associated Causes	Confirmed?
Impacts from Hydrostructure Flow Regulation/modification	Other flow regime alterations	

Comments On:

Overall Assessment

TFB02 IS A MONITORING STATION WHERE PHYSICAL, CHEMICAL, AND BIOLOGICAL ASSESSMENT DATA ARE COLLECTED.

ACCORDING TO NATIONAL PARK SERVICE STAFF, THE PORTION OF FOUDNRY BRANCH IN GLOVER ARCHIBALD PARK ABOVE MASSACHUSETTS AVENUE, NW IS HYDROLOGICALLY SEPERATED FROM THE REACH OF FOUNDRY BRANCH BELOW MASSACHUSETTS AVENUE. ALL WATER ABOVE MASSACHUSETTS AVE. ENTERING THE PIPE FLOWS DIRECTLY TO THE POTOMAC RIVER THROUGH THE STORMWATER NETWORK. ALL WATER FLOWING BELOW MASSACHUSETTS AVE. IN FOUNDRY BRANCH IS HYDROLOGICALLY DISTINCT UNTIL IT ENTERS INTO A PIPE AT RESERVOIR ROAD, NW AND FINALLY DISCHARGES INTO THE POTOMAC RIVER.

FOUNDRY BRANCH FLOWS THROUGH THE ARCHIBALD GLOVER PARK, MAINTAINED BY THE U.S. NATIONAL PARK SERVICE. SEVERAL STREETS CROSS IT AND STORM WATER INPUTS FROM THE IMPERVIOUS SURFACES OUTSIDE OF THE PARK WHICH COMPOSE THE LARGEST PERCENTAGE OF THE WATERSHED AREA. CHIRONOMIDAE AND OLIGOCHAETEA DOMINATED THE INVERTEBRATE COMMUNITY ALTHOUGH RESPECTABLE NUMBERS OF LESS TOLERANT ORGANISMS WERE ALSO IN EVIDENCE. HISTORIC U.S. NAVY OPERATIONS HIGHER IN THE WATERSHED RESULTED IN THE DISPOSAL OF LARGE CONCENTRATIONS OF PCBS WHICH HAVE RECENTLY BEEN REMOVED FROM THEIR DISPOSAL SITES.

FOUNDRY BRANCH WAS VISITED FOR A NEW ASSESSMENT IN AUGUST 2002. THE MONITORING SITE WAS DRY AND NO BIOLOGICAL ASSESSMENT COULD OCCUR. THE EVALUATION OF FOUNDRY BRANCH'S AQUATIC LIFE SUPPORT USE IS THEREFORE CLASSIFIED AS INSUFFICIENT INFORMATION.

DO AND TEMPERATURE WERE IN FULL COMPLIANCE. PH VIOLATED 10% OF THE TIME FOR THE PERIOD 2003 TO 2007.

THE EVALUATION OF FOUNDRY BRANCH'S SWIMMABLE AND SECONDARY USES DID NOT SUPPORT VIOLATIONS OCCURRED 33.3% AND 16.7%, RESPECTIVELY, OF THE TIME.

FOUNDRY BRANCH DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED UN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHES OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE FOUNDRY BRANCH IS A TRIBUTARY OF THE POTOMAC RIVER, FISH MAY MIGRATE FROM THE RIVER INTO THIS TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO FOUNDRY BRANCH.

THE SEGMENT OF FOUNDRY BRANCH ABOVE MASSACHUSETTS ANVENUE, NW HAS BEEN THE SITE OF US NAVY HAZARDEROUS WASTE REMEDIATION AND REMOVAL. HIGH LEVELS OF PCBS WERE REMOVED FROM THE STREAM AND ADJACENT SITED ALONG A SEVERAL HUNDRED METER REACH OF FOUNDRY BRANCH ABOVE MASSACHUSETTS AVENUE. THE HAZARDOUS MATERIAL WAS REMOVED AND THE STREAM AND SITE ARE CURRENTLY BEING RESTORED.

THIS TRIBUTARY WAS ASSESSED AS HAVING A POTENTIAL ORGANIC

ENRICHMENT/LOW DISSOLVED OXYGEN WATER QUALITY IMPAIRMENT. THIS DETERMINATION WAS BASED ON A BENTHIC MACROINVERTEBRATE BIOLOGICAL ASSESSMENT WHICH FOUND A DOMINANCE OF THE OLIGOCHAETA ORDER OF AQUATIC WORM IN THE SAMPLED STREAM REACH. A DOMINANCE OF OLIGOCHAETE WORMS IS A STRONG INDICATOR OF ORGANIC ENRICHMENT WHICH CAN BE A MAJOR CAUSE OF LOW DISSOLVED OXYGEN CONCENTRATION(BANTA, 1993). MAB HAS DETERMINED THAT ANY STREAM BENTHIC SAMPLE CONTAINING MORE THAN 20% OF OLIGOCHAETE DOMINANCE WILL BE CLASSIFIED AS HAVING AN ORGANIC ENRICHMENT/LOW DISSOLVED OXYGEN CAUSE.

FOUNDRY BRANCH HAD 26% OF ITS MOST RECENT (1997) BENTHIC INVERTEBRATE SAMPLE IDENTIFIED AS OLIGOCHAETE WORMS.

Detail Report for HICKEY RUN

ID: DCTHR01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**HICKEY RUN**	
	Location: HICKEY RUN IS A WESTERN TRIBUTARY OF THE ANACOSTIA RIVER WHICH RUNS THROUGH THE NAT'L ARBORETUM (THR01).	**Water Type:** RIVER **Size:** 0.9 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Alteration in stream-side or littoral vegetative covers	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	

Fecal Coliform	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment	Yes
Oil and Grease	Primary Contact Recreation	Yes
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Above Ground Storage Tank Leaks (Tank Farms)	Oil and Grease	
Channelization	Alteration in stream-side or littoral vegetative covers Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Illegal Dumps or Other Inappropriate Waste Disposal	Alteration in stream-side or littoral vegetative covers Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Impacts from Hydrostructure Flow Regulation/modification	Alteration in stream-side or littoral vegetative covers Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Municipal (Urbanized High Density Area)	Alteration in stream-side or littoral vegetative covers Combination Benthic/Fishes	

	Bioassessments
	Combined Biota/Habitat Bioassessments
	Debris/Floatables/Trash
	Fecal Coliform
	Other flow regime alterations
	Particle distribution (Embeddedness)
Municipal Point Source Discharges	Fecal Coliform

Comments On:

Overall Assessment

HICKEY RUN IS A WESTERN TRIBUTARY OF THE ANACOSTIA RIVER WHICH RUNS THROUGH THE NAT'L ARBORETUM (THR01). THE STREAM ORIGINATES FROM A LARGE STORM WATER DISCHARGE NORTH OF NY AVE AND RECEIVES DISCHARGE FROM AT LEAST THREE OTHER LARGE STORM DRAINS BEFORE ENTERING THE NATIONAL ARBORETUM. THE WATERSHED IS ABOUT 1080 ACRES OF MOSTLY URBAN LAND (36% IMPERVIOUS). ABOUT 20% OF WATERSHED IS FOREST OR PARKLAND. THE REMAINDER IS RESIDENTIAL (ABOUT 40%), COMMERCIAL AND INDUSTRIAL (ABOUT 40%). THE HICKEY RUN WATERSHED CAN BE DIVIDED INTO TWO PARTS; THE UPPER CATCHMENT DRAINING THE RESIDENTIAL, COMMERCIAL AND INDUSTRIAL AREAS; AND THE LOWER CATCHMENT IN THE IDYLLIC SETTING OF THE NATIONAL ARBORETUM BRFORE DISCHARGING INTO THE ANACOSTIA RIVER JUST ABOVE KINGMAN LAKE.

THE ABOVE DESCRIPTION IS PARTIALLY TAKEN FROM " BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA", W.C. BANTA, THE AMERICAN UNIVERSITY, 1993 AND "THE HICKEY RUN SUBWATERSHED ACTION PLAN, D.L. SHEPP, METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, DECEMBER 1991.

AT LEAST ONE SEWER LINE DOES CROSS THE STREAM AND THE WATERSHED EXCOMPASES A RAILYARD AND A METRO MAINTAINANCE FACILITY. INPUTS OF OIL AND GREASE FROM THESE AREAS HAVE BEEN KNOWN TO BE CHRONIC PROBLEM WHICH IS CURRENTLY BEING DEALT WITH.

THE EVALUATION OF HICKEY RUN AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2003. HICKEY RUN WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. THE STREAM'S HABITAT WAS SEVERELY DEGRADED. OIL AND GREASE SHEEN WAS OBSERVED. IN THE 2002 SAMPLE INSECTS WERE FOUND, HOWEVER THE HEAVY RAINS SINCE MAY HAVE CAUSED MORE TOXICS TO POLLUTE THE STREAM AND THE MACROINVERTEBRATES WERE NOT ABLE TO RECOVER. THERE WERE NO INSECTS IN THE SAMPLE. TOXICS AND HABITAT DEGRADATION ARE POSSIBLY RESPONSIBLE. DO, PH AND TEMPERATURE WERE IN COMPLIANCE.

DURING THE 2007 HABITAT ASSESSMENT THE LEFT BANK STABILITY AND RIPARIAN VEGETATION INCREASED FROM THE 2003 ASSESSMENT. EVIDENCE OF CHANNELIZATION THROUGHTOUT THE ENTIRE STRETCH.

THE EVALUATION OF HICKEY RUN SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE YEAR 2003-2007. HICKEY RUN WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 74.5% OF THE TIME. ITS SECONDARY CONTACT USE AT 41.2% THE TIME. AS A

RESULT, HICKEY RUN DID NOT SUPPORT EITHER ITS SWIMMABLE OR 2ND CONTACT RECREATION USES.

HICKEY RUN DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED UN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHES OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE HICKEY RUN IS A TRIBUTARY OF THE ANACOSTIA RIVER, FISH MAY MIGRATE FOR THE RIVER INTO THIS TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO HICKEY RUN.

Detail Report for KINGMAN LAKE

ID: DCAKL00L_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**KINGMAN LAKE**	
	Location: LOCATED BETWEEN CHILDRENS ISLAND AND RFK STADIUM PARKING LOT ON THE UPPER ANACOSTIA. THE NORTHEAST BOUNDARY SWIRL CONCENTRATOR IS LOCATED JUST DOWN RIVER FROM THE LAKE.	**Water Type:** FRESHWATER LAKE **Size:** 102.7 ACRES **Next Scheduled Monitoring Date:** N/A **Trophic Status:** Eutrophic **Public Lake:** No

Use Information

	Attainment Status	**Uses**
Assessed:	Fully Supporting	Navigation Protection and Propagation of Fish, Shellfish and Wildlife
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment

Types of Assessment

Assessment Type	**Uses**	**Assessment Confidence**
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	**Associated Uses**	**Pollutant?**	**Confidence**
Fecal Coliform	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment	Yes	
Oil and Grease	Primary Contact Recreation	Yes	

Source Information

Sources	Associated Causes	Confirmed?
Combined Sewer Overflows	Fecal Coliform	
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	

Comments On:

Overall Assessment

EVALUATIONS OF USE SUPPORT DECISIONS ARE BASED ON A FIVE YEAR STATISTICAL EVALUATION (2003-2007) OF CONVENTIONAL AND FECAL COLIFORM BACTERIA WATER QUALITY DATA COLLECTED BY THE MAB.

EVALUATIONS OF KINGMAN LAKE'S PRIMARY (SWIMMABLE) AND SECONDARY CONTACT RECREATION USES WERE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND ANALYZED OVER A FIVE YEAR PERIOD. WITH AN AVERAGE FECAL BACTERIA COUNT OF 2436 MPN/100ML, THIS LAKE DID NOT SUPPORT ITS SWIMMABLE USE AND SECONDARY CONTACT RECREATION USE. IT WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE (200MPN/100ML) 81.2% OF THE TIME AND FOR ITS SECONDARY CONTACT USE (1000MPN/100ML) 30.6% OF THE TIME. KINGMAN LAKE IS TIDALLY INFLUENCED AND, THEREFORE, IS AFFECTED BY THE DISTRICT'S LARGEST CSO (COMBINED SEWER OVERFLOW) WHICH LIES JUST DOWNSTREAM OF THE LAKE'S LOWER INLET.

THE AQUATIC LIFE USE IS SUPPORTED. TEMPERATURE HAD NO VIOLATIONS, PH VIOLATED 6.5% OF THE TIME AND DISSOLVED OXYGEN VIOLATED 3.3% OF THE TIME.

BECAUSE OF A FISH CONSUMPTION ADVISORY IN PLACE, KINGMAN LAKE DID NOT SUPPORT THE FISH CONSUMPTION USE. DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994, BY THE DC COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS.

KINGMAN LAKE FULLY SUPPORTED ITS NAVIGATION USE.

BECAUSE OF THE ABOVE USE SUPPORT DECISIONS, KINGMAN LAKE DID NOT SUPPORT THE OVERALL SUPPORT CLASSIFICATION FOR WATERS WITH MULTIPLE USES.

APPROXIMATELY 42 ACRES OF FRESHWATER TIDAL WETLANDS WERE RESTORED IN THE KINGMAN LAKE AREA IN 2000. A POTENTIALLY SIGNIFICANT PROJECT SLATED FOR THE KINGMAN LAKE AREA IS A NATURAL RECREATION AREA ON KINGMAN ISLAND.

Detail Report for KLINGLE VALLEY

ID: DCTKV01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**KLINGLE VALLEY**	
	Location: KLINGLE VALLEY TRIBUTARY FLOWS THROUGH A RESIDENTIAL AREA AND DISCHARGES INTO ROCK CREEK FROM THE WEST NEAR THE PORTER STREET BRIDGE. THE STREAM'S REACH PARALLELS THE SOUTH SIDE OF KLINGLE ROAD.	**Water Type:** RIVER **Size:** 0.8 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Alteration in stream-side or littoral vegetative covers	Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and Aesthetic Enjoyment	Yes	
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and Aesthetic Enjoyment	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	

	Secondary Contact Recreation and Aesthetic Enjoyment	
Fecal Coliform	Primary Contact Recreation	Yes
	Protection and Propagation of Fish, Shellfish and Wildlife	
	Secondary Contact Recreation and Aesthetic Enjoyment	
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
	Secondary Contact Recreation and Aesthetic Enjoyment	

Source Information

Sources	Associated Causes	Confirmed?
Residential Districts	Alteration in stream-side or littoral vegetative covers	
	Combination Benthic/Fishes Bioassessments	
	Debris/Floatables/Trash	
	Fecal Coliform	
	Other flow regime alterations	
Wet Weather Discharges (Non-Point Source)	Alteration in stream-side or littoral vegetative covers	
	Combination Benthic/Fishes Bioassessments	
	Debris/Floatables/Trash	
	Fecal Coliform	
	Other flow regime alterations	
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	Alteration in stream-side or littoral vegetative covers	
	Combination Benthic/Fishes Bioassessments	
	Debris/Floatables/Trash	
	Fecal Coliform	
	Other flow regime alterations	
Yard Maintenance	Alteration in stream-side or littoral vegetative covers	
	Combination Benthic/Fishes Bioassessments	
	Debris/Floatables/Trash	
	Fecal Coliform	
	Other flow regime alterations	

Comments On:

Overall Assessment

KLINGLE VALLEY TRIBUTARY FLOWS THROUGH A RESIDENTIAL AREA AND DISCHARGES INTO ROCK CREEK FROM THE WEST NEAR THE PORTER STREET BRIDGE. THE STREAM'S REACH PARALLELS THE SOUTH SIDE OF KLINGLE ROAD. A WOODED BUFFER OF A FEW HUNDRED FEET COVERS ONE SIDE OF THE STREAM WITH THE REST OF THE 320 ACRE WATERSHED RESIDENTIAL URBAN AREA. NINE (9) OUTFALLS INCLUDING ONE CSO LINE THE STREAM.

THE ABOVE DESCRIPTION WAS TAKEN FROM 'BIOLOGICAL WATER QUALITY OF THE SURFACE STREAMS OF THE DISTRICT OF COLUMBIA,' W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF KLINGLE CREEK'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT PERFORMED BY IN 2003. KLINGLE VALLEY CREEK WAS FOUND TO BE NOT SUPPORTING' OF THIS DESIGNATED USE. THE STREAM'S HBI SCORE SUGGESTA FAIRLY SIGNIFICANT ORGANIC POLLUTION. THERE WERE MORE THAN 100 ORGANISMS IN THE SAMPLE. THE SAMPLE WAS DOMINATED BY ORGANISMS THAT CAN SURVIVE IN TOXICS AND ONLY 1 EPT WAS FOUND IN THE SAMPLE. 72 CHIRONOMIDAE (TOLERANT GENERALIST) WERE THE DOMINANT TAXA. THE

HABITAT WAS MODERATELY IMPAIRED. D.O., PH, AND TEMPERATURE FULLY SUPPORTED THE USE.

THE EROSION ON THE RIGHT AND LEFT BANKS WAS MODERATELY EFFECTED THROUGH THE RAPID INCREASE OF THE URBANIZATION OF THE DISTRICT OF COLUMBIA. WITH THIS LARGE NUMBER OF TOLERANT TAXA, IT IS POSSIBLE THAT THIS STREAM IS UNHEALTHY BECAUSE OF TOXICS.

2007 HABITAT ASSESSMENT REVEALED MODERATE BANK EROSION ON THE LEFT SIDE FACING UPSTREAM.

DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994 BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS. THIS WATERBODY DID NOT SUPPORT FISH CONSUMPTION CRITERIA.

THE EVALUATION OF KLINGLE VALLEY CREEK'S SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE YEAR SPAN 2003-2007. THE CREEK WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 50.0.0% OF THE TIME. ITS SECONDARY CONTACT USE AT 11.1% THE TIME. AS A RESULT, KLINGLE VALLEY CREEK DID NOT SUPPORT EITHER ITS SWIMMABLE OR 2ND CONTACT RECREATION USES.

Detail Report for LUZON BRANCH

ID: DCTLU01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**LUZON BRANCH**	
	Location: THE STREAM FLOWS THROUGH A SMALL PARK AND ENTERS ROCK CREEK AT JOYCE ROAD.	**Water Type:** RIVER **Size:** 1 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Alteration in stream-side or littoral vegetative covers	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		

	Secondary Contact Recreation and Aesthetic Enjoyment	
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Cercla NPL (Superfund) Sites	Alteration in stream-side or littoral vegetative covers	
	Combination Benthic/Fishes Bioassessments	
	Combined Biota/Habitat Bioassessments	
	Fecal Coliform	
	Other flow regime alterations	
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Alteration in stream-side or littoral vegetative covers	
	Combination Benthic/Fishes Bioassessments	
	Combined Biota/Habitat Bioassessments	
	Fecal Coliform	
	Other flow regime alterations	
Impacts from Hydrostructure Flow Regulation/modification	Alteration in stream-side or littoral vegetative covers	
	Combination Benthic/Fishes Bioassessments	
	Combined Biota/Habitat Bioassessments	
	Fecal Coliform	
	Other flow regime alterations	
Loss of Riparian Habitat	Alteration in stream-side or littoral vegetative covers	
	Combination Benthic/Fishes Bioassessments	
	Combined Biota/Habitat Bioassessments	
	Fecal Coliform	
	Other flow regime alterations	
Residential Districts	Alteration in stream-side or littoral vegetative covers	
	Combination Benthic/Fishes Bioassessments	
	Combined Biota/Habitat Bioassessments	
	Fecal Coliform	
	Other flow regime alterations	

Comments On:

Overall Assessment

THE STREAM FLOWS THROUGH A SMALL PARK AND ENTERS ROCK CREEK AT JOYCE ROAD. THERE ARE 14 OUTFALLS FROM THE RESIDENTIAL AREA TO THE STREAM INCLUDING ONE CSO. LUZON CREEK EMPTIES INTO ROCK CREEK AT JOYCE ROAD, ABOUT 600 FEET DOWNSTREAM OF THE MILITARY ROAD BRIDGE OVER ROCK CREEK. THE SURFACE PORTION ORIGINATES AS A STORM DRAIN NEAR FORT STEVENS DRIVE AND TRAVELS ALMOST STRAIGHT SOUTHWEST TO ROCK

CREEK. MOST OF THE WATERSHED IS RESIDENTIAL AND LIGHT COMMERCIAL. THE SURFACE STREAM IS BUFFERED BY A 100-1,000 FOOT BORDER OF PARKLAND ACCOUNTING FOR 10% OF THE WATERSHED. THERE ARE 14 OUTFALLS FROM THE RESIDENTIAL AREA TO THE STREAM INCLUDING ONE CSO.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF LUZON BRANCH AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2002. LUZON BRANCH WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. THE STREAM'S HBI SCORE SUGGESTED A FAIRLY SIGNIFICANT AMOUNT OF ORGANIC POLLUTION IN THE STREAM. THE DOMINANT TAXA FOUND WAS TURBELLARIA. HABITAT WAS ALSO MODERATELY IMPAIRED ON THE RIGHT BANK AND SEVERELY IMPAIRED ON THE LEFT BANK.

DO, PH, AND TEMPERATURE FULLY SUPPORTED THE USE. 29 ORGANISMS WERE FOUND IN THE SAMPLE COLLECTED. THE DIVERSITY OF THE STREAM WAS POOR AS EVIDENCED BY ONLY 2 TAXA IDENTIFIED. ORGANICS AND TOXICS ARE POSSIBLY THE CAUSE OF DEGRADATION. DO, PH AND TEMPERATURE WERE FULLY IN COMPLIANCE.

THE EVALUATION OF LUZON BRANCH SWIMMABLE AND SECONDARY USES WERE ASSESSED AS NOT SUPPORTING DUE TO A 81.2% VIOLATION OF THE PRIMARY CONTACT USE AND 25.0% VIOLATION OF THE SECONDARY CONTACT USE, FOR THE PERIOD OF 2003-2007.

FISH CONSUMPTION WAS NOT ASSESSED FOR LUZON BRANCH.

Detail Report for MELVIN HAZEN VALLEY BRANCH

ID: DCTMH01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**MELVIN HAZEN VALLEY BRANCH**	
	Location: THE STREAM FLOWS THROUGH A SMALL PARK AND ENTERS ROCK CREEK AT JOYCE ROAD.	**Water Type:** RIVER **Size:** 1 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and	Yes	

Aesthetic Enjoyment

Source Information

Sources	Associated Causes	Confirmed?
Residential Districts	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform	
Yard Maintenance	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform	

Comments On:

Overall Assessment

THE STREAM FLOWS THROUGH A SMALL PARK AND ENTERS ROCK CREEK AT JOYCE ROAD. THERE ARE 14 OUTFALLS FROM THE RESIDENTIAL AREA TO THE STREAM INCLUDING ONE CSO. LUZON CREEK EMPTIES INTO ROCK CREEK AT JOYCE ROAD, ABOUT 600 FEET DOWNSTREAM OF THE MILITARY ROAD BRIDGE OVER ROCK CREEK. THE SURFACE PORTION ORIGINATES AS A STORM DRAIN NEAR FORT STEVENS DRIVE AND TRAVELS ALMOST STRAIGHT SOUTHWEST TO ROCK CREEK. MOST OF THE WATERSHED IS RESIDENTIAL AND LIGHT COMMERCIAL. THE SURFACE STREAM IS BUFFERED BY A 100-1,000 FOOT BORDER OF PARKLAND ACCOUNTING FOR 10% OF THE WATERSHED. THERE ARE 14 OUTFALLS FROM THE RESIDENTIAL AREA TO THE STREAM INCLUDING ONE CSO.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF MELVIN HAZEN VALLEY BRANCH AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2002. THE STREAM'S HBI SCORE SUGGESTS A SIGNIFICANT ORGANIC POLLUTION. HYDROPSYCHIDAE IS THE DOMINANT TAXA AND THE HABITAT IS SEVERELY IMPAIRED. D.O., PH AND TEMPERATURE FULLY SUPPORTED THE AQUATIC LIFE USE. 47 ORGANISMS WERE FOUND IN THE ENTIRE SAMPLE. HABITAT AND ORGANICS ARE POSSIBLY THE CAUSES OF DEGRADATION TO THE STREAM. MELVIN HAZEN VALLEY BRANCH WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. DO, PH AND TEMPERATURE ARE IN FULL COMPLIANCE.

MELVIN HAZEN VALLEY BRANCH'S SWIMMABLE AND SECONDARY USES WERE NOT SUPPORTED. THE SWIMMABLE USE WAS VIOLATED 68.7% OF THE TIME AND THE SECONDARY CONTACT USE WAS VIOLATED 25.0% OF THE TIME. PERIOD OF STUDY FOR THESE USES SPAN OVER FIVE YEARS FROM 2003-2007.

Detail Report for NASH RUN

ID: DCTNA01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**NASH RUN**	
	Location: NASH RUN IS A TRIBUTARY OF THE ANACOSTIA RIVER WHOSE MOUTH IS A BRAIDED WETLAND THAT EMPTIES INTO THE KENILWORTH MARSH. NASH RUN ORIGINATES FROM A STORMDRAIN AT NASH ROAD AND SHERIFF AVENUES IN DEANWOOD PARK IN MARYLAND	**Water Type:** RIVER **Size:** 0.1 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		
	Protection of Human Health related to Consumption of Fish and Shellfish		
	Secondary Contact Recreation and Aesthetic Enjoyment		
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	

Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Physical substrate habitat alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Channelization	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness) Physical substrate habitat alterations	
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Hydrostructure Impacts on Fish Passage	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness) Physical substrate habitat alterations	
Illegal Dumping	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness) Physical substrate habitat alterations	
Illegal Dumps or Other Inappropriate Waste Disposal	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness) Physical substrate habitat alterations	
Impacts from Hydrostructure Flow Regulation/modification	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness) Physical substrate habitat alterations	
Residential Districts	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness) Physical substrate habitat alterations	
Source Unknown	Fecal Coliform	

Comments On:

Overall Assessment

NASH RUN IS A TRIBUTARY OF THE ANACOSTIA RIVER WHOSE MOUTH IS A BRAIDED WETLAND THAT EMPTIES INTO THE KENILWORTH MARSH. NASH RUN ORIGINATES FROM A STORMDRAIN AT NASH ROAD AND SHERIFF AVENUES IN DEANWOOD PARK IN MARYLAND. THE STREAMS REACH IS PUNCTUATED BY SEVERAL SEGMENTS THAT HAVE BEEN SUBVERTED INTO PIPES ONLY TO EMERGE AGAIN. ALL BUT 5% OF THE 460 ACRE WATERSHED IS URBAN RESIDENTIAL AND COMMERCIAL. THE STREAM RECEIVES NUMEROUS STORMDRAINS AND IS PARALLELED AND CROSSED BY SEVERAL SEWER LINES.

THE ABOVE DESCRIPTION WAS TAKEN FROM 'BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARIES OF THE DISTRICT OF COLUMBIA,' BY W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF SUPPORT USES ARE NOT SUPPORTED BASED ON A FIVE YEAR STATISTICAL EVALUATION (2003-2007) OF CONVENTIONAL AND BACTERIAL WATER QUALITY DATA COLLECTED BY THE WQMB. DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994 BY THE D.C COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS. THE WATERBODY IS NOT SUPPORTING OF FISH CONSUMPTION CRITERIA.

THE EVALUATION OF THIS WATERBODY'S SWIMMABLE AND SECONDARY CONTACT USES IS BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND ANALYZED OVER A FIVE YEAR PERIOD, 2003-2007 ERAGE FECAL COUNT OF 15785 MPN/100ML, THIS STREAM DID NOT SUPPORT ITS SWIMMABLE OR ITS SECONDARY CONTACT RECREATION USE. IT WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE (200MPN/100ML) 100.0% OF THE TIME AND FOR ITS SECONDARY CONTACT USE (1000MPN/100ML) 55.0% OF THE TIME.

THE EVALUATION OF NASH RUN'S AQUATIC LIFE SUPPORT USE IS BASED ON BIOASSESSMENT PERFORMED IN 2003. NASH RUN WAS FOUND TO BE 'NOT SUPPORTING' OF THIS DESIGNATED USE.

THE HBI SCORE SUGGESTED SOME ORGANIC POLLUTION. MORE THAN 100 ORGANISMS WERE FOUND IN THE SAMPLE. 2 TAXA THAT ARE CATEGORIZED AS SENSITIVE TO TOXICS (EPT) WERE IDENTIFIED.

ONE MAYFLY AND ONE CADDIS FLY WERE IN THE SAMPLE. D.O. AND TEMPERATURE SUPPORTED WITH A 0.0% VIOLATION OF THE STANDARD. PH VIOLATED 5.1% OF THE TIME.

THE 2007 HABITAT ASSESSMENT IN NASH RUN REVEALED THE HABITAT HAD BEEN MODERATELY IMPACTED. EXPOSURE TO TOXICS POSSIBLY DEGRADED THE STREAM. IMPROVING THE HABITAT COULD IMPROVE THE OVERALL QUALITY OF THE STREAM.

THE OVER ALL HABITAT QUALITY HAS NOT IMPROVED FROM THE 2003 ASSESSMENT.

Detail Report for NORMANSTONE CREEK

ID: DCTNS01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**NORMANSTONE CREEK**	
	Location: NORMANSTONE CREEK FLOWS THROUGH A SMALL RESIDENTIAL PARK AND ENTERS ROCK CREEK FROM THE WEST ABOUT 1000 FEET ABOVE THE MASSACHUSETTS AVENUE BRIDGE BELOW THE ZOO. THE STREAM ORIGINATES AS A STORMDRAIN NEAR GARFIELD AVENUE AND 3RD STREET, NW	**Water Type:** RIVER **Size:** 0.8 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Insufficient Information	Protection and Propagation of Fish, Shellfish and Wildlife
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		

	Secondary Contact Recreation and Aesthetic Enjoyment	
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Cercla NPL (Superfund) Sites	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations	
Hydrostructure Impacts on Fish Passage	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations	
Impacts from Hydrostructure Flow Regulation/modification	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations	
Yard Maintenance	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations	

Comments On:

Overall Assessment

NORMANSTONE CREEK FLOWS THROUGH A SMALL RESIDENTIAL PARK AND ENTERS ROCK CREEK FROM THE WEST ABOUT 1000 FEET ABOVE THE MASSACHUSETTS AVENUE BRIDGE BELOW THE ZOO. THE STREAM ORIGINATES AS A STORMDRAIN NEAR GARFIELD AVENUE AND 3RD STREET, NW. THE 231 ACRE WATERSHED INCLUDES MOST OF THE GROUNDS OF THE WASHINGTON CATHEDRAL AND PART OF THE U.S. NAVAL OBSERVATORY AS WELL AS PARTS OF CLEVELAND AND WOODLEY PARKS. MOST OF THE ACREAGE IS RESIDENTIAL AND LIGHT COMMERCIAL PROPERTY WITH ABOUT 10% PARKLAND. THE STREAM PARALLELS NORMANSTONE PARKWAY AND IS CROSSED SEVERAL TIMES BY SMALL SEWER LINES AND LARGE STORM DRAINS.THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

WHEN THE SITE WAS VISITED FOR BIOLOGICAL ASSESSMENT IN AUGUST 2003, IT WAS DRY. THE BIOLOGICAL ASSESSMENT DID NOT OCCUR. EVALUATION OF NORMANSTONE CREEK'S AQUATIC LIFE SUPPORT USE IS THEREFORE CLASSIFIED AS INSUFFICIENT INFORMATION. NO D.O., TEMPERATURE, AND PH VIOLATIONS OCCURRED DURING THE 2003-2007 STUDY PERIOD.

THE SWIMMABLE AND SECONDARY CONTACT USE WERE NOT SUPPORTED DURING THE 2003-2007 PERIOD OF STUDY. THE SWIMMABLE STANDARD OF 200 MPN/100ML

WAS VIOLATED 69.2% OF THE TIME. THE SECONDARY CONTACT USE WAS VIOLATED 30.8% OF THE TIME.

DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994 BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS. THIS WATERBODY IS NOT SUPPORTING OF FISH CONSUMPTION CRITERIA.

Detail Report for OXON RUN

ID: DCTOR01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**OXON RUN**	
	Location: THIS STREAM ORIGINATES IN PRINCE GEORGES COUNTY, MARYLAND AND FLOWS INTO THE DISTRICT BEFORE IT DIPS BACK INTO MARYLAND JUST BEFORE IT ENTERS OXON COVE	**Water Type:** RIVER **Size:** 3.2 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		
	Protection of Human Health related to Consumption of Fish and Shellfish		

	Secondary Contact Recreation and Aesthetic Enjoyment	
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Channelization	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Hydrostructure Impacts on Fish Passage	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Illegal Dumping	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Illegal Dumps or Other Inappropriate Waste Disposal	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Impacts from Hydrostructure Flow Regulation/modification	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Municipal (Urbanized High Density Area)	Fecal Coliform	
Post-development Erosion and Sedimentation	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Residential Districts	Combination Benthic/Fishes Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Source Unknown	Fecal Coliform	

Comments On:

Overall Assessment

OXON RUN IS A TRIBUTARY OF THE POTOMAC RIVER WHICH DISCHARGES INTO THE RIVER WHERE THE SOUTHEASTERN DISTRICT LINE MEETS OXON COVE. THIS STREAM ORIGINATES IN PRINCE GEORGES COUNTY, MARYLAND AND FLOWS INTO THE DISTRICT BEFORE IT DIPS BACK INTO MARYLAND JUST BEFORE IT ENTERS OXON COVE. THE WATERSHED IS ABOUT 2,650 ACRES OF WHICH 37% IS IN THE DISTRICT. ABOUT 15% OF THE WATERSHED IS FORESTED WITH THE REST RESIDENTIAL AND COMMERCIAL PROPERTY. MOST OF ITS REACH WITHIN THE DISTRICT HAS BEEN CANALIZED AND MOST OF ITS TRIBUTARIES ARE PIPED. IT IS PARALLELED AND CROSSED BY NUMEROUS SEWER LINES OF ALL SIZES.

THE ABOVE DESCRIPTION WAS TAKEN FROM 'BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA,' W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

ALTHOUGH OXON RUN IS PREDOMINANTLY A CONCRETE CHANNEL THROUGHOUT ITS REACH IN THE DISTRICT, THERE ARE TWO RELATIVELY LARGE SEGMENTS WHICH ARE STILL IN THEIR 'NATURAL 'STATE. ONE OF THE SEGMENTS IS NEAR THE END OF THE TRIBUTARY AT THE DISTRICT LINE BEFORE IT REACHES THE POTOMAC RIVER. BECAUSE BIOLOGICAL SAMLPING WAS CONDUCTED AS LOW AS POSSIBLE IN EACH WATERSHED TO INCORPORATE THE CUMULATIVE EFFECTS OF EACH STREAM IMPACTS, OXON RUN WAS SAMPLED IN ONE OF THESE 'NATURAL' AREA. THIS SEGEMENT PRODUCED A MUCH HIGHER HABITAT ASSESSMENT THAN WOULD HAVE BEEN SCORED IN A CHANNELIZED SEGMENT AND RECORDED A BIOLOGICAL ASSESSMENT THAT INDICATED WATER QUALITY INPAIRMENT FROM TOXIC AND ORGANIC SOURCES. OXON RUN IS A LARGE TRIBUTARY BY DISTRICT STANDARDS AND SHARES A MAJORITY OF ITS WATERSHED WITH MARYLAND. IT IS HIGHLY CHANNELIZED AND MOST OF ITS FIRST AND SECOND ORDER TRIBUTARIES ARE PIPED INTO THE MAIN REACH. STORMWATER PIPES DISCHARGE AT NUMEROUS LOCATION ALONG ITS COURSE AND SEVERAL SEWER LINES CROSS AND PARALLEL IT. THERMAL WATER QUALITY POLLUTION IS ALSO MOST LIKELY A SIGNIFICANT IMPACT DURING THE SUMMER SEASON.

THE EVALUATION OF OXON RUN AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2002. OXON RUN WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. THE HBI SCORE SUGGESTS FAIRLY SIGNIFICANT ORGANIC POLLUTION. A HIGH PERCENTAG OF EPT, SUGGEST THE STREAMS HAS SOME SENSITIVE ORGANISMS. THE DOMINANT TAXA WAS COENAGRINIDAE. 42 ORGANISMS WERE FOUND IN THE SAMPLE. D.O. (0.0%-VIOLATION), PH (5.0%-VIOLATION) AND TEMPERATURE (0.0%) FULLY SUPPORTED THE USE. PERIOD OF STUDY FOR THE PHYSICAL PARAMETERS IS 2003-2007.

THE ORGANISMS FOUND DID NOT INDICATE THE APPARENT PRESENCE OF ORGANIC POLLUTANTS. THE EROSION ON THE RIGHT BANK WAS VERY MINIMAL, WHILE EROSION ON THE LEFT BANK WAS MODERATE. ALL MACROINVERTEBRATE COLLECTED WERE ALL VERY TOLERANT TO TOXICS, WHICH WOULD SUGGEST POSSIBLE TOXIC DEGRADATION OF THE STREAM'S INHABITANTS.

THE EVALUATION OF OXON RUN SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE YEAR, SPAN 2003-2007. OXON RUN WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 100% OF THE TIME WHICH RESULTED IN NOT SUPPORTING OF ITS SWIMMABLE USE. OXON RUN WAS NOT IN COMPLIANCE FOR ITS SECONDARY CONTACT USE AT 81.2% THE TIME WHICH RESULTED IN NOT SUPPORTING OF ITS SECONDARY CONTACT USE.

OXON RUN DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED UN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHES OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE OXON RUN IS A TRIBUTARY OF THE POTOMAC RIVER, FISH MAY MIGRATE FOR THE RIVER INTO THIS TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO OXON RUN.

Detail Report for PINEHURST BRANCH

ID: DCTPI01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**PINEHURST BRANCH**	
	Location: PINEHURST BRANCH IS A TRIBUTARY OF ROCK CREEK WHOSE MOUTH IS ABOUT 1,200 FEET NORTH OF THE INTERSECTION OF BINGHAM DRIVE AND BEACH DRIVE NW	**Water Type:** RIVER **Size:** 1.5 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	**Uses**
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation Protection of Human Health related to Consumption of Fish and Shellfish

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		
	Secondary Contact Recreation and Aesthetic Enjoyment		

Source Information

Sources	Associated Causes	Confirmed?

Residential Districts	Combination Benthic/Fishes Bioassessments Fecal Coliform
Yard Maintenance	Combination Benthic/Fishes Bioassessments Fecal Coliform

Comments On:

Overall Assessment

PINEHURST BRANCH STREAM FLOWS FROM A RESIDENTIAL SECTION OF MARYLAND TO ROCK CREEK IN THE DISTRICT. TEN OUTFALLS DISCHARGE TO THIS STREAM. PINEHURST BRANCH IS A TRIBUTARY OF ROCK CREEK WHOSE MOUTH IS ABOUT 1,200 FEET NORTH OF THE INTERSECTION OF BINGHAM DRIVE AND BEACH DRIVE NW. THE STREAM ORIGINATES AT THE DC/MARYLAND LINE IN CHEVY CHASE MANOR, MARYLAND. THE WATERSHED IS ABOUT 70% URBANIZED RESIDENTIAL AND COMMERCIAL.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF PINEHURST BRANCH'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT PERFORMED IN 2003. PINEHURST WAS RATED 'NOT SUPPORTING' OF THIS DESIGNATED USE. THE STREAM'S HBI SCORE INDICATES FAIRLY SIGNIFICANT ORGANIC POLLUTION.

THE DOMINANT TAXA FOUND WAS CHIRONOMIDAE (TOLERANT GENERALIST). HABITAT WAS ALSO MODERATELY IMPAIRED. D.O. (0.0% VIOLATION), PH (0.0%), AND TEMPERATURE (0.0%) FULLY SUPPORTED THE USE'S STANDARDS (BASED ON A RECENT 5-YEAR PERIOD OF STUDY, 2003-2007) . ONLY 17 (A LOW NUMBER) ORGANISMS WERE FOUND IN THE ENTIRE SAMPLE. TOXICS AND ORGANICS ARE POSSIBLY DEGRADING THE STREAM.

PINEHURST BRANCH WAS NOT ASSESSED FOR FISH CONSUMPTION.

THE STREAM DID NOT SUPPORT THE PRIMARY OR SECONDARY CONTACT USES DUE TO VIOLATIONS OF 50.0% AND 16.7%, RESPECTIVELY.

Detail Report for PINEY BRANCH

ID: DCTPY01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**PINEY BRANCH**	
	Location: THIS MINOR STREAM WHICH ENTERS ROCK CREEK FROM THE EAST ABOVE THE NATIONAL ZOO	**Water Type:** RIVER **Size:** 1 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Insufficient Information	Protection and Propagation of Fish, Shellfish and Wildlife
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Fecal Coliform	Primary Contact Recreation Secondary Contact Recreation and Aesthetic Enjoyment	Yes	

Comments On:

Overall Assessment

PINEY BRANCH HAS THE LARGEST WATERSHED OF ANY TRIBUTARY OF ROCK CREEK ENTIRELY IN THE DISTRICT OF COLUMBIA. THIS MINOR STREAM WHICH

ENTERS ROCK CREEK FROM THE EAST ABOVE THE NATIONAL ZOO IS INDICATED ON THE USGS 7.5 MINUTE QUADRANGLE AS A TEMPORARY STREAM RUNNING NEAR THE CENTER OF A STRIP OF FORESTED PARKLAND ABOUT 1,000 YARDS WIDE. THE STREAM HAS A VERY LARGE WATERSHED (2,500 ACRES) COMPARED TO THE ACTUAL STREAM SIZE WHICH IS ATTRIBUTABLE TO THE EXTENSIVE SYSTEM OF COMBINED SEWER/STORM DRAINS THAT COLLECT RUNOFF. DURING PERIODS OF HIGH FLOWS THE EXCESS WATER FROM THESE LINES COMBINE WITH RAW SEWAGE AND ARE DISCHARGED INTO THE STREAM.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

PINEY BRANCH IS A RECIPIENT OF COMBINED SEWER OVERFLOW DURING HEAVY STORM PEAK FLOWS. THIS EFFECT COUPLED WITH THE STORMWATER DRAIN INPUTS CAUSE EPISODIC WATER QUALITY STRESSORS EVIDENCED BY THE DOMINANCE OF CHIRONOMID MIDGE LARVAE. THE WATERSHED ENCOMPASES A RELATIVELY LARGE PRIMARILY RESIDENTIAL AREA WHICH IS MOST LIKELY THE SOURCE OF TOXICS FROM VARIOUS UNIDENTIFIED SOURCES.

AN EVALUATION OF PINEY BRANCH FOR THE AQUATIC LIFE SUPPORT USE IS NOT AVAILABLE FOR THE 2004 REPORTING CYCLE. DUE TO A SCHEDULING OVERSIGHT, THE WATERBODY WAS NOT ASSESSED DURING 2003.

A REVIEW OF PH, TEMPERATURE, AND D.O. DATA OVER THE 2003-2007 PERIOD SHOWED THAT THESE PARAMETERS MET THE INDIVIDUAL WATER QUALITY STANDARD. THE D.O., PH AND TEMPERATURE STANDARDS HAD NO VIOLATIONS.

THE EVALUATION OF PINEY BRANCH SWIMMABLE AND SECONDARY USES UTILIZING DATA COLLECTED FORM 2003-2007 INDICATED NON-SUPPORT OF THE TWO USES. THE SECONDARY CONTACT USE WAS VIOLATED 18.2% OF THE TIME. THE PRIMARY CONTACT USE WAS VIOLATED 63.6% OF THE TIME.

PINEY BRANCH DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED IN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHS OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE PINEY BRANCH IS A TRIBUTARY OF THE POTOMAC RIVER, FISH MAY MIGRATE FROM THE RIVER INTO THE TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO PINEY BRANCH.

Detail Report for POPES BRANCH (HAWES RUN)

ID: DCTPB01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 4A(N/A)

Water Information:	**POPES BRANCH (HAWES RUN)**	
	Location: POPE'S BRANCH, THE LOWER REACHES OF WHICH WERE ONCE CALLED HAWES RUN, DISCHARGES INTO THE ANACOSTIA RIVER BY WAY OF A STORMWATER PIPE ABOVE THE EASTERN FOOTING OF THE PENNSYLVANIA AVENUE SOUSA BRIDGE	**Water Type:** RIVER **Size:** 1.1 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Fully Supporting	Secondary Contact Recreation and Aesthetic Enjoyment
	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		
	Protection of Human Health related		

	to Consumption of Fish and Shellfish	
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Channelization	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Hydrostructure Impacts on Fish Passage	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Illegal Dumping	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Illegal Dumps or Other Inappropriate Waste Disposal	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Residential Districts	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Source Unknown	Fecal Coliform	

Comments On:

Overall Assessment

POPE'S BRANCH, THE LOWER REACHES OF WHICH WERE ONCE CALLED HAWES RUN, DISCHARGES INTO THE ANACOSTIA RIVER BY WAY OF A STORMWATER PIPE ABOVE THE EASTERN FOOTING OF THE PENNSYLVANIA AVENUE SOUSA BRIDGE. THE SURFACE PORTION OF THE STREAM ORIGINATES NEAR TEXAS AVENUE AND NASH STREET, SE. THE WATERSHED OF ABOUT 210 ACRES INCLUDES A FORESTED SECTION OF UP TO 400 FEET WIDE CALLED POPE'S BRANCH PARK AND ALL OF FORT DAVIS. THE FORESTED WATERSHED ACCOUNTS FOR ABOUT 15% WITH THE REMAINDER RESIDENTIAL AND LIGHT COMMERCIAL PROPERTY. THE STREAM RECEIVES NUMEROUS STORMWATER DISCHARGES ALONG ITS REACH AND IS

PARALLELED AND CROSSED BY MANY SMALL SEWER LINES.

THE ABOVE DESCRIPTION WAS TAKEN FROM 'BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA,' W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF SUPPORT USES ARE NOT SUPPORTED BASED ON A FIVE YEAR STATISTICAL EVALUATION 2003-2007 OF CONVENTIONAL AND BACTERIAL WATER QUALITY DATA COLLECTED BY THE WQMB. DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994 BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS. THIS WATERBODY IS NOT SUPPORTING FISH CONSUMPTION CRITERIA.

THE EVALUATION OF THIS WATERBODY'S SWIMMABLE AND SECONDARY CONTACT USES IS BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND ANALYZED OVER THE RECENT FIVE YEAR PERIOD, 2003-2007. WITH AN AVERAGE FECAL COUNT OF 805 MPN/100ML, THIS STREAM DID NOT SUPPORT ITS SWIMMABLE USE (200MPN/100ML) 30.4% OF THE TIME. ITS SECONDARY CONTACT USE VIOLATED (1000MPN/100ML) 6.5% OF THE TIME; IT'S SUPPORTING.

A LARGE AMOUNT SEDIMENT WAS PRESENT DURING the 2007 HABITAT ASSESSMENT. LEFT BANK STABILITY, FACING UPSTREAM, WAS INCONSISTENT THROUGHOUT.

THE EVALUATION OF POPE'S BRANCH AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT PROTOCOLS PERFORMED IN 2003. POPE'S BRANCH WAS RATED 'NOT SUPPORTING' OF THIS DESIGNATED USE. THE HBI SCORE SUGGESTS SOME ORGANIC POLLUTION. NO SENSITIVE ORGANISMS WERE FOUND (EPT). A HIGH PERCENTAGE OF GATHERER-COLLECTOR ORGANISMS SUGGEST POLLUTANTS, BECAUSE THEY ARE GENERALIST AND CAN THRIVE IN POLLUTED WATER. ALL 75 METERS OF THE HABITAT WERE SEVERELY IMPAIRED. THE DOMINANT TAXA WAS OLIGOCHAETA (WHICH SUGGEST SEWAGE LOVING ORGANISIMS). 39 ORGANISMS FOUND IN THE ENTIRE SAMPLE. HABITAT AND TOXICS ARE THE POSSIBLE CAUSES FOR DEGRADATION. A REVIEW OF D.O.TEMPERATURE AND PH DATA COLLECTED OVER THE RECENT FIVE YEAR STUDY PERIOD, 2003-2007, WERE INCOMPLIANCE WITH THE WATER QUALITY STANDARDS.

Detail Report for PORTAL BRANCH

ID: DCTPO01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**PORTAL BRANCH**	
	Location: PORTAL BRANCH FLOWS FROM MARYLAND INTO THE NORTHERN CORNER OF THE DISTRICT TO FENWICK BRANCH IN THE DISTRICT BEFORE JOINING ROCK CREEK	**Water Type:** RIVER **Size:** 0.5 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation Protection of Human Health related to Consumption of Fish and Shellfish

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and Aesthetic Enjoyment	Yes	

Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Illegal Dumping	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Illegal Dumps or Other Inappropriate Waste Disposal	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Municipal (Urbanized High Density Area)	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	
Post-development Erosion and Sedimentation	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Particle distribution (Embeddedness)	

Comments On:

Overall Assessment

PORTAL BRANCH FLOWS FROM MARYLAND INTO THE NORTHERN CORNER OF THE DISTRICT TO FENWICK BRANCH IN THE DISTRICT BEFORE JOINING ROCK CREEK. PORTAL BRANCH JOINS FENWICK BRANCH ABOUT 120 FEET NORTH OF FENWICK'S MOUTH AT ROCK CREEK. THE SURFACE STREAM IS ENTIRELY WITHIN THE DISTRICT BUT ONLY 36% OF ITS WATERSHED IS WITHIN DC'S BORDERS. A TOTAL OF 10 OUTFALLS DISCHARGE INTO THIS STREAM SIX WITHIN THE DISTRICT. THE SURFACE PORTION OF THE STREAM IS BUFFERED BY 100 FEET OF PARKLAND AND IS PARALLELED BY SEWAGE LINES. THE 198 ACRE WATERSHED IS A MIX OF COMMERCIAL AND RESIDENTIAL PROPERTY.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA," W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

PORTAL BRANCH IS LIKELY TO BE SIGNIFICANTLY IMPACTED BY ORGANIC AND TOXIC EFFECTS. THE WATERSHED WITHIN THE DISTRICT OF COLUMBIA IS RESIDENTIAL AND PARKLAND PROPERTY. WHILE THE MARYLAND PORTION HAS INDUSTRIAL AND COMMERCIAL USES.

THE EVALUATION OF PORTAL BRANCH AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2002. PORTAL BRANCH WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. THE HBI SCORE SUGGESTS SIGNIFICANT ORGANIC POLLUTION. THE DOMINANT TAXA IDENTIFIED WAS GASTROPODA, WHICH IS VERY TOLERANT TO TOXIC WATER QUALITY. HABITAT IN THE STREAM WAS SEVERELY IMPAIRED. DO, PH AND TEMPERATURE READINGS FULLY SUPPORTED ALUS OVER THE 2003-2007 PERIOD OF STUDY. ONLY 21 ORGANISMS WERE FOUND IN THE ENTIRE SAMPLE. SIX STORM DRAINS THAT DISCHARGE IN DC AFFECT PORTAL BRANCH. ORGANICS AND HABITAT ARE POSSIBLY THE CAUSE OF DEGRADATION TO THE STREAM.

THE EVALUATION OF PORTAL BRANCH SWIMMABLE AND SECONDARY USES IS BASED ON DATA GATHERED DURING 2003-2007. THE WATERBODY DID NOT SUPPORT EITHER USE DUE TO A 57.1% VIOLATION OF THE PRIMARY CONTACT USE AND 28.6% VIOLATION OF THE SECONDARY CONTACT USE.

FISH CONSUMPTION WAS NOT ASSESSED FOR PORTAL BRANCH.

Detail Report for POTOMAC DC

ID: DCPMS00E_01 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	POTOMAC DC	
	Location: HAINES POINT TO WOODROW WILSON BRIDGE (PRINCE GEORGE'S COUNTY MARYLAND LINE) (PMS29 TO PMS44), TIDAL FRESHWATER. RIVER PASSES THROUGH AN URBAN AREA OF COMMERCIAL BUILDINGS, MILITARY BASES AND MUNICIPAL FACILITIES.	**Water Type:** ESTUARY **Size:** 3.05 SQUARE MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Fully Supporting	Navigation Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and Aesthetic Enjoyment
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish

Types of Assessment

Assessment Type	Uses	Assessment Confidence
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Fecal Coliform	Primary Contact Recreation	Yes	

Source Information

Sources	Associated Causes	Confirmed?
Combined Sewer Overflows	Fecal Coliform	
Discharges from Municipal Separate Storm Sewer Systems	Fecal Coliform	

(MS4)

Municipal Point Source Discharges	Fecal Coliform

Comments On:

Overall Assessment

THE POTOMAC ESTUARY SEGMENT UNDER REVIEW EXTENDS FROM HAINS POINT TO WOODROW WILSON BRIDGE. THIS SEGMENT IS AFFECTED BY HIGH FECAL COLIFORM LEVELS, BLUE PLAINS OUTFALL LOADINGS, AND OCCASIONAL MAINTENANCE ACTIVITIES AT WOODROW WILSON BRIDGE. AMBIENT MONITORING DATA FROM 2003 TO 2007 WERE ANALYZED FOR THE USE SUPPORT DETERMINATIONS.

FOR THE PERIOD UNDER STUDY, TEMPERATURE, DISSOLVED OXYGEN, AND PH OBSERVATIONS MET AQUATIC LIFE USE SUPPORT CRITERIA. A REVIEW OF THE DATA FOR THIS SEGMENT SHOWED THAT 9.6% OF THE TIME PH OBSERVATIONS WERE IN VIOLATION OF ITS AQUATIC LIFE SUPPORT STANDARD. ELEVATED PH COULD BE ATTRIBUTED TO EITHER ITS SEASONAL PATTERN OR THE INTERACTION OF ELEVATED TEMPERATURES AND INCREASED PHYTOPLANKTON ACTIVITY. DISSOLVED OXYGEN AND TEMPERTURE OBSERVATIONS WERE GENERALLY IN FULL COMPLIANCE WITH WATER QUALITY STANDARDS.

SIMILARLY, 26.5% OF FECAL COLIFORM BACTERIA LEVELS WERE IN VIOLATION OF THE STANDARD FOR THE PRIMARY CONTACT RECREATION USE (SWIMMABLE) 200 MPN/100 ML, AND 2.6% IN VIOLATION OF THE SECONDARY CONTACT RECREATION STANDARD OF 1000 MPN/100ML. AS A RESULT THIS POTOMAC SEGMENT DID NOT SUPPORT ITS SWIMMABLE USE AND FULLY SUPPORTED ITS SECONDARY CONTACT RECREATION USE. EVENTS THAT COULD ACCOUNT FOR THE NON-COMPLIANCE IN FECAL COLIFORM BACTERICA INCLUDE COMBINED SEWER OVERFLOWS AND URBAN RUNOFF.

EVENTS DURING THE REVIEW PERIOD WITH POTENTIAL INFLUENCE ON THIS WATERBODY SEGMENT OF THE POTOMAC WATER QUALITY INCLUDE: THE BNR IMPLEMENTATION AT BLUE PLAINS, AND MARINA ACTIVITIES.

DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994, BY THE D.C. COMMISSONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS.

BECAUSE OF THE ABOVE USE SUPPORT DECISIONS, THIS SEGMENT OF THE POTOMAC DID NOT SUPPORT ITS OVERALL USE FOR WATERS WITH MULTIPLE USES.

REPORTS WITH MORE INFORMATION INCLUDE:

* IMPACT OF DREDGING, ICPRB, FISH TISSUE SURVEY, ICPRB, SEDIMNET TOXICITY SURVEY, ICPRB; WETLAND ASSESSMENT, MWCOG, PETROLEUM OIL SPILL, VERSAR

* A DISSOLVED OXYGEN STUDY OF THE UPPER POTOMAC ESTUARY-FINAL REPORT, MWCOG; POTOMAC RIVER WATER QUALITY 1982-1986 - TRENDS AND ISSUES IN THE METROPOLITAN WASHINGTON AREA, MWCOG.
* AWRC. 1997. DRAFT ANACOSTIA WATERSHED RESTORATION PROGRESS AND

CONDITIONS REPORT 1990-1996. DEPT. OF ENVIRONMENTAL PROGRAM, MWCOG. WASH., DC.
* SEDIMENT CONTAMINATION STUDIES OF THE POTOMAC AND ANACOSTIA RIVER AROUND THE DISTRICT OF COLUMBIA, ICPRB, 1992.
* FISH TISSUE SURVEY, ICPRB, VELINSKY, 1993.
* EMERGENT WETLAND ESTABLISHMENT UNDER DIFFERING HABITAT CONDITIONS IN THE ANACOSTIA AND POTOMAC RIVER BASIN, HORN POINT ENVIRONMENTAL LABORATORY, CEES AND MWCOG, 1991.

Detail Report for POTOMAC DC

ID: DCPMS00E_02 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	POTOMAC DC	
	Location: KEY BRIDGE, GEORGETOWN, TO HAINS POINT (PMS10 TO PMS 29), TIDAL FRESHWATER. RIVER PASSES THROUGH AN URBAN AREA OF COMMERCIAL AND RESIDENTIAL BUILDINGS AND NATIONAL PARK SERVICE LAND.	**Water Type:** ESTUARY **Size:** 1.38 SQUARE MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Fully Supporting	Navigation Secondary Contact Recreation and Aesthetic Enjoyment
	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish

Types of Assessment

Assessment Type	Uses	Assessment Confidence
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Fecal Coliform	Primary Contact Recreation	Yes	

Source Information

Sources	Associated Causes	Confirmed?
Combined Sewer Overflows	Fecal Coliform	
Discharges from Municipal Separate Storm Sewer Systems	Fecal Coliform	

(MS4)

Municipal Point Source Discharges	Fecal Coliform
Source Unknown	Fecal Coliform

Comments On:

Overall Assessment

THE MID-TIDAL POTOMAC WATERBODY SEGMENT EXTENDS FROM KEY BRIDGE TO HAINES POINT. THIS SEGMENT OF THE POTOMAC IS INFLUENCED BY HIGH FECAL COLIFORM BACTERIA LEVELS, OCCASSIONAL HIGH PH LEVELS, AND CONTAMINATED FISH TISSUE. FECAL AMBIENT MONITORING DATA FROM 2003 TO 2007 WERE ANALYZED TO MAKE USE SUPPORT DETERMINATIONS FOR THE PERIOD UNDER REVIEW.

THIS SEGMENT OF THE POTOMAC IS NOT SUPPORTING ITS AQUATIC LIFE USE. DIURNAL MONITORING DATA COLLECTED DURING 2003-2007 WAS USED TO DETERMINE USE SUPP0RT. pH WAS VIOLATED 14.5% , D.O AND TEMPERATURE WERE NOT VIOLATED AND DURING THE ASSESSMENT PERIOD.

23.7% OF FECAL COLIFORM LEVELS WERE IN VIOLATION OF THE PRIMARY CONTACT RECREATION (SWIMMABLE) STANDARD OF 200 MPN/100 ML, AND 8.8% WERE IN VIOLATION OF THE SECONDARY CONTACT RECREATION STANDARD OF 1000 MPN/100 ML. SECONDARY CONTACT USE IS SUPPORTED.

THIS POTOMAC SEGMENT DID NOT SUPPORT THE FISH CONSUMPTION USE. DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994, BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS.

SEGMENT #2 FULLY SUPPORTED ITS NAVIGATION USE.

BECAUSE OF THE ABOVE USE SUPPORT DECISIONS, THE MID-TIDAL POTOMAC DID NOT SUPPORT ITS OVERALL SUPPORT USE CLASSIFICATION.

SIMILARLY, SURVEYS CONDUCTED DURING THE PERIOD UNDER REVIEW REVEAL THE PRESENCE OF TOXICS IN SEDIMENTS. FISH TISSUE OF SAMPLES OF CERTAIN SPECIES SHOW ELEVATED LEVELS OF CONTAMINANTS, INCLUDING CHLORDANE AND PCBs. BIOLOGICAL SAMPLES FROM THE SITE SUGGEST A SEVERELY STRESSED BENTHIC COMMUNITY. STRESSED CONDITIONS COULD BE ATTRIBUTED TO URBAN RUNOFFS FROM UPSTREAM AND POLLUTED STREAMS, CSO EVENTS AND IMPACT FROM ADJACENT INDUSTRIAL FACILITIES.

REPORTS CONTAINING MORE INFORMATION INCLUDE: POTOMAC RIVER WATER QUALITY 1982-1986 - TRENDS AND ISSUES IN THE METROPOLITAN WASHINGTON, D.C.; IMPACT OF DREDGING, ICPRB; FISH TISSUE SURVEY, ICPRB; SEDIMENT TOXICITY SURVEY, ICPRB; WETLAND ASSESSMENT, MWCOG; PETROLEUM OIL SPILL, VERSAR.

REPORTS WITH MORE INFORMATION INCLUDE:
* SEDIMENT CONTAMINATION STUDIES OF THE POTOMAC AND ANACOSTIA RIVER

AROUND THE DISTRICT OF COLUMBIA, ICPRB, 1992.
* FISH TISSUE SURVEY, ICPRB, VELINSKY, 1993.
* EMERGENT WETLAND ESTABLISHMENT UNDER DIFFERING HABITAT CONDITIONS IN THE ANACOSTIA AND POTOMAC RIVER BASIN, HORN POINT ENVIRONMENTAL LABORATORY, CEES AND MWCOG, 1991.

Detail Report for POTOMAC DC

ID: DCPMS00E_03 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	POTOMAC DC	
	Location: CHAIN BRIDGE (MONTGOMERY COUNTY MARYLAND LINE), JUST BELOW FALL LINE, TO KEY BRIDGE (PMS01 TO PMS10), TIDAL FRESHWATER. BORDERED BY NATIONAL PARK SERVICE LAND.	**Water Type:** ESTUARY **Size:** 0.4 SQUARE MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Fully Supporting	Navigation Secondary Contact Recreation and Aesthetic Enjoyment
	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish

Types of Assessment

Assessment Type	Uses	Assessment Confidence
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Fecal Coliform	Primary Contact Recreation	Yes	

Source Information

Sources	Associated Causes	Confirmed?
Combined Sewer Overflows	Fecal Coliform	
Municipal (Urbanized High Density Area)	Fecal Coliform	

Comments On:

Overall Assessment

THIS WATERBODY SEGMENT INCLUDES THE UPPER TIDAL POTOMAC FROM CHAIN BRIDGE, D.C. BORDER, TO KEY BRIDGE (GEORGETOWN). THIS SEGMENT IS AFFECTED BY HIGH COLIFORM BACTERIA LEVELS, TOXICS IN SEDIMENTS, AND FISH CONTAMINATED WITH TOXICS. FECAL AMBIENT WATER QUALITY DATA FROM 2003 TO 2007 WERE ANALYZED FOR USE SUPPORT DETERMINATIONS.

A REVIEW OF THE DATA FOR THIS SEGMENT SHOWED THAT 13.7% OF THE TIME PH OBSERVATIONS WERE IN VIOLATION OF ITS AQUATIC LIFE SUPPORT STANDARD. ELEVATED PH COULD BE ATTRIBUTED TO EITHER ITS SEASONAL PATTERN OR THE INTERACTION OF ELEVATED TEMPERATURES AND INCREASED PHYTOPLANKTON ACTIVITY. DISSOLVED OXYGEN AND TEMPERTURE OBSERVATIONS WERE IN FULL COMPLIANCE OF WATER QUALITY STANDARDS.

FECAL COLIFORM BACTERIA OBSERVATIONS DID NOT SUPPORT THE PRIMARY CONTACT RECREATION (SWIMMABLE) USE OF 200 MPN/100ML BECAUSE IT VIOLATED THIS STANDARD 15.7% OF THE TIME. THIS SEGMENT SUPPORTED ITS SECONDARY CONTACT RECREATION USE OF 1000 MPN/100ML AT 3.9%. ELEVATED FECAL COLIFORM BACTERIA LEVELS COULD BE THE RESULT OF URBAN RUNOFF AND COMBINED SEWER OVERFLOWS.

SEGMENT #3 DID NOT SUPPORT THE FISH CONSUMPTION USE. DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994, BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS.

SURVEYS CONDUCTED OVER THE PERIOD OF REVIEW REVEAL THE PRESENCE OF TOXICS IN SEDIMENT. FISH TISSUE OF SAMPLES OF CERTAIN SPECIES SHOWED ELEVATED LEVELS OF CONTAMINANTS INCLUDING CHLORDANE AND PCBS. BIOLOGICAL SAMPLES FROM SELECTED SITES SUGGEST A SEVERELY STRESSED BENTHIC COMMUNITY. THE STRESSED CONDITION COULD BE ATTRIBUTED TO URBAN STORM WATER RUNOFFS FROM UPSTREAM AND POLLUTED STREAMS, CSO EVENTS AND IMPACT FROM ADJACENT INDUSTRIAL FACILITIES.

REPORTS WITH MORE INFORMATION INCLUDE:

* SEDIMENT CONTAMINATION STUDIES OF THE POTOMAC AND ANACOSTIA RIVER AROUND THE DISTRICT OF COLUMBIA, ICPRB, 1992.
* FISH TISSUE SURVEY, ICPRB, VELINSKY, 1993.
* EMERGENT WETLAND ESTABLISHMENT UNDER DIFFERING HABITAT CONDITIONS IN THE ANACOSTIA AND POTOMAC RIVER BASIN, HORN POINT ENVIRONMENTAL LABORATORY, CEES AND MWCOG, 1991.

Detail Report for ROCK CREEK DC

ID: DCRCR00R_01 **State:** DC - 2008 **Single Cat.(User Cat.):** 4A(N/A)

Water Information:	ROCK CREEK DC	
	Location: THE SOUTHERN OR LOWER SEGMENT OF ROCK CREEK WHICH EXTENDS FROM IT'S MOUTH AT THE POTOMAC RIVER IN GEORGETOWN UP TO JUST ABOVE THE NATIONAL ZOO BELOW THE PIERCE MILL DAM	**Water Type:** RIVER **Size:** 3.6 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Fully Supporting	Navigation
	Not Supporting	Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment Primary Contact Recreation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		
	Protection of Human Health related to Consumption of Fish and Shellfish		

	Secondary Contact Recreation and Aesthetic Enjoyment	
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Combined Sewer Overflows	Fecal Coliform	
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Post-development Erosion and Sedimentation	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Residential Districts	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Wet Weather Discharges (Non-Point Source)	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	

Comments On:

Overall Assessment

THE SOUTHERN SEGMENT OF ROCK CREEK EXTENDING FROM ITS MOUTH AFTER THE POTOMAC RIVER TO NATIONAL ZOO. THE SOUTHERN OR LOWER SEGMENT OF ROCK CREEK WHICH EXTENDS FROM ITS MOUTH AT THE POTOMAC RIVER IN GEORGETOWN UP TO JUST ABOVE THE NATIONAL ZOO BELOW THE PIERCE MILL DAM. THE ENTIRE REACH OF THIS SEGMENT OF THE TRIBUTARY IS ENCLOSED BY ROCK CREEK PARK. THIS TRIBUTARY IS DESIGNATED AS A "SPECIAL WATERS OF THE DISTRICT OF COLUMBIA" UNDER THE DISTRICT'S WATER QUALITY STANDARDS.

THE LOWER ROCK CREEK SUFFERS FROM A COMBINATION OF STRESSORS BY ITS TRIBUTARY STREAMS. THESE TRIBUTARY STREAMS ARE PREDOMINANTLY BUFFERED BY PARKLAND BUT STILL RECIEVE STORMWATER DISCHARGES FROM

URBAN IMPERVIOUS SURFACES AS WELL AS PROBABLE LEEKAGE FROM UNIDENTIFIED SEWER LINES CROSSING THE STREAMS. NUTRIENT ENRICHMENT, PHYSICAL HABITAT PROBLEMS AND TOXIC EFFECTS ALL MAY BE ATTRIBUTED TO THESE CAUSES.

THE EVALUATION OF LOWER ROCK CREEK'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2003. ROCK CREEK WAS FOUND TO BE PARTIALLY SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION.

HBI SUGGEST THERE MAY BE FAIRLY SIGNIFICANT ORGANIC POLLUTION. NO SENSITIVE ORGANISMS WERE FOUND (EPT). CHIRONOMIDAE (GENERALIST THAT CAN THRIVE IN POLLUTED WATERS) WERE THE DOMINANT TAXA. THE HABITAT IS MODERATELY IMPAIRED. DO, PH AND TEMPERATURE STANDARDS WERE FULLY SUPPORTED. ONLY 10 ORGANISMS FOUND IN THE ENTIRE SAMPLE. THE DOMINANT TAXA FOR 2002 (HYDROPSYCHIDAE) HAS BEEN REPLACED BY CHIRONOMIDAE. ONLY 2 TAXA WERE FOUND IN THIS STREAM. THE WET WEATHER OF 2004 HAS POSSIBLY CAUSED AN INFLUX OF TOXICS TO DEGRADE THE STREAM.

DURING THE 2007 HABITAT ASSESSMENT IS HAS BEEN NOTED IN THAT PORTION OF LOWER ROCK CREEK THE CANOPY HAS BEEN SOMEWHAT REDUCED FROM PREVIOUS YEARS.

THE EVALUATION OF LOWER ROCK CREEK'S SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE- YEAR SPAN 2003- 2007. ROCK CREEK WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 73.9% OF THE TIME. ITS SECONDARY CONTACT USE 26.1% OF THE TIME. AS A RESULT, LOWER ROCK CREEK DID NOT SUPPORT EITHER IT'S SWIMMABLE OR 2ND CONTACT RECREATION USES.

LOWER ROCK CREEK DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED IN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHS OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE ROCK CREEK IS A TRIBUTARY OF THE POTOMAC RIVER, FISH MAY MIGRATE FROM THE RIVER INTO THE TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO ROCK CREEK.

Detail Report for ROCK CREEK DC

ID: DCRCR00R_02 **State:** DC - 2008 **Single Cat.(User Cat.):** 4A(N/A)

Water Information:	ROCK CREEK DC	
	Location: THE NORTHERN SEGMENT OF ROCK CREEK EXTENDING FROM THE PIERCE MILL DAM ABOVE THE NATIONAL ZOO AND KLINGLE ROAD TO THE DISTRICT/MARYLAND LINE. THIS SEGMENT OF ROCK CREEK FLOWS ABOVE THE FALL LINE AND IS SURROUNDED BY ROCK CREEK PARK.	**Water Type:** RIVER **Size:** 5.9 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Fully Supporting	Navigation
	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment

Types of Assessment

Assessment Type	Uses	Assessment Confidence
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	
	Protection and Propagation of Fish, Shellfish and Wildlife		
	Protection of Human Health related to Consumption of Fish and Shellfish		

	Secondary Contact Recreation and Aesthetic Enjoyment	
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Combined Sewer Overflows	Fecal Coliform	
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Hydrostructure Impacts on Fish Passage	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Residential Districts	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Wet Weather Discharges (Non-Point Source)	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Yard Maintenance	Combination Benthic/Fishes Bioassessments Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	

Comments On:

Overall Assessment

UPPER ROCK CREEK SUFFERS FROM A COMBINATION OF STRESSORS CONTRIBUTED BY ITS TRIBUTARY STREAMS. THESE TRIBUTARY STREAMS ARE PREDOMINANTLY BUFFERED BY PARKLAND BUT STILL RECEIVE STORMWATER DISCHARGES FROM URBAN IMPERVIOUS SURFACES AS WELL AS PROBABLE LEEKAGE FROM UNIDENTIFIED SEWER LINES CROSSING THE STREAMS. NUTRIENT ENRICHMENT, PHYSICAL HABITAT PROBLEMS AND TOXIC EFFECTS ALL MAY BE ATTRIBUTED TO THESE CAUSES.

THE EVALUATION OF UPPER ROCK CREEK'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2003. THE UPPER ROCK CREEK WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. HBI SUGGESTS FAIRLY SIGNIFICANT ORGANIC POLLUTION. EPT PRESENT, BUT IN A VERY LOW PERCENTAGE. CHIRONOMIDAE (GENERALIST THAT CAN THRICE IN POLLUTED WATERS) WERE THE DOMINANT TAXA. HABITAT IS MODERATELY IMPAIRED. DO (3.7 % VIOLATION), PH AND TEMPERATURE GENERALLY FULLY SUPPORTED THE ALUS STANDARD. ONLY 11 ORGANISMS WERE FOUND IN THE ENTIRE SAMPLE. THE DOMINANT TAXA FOR 2002 (HYDROPSYCHIDAE) HAS BEEN REPLACED BY CHIRONOMIDAE. ONLY 3 TAXA WERE FOUND IN THE STREAM. WET WEATHER OF 2003 HAS POSSIBLY CAUSED AS INFLUX OF TOXICS TO DEGRADE THE STREAM.

DURING THE 2007 HABITAT ASSESSMENT IT WAS NOTED THAT THE LEFT BANK RIPARIAN BUFFER WAS BEING ENHANCED WITH VEGETATION.

THE EVALUATION OF UPPER ROCK CREEK SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE-YEAR SPAN 2003-2007. ROCK CREEK WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 76.6% OF THE TIME. ITS SECONDARY CONTACT USE 42.5% OF THE TIME. AS A RESULT, UPPER ROCK CREEK DID NOT SUPPORT EITHER ITS SWIMMABLE OR 2ND CONTACT RECREATION USES.

UPPER ROCK CREEK WAS NOT ASSESSED FOR FISH CONSUMPTION.

Detail Report for SOAPSTONE CREEK

ID: DCTSO01R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**SOAPSTONE CREEK**	
	Location: SOAPSTONE CREEK IS A TRIBUTARY OF BROAD BRANCH WHICH JOINS BROAD BRANCH JUST ABOVE ITS CONFLUENCE WITH ROCK CREEK NEAR DUMBARTON OAKS, NW	**Water Type:** RIVER **Size:** 0.8 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
BIOLOGICAL	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Alterations in wetland habitats	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and Aesthetic Enjoyment	Yes	

Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Illegal Dumping	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Illegal Dumps or Other Inappropriate Waste Disposal	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Impacts from Hydrostructure Flow Regulation/modification	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Residential Districts	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Fecal Coliform Particle distribution (Embeddedness)	
Yard Maintenance	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Fecal Coliform Particle distribution (Embeddedness)	

Comments On:

Overall Assessment

SOAPSTONE CREEK IS A TRIBUTARY OF BROAD BRANCH WHICH JOINS BROAD BRANCH JUST ABOVE ITS CONFLUENCE WITH ROCK CREEK NEAR DUMBARTON OAKS, NW. SIX OUTFALLS DISCHARGE INTO THE STREAM. THE 550 ACRE WATERSHED IS MOSTLY URBAN WITH 15% PARKLAND AND FOREST AT ITS LOWER REACHES. ONLY ABOUT 20% OF THE WATERSHED, ALL IN ITS LOWER REACHES, IS NATURALLY DRAINED. BETWEEN THE MAIN STORM DRAIN DISCHARGE AND ITS MOUTH, SOAPSTONE CREEK RUNS THROUGH A STEEP-SIDED, HEAVILY-WOODED VALLEY ABOUT 500 YARDS WIDE.

THE ABOVE DESCRIPTION WAS TAKEN FROM "BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY OF THE DISTRICT OF COLUMBIA, "W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF SOAPSTONE CREEK'S AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2003. SOAPSTONE CREEK WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. THE HABITAT SCORE SUGGEST A FAIRLY SIGNIFICANT ORGANIC POLLUTION PROBLEM IN THE STREAM.

THE DOMINANT TAXA FOUND WAS CHIRONOMIDAE (TOLERANT GENERALIST). THE STREAM'S HABITAT WAS MODERATELY IMPAIRED. D.O., PH, AND TEMPERATURE PARAMETERS FULLY SUPPORTED THE USE DURING THE 2003-2007 DATA COLLECTION PERIOD. 27 ORGANISMS WERE FOUND IN ENTIRE SAMPLE. THE STREAM POSSIBLY SUFFERS FROM ORGANIC AND TOXIC POLLUTION.

THE EVALUATION OF SOAPSTONE CREEK'S SWIMMABLE AND SECONDARY USES DETERMINED THAT THE PRIMARY CONTACT USE WAS VIOLATED 71.4% OF THE TIME DURING 2003-2007. THE SECONDARY CONTACT USE WAS VIOLATED 42.8% DURING THE SAME PERIOD OF STUDY. NEITHER SUPPORTED THEIR USE.

FISH CONSUMPTION WAS NOT ASSESSED FOR SOAPSTONE CREEK.

Detail Report for TEXAS AVENUE TRIBUTARY

ID: DCTTX27R_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 4A(N/A)

Water Information:	**TEXAS AVENUE TRIBUTARY**	
	Location: TEXAS AVENUE IS AN ANACOSTIA RIVER TRIBUTARY OF A NOW ALMOST COMPLETELY SUBTERRANEAN STREAM. THE SURFACE PORTION OF THE STREAM ORIGINATES FROM A STORM DRAIN SOUTH OF THE INTERSECTION OF PENNSYLVANIA AVENUE AND BRANCH AVENUE, SE	**Water Type:** RIVER **Size:** 0.2 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Fecal Coliform	Primary Contact Recreation	Yes	

	Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment	
Oil and Grease	Primary Contact Recreation	Yes
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Illegal Dumping	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Illegal Dumps or Other Inappropriate Waste Disposal	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Impacts from Hydrostructure Flow Regulation/modification	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Loss of Riparian Habitat	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness)	
Residential Districts	Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash	

Fecal Coliform
Other flow regime alterations
Particle distribution (Embeddedness)

Comments On:

Overall Assessment

TEXAS AVENUE IS AN ANACOSTIA RIVER TRIBUTARY OF A NOW ALMOST COMPLETELY SUBTERRANEAN STREAM. THE SURFACE PORTION OF THE STREAM ORIGINATES FROM A STORM DRAIN SOUTH OF THE INTERSECTION OF PENNSYLVANIA AVENUE AND BRANCH AVENUE, SE. THE WATERSHED OF 110 ACRES IS ABOUT 40% FORESTED PARKLAND AND 60% RESIDENTIAL AND LIGHT COMMERCIAL PROPERTY. ONE LARGE STORMWATER OUTFALL DISCHARGES INTO THE STREAM WHILE SEVERAL SEWER LINES PARALLEL AND CROSS IT AS WELL.

THE ABOVE DESCRIPTION WAS TAKEN FROM 'BIOLOGICAL WATER QUALITY OF THE SURFACE TRIBUTARY STREAMS OF THE DISTRICT OF COLUMBIA,' W.C. BANTA, THE AMERICAN UNIVERSITY, 1993.

THE EVALUATION OF TEXAS AVENUE TRIBUTARY AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2002. TEXAS AVENUE TRIBUTARY WAS FOUND TO BE NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. THE STREAM'S HBI SCORE SUGGESTS SOME ORGANIC POLLUTION. A HIGH PERCENTAGLE OF GATHERER-COLLECTOR ORGANISMS SUGGESTS TOXIC AND ORGANIC POLLUTANTS, BECAUSE THEY ARE GENERALIST AND CAN THRIVE IN POLLUTED WATERS. NO SENSITIVE ORGANISMS WERE FOUND (EPT). THE DOMINANT TAXA SEEN WAS OLIGOCHAETA, (SEWAGE LOVING ORGANISMS). D.O. (0.0% VIOLATION), PH (5.5%), AND TEMPERATURE (0.0% VIOLATION) SUPPORTED THE AQUATIC LIFE SUPPORT USE FOR THE 2003-2007 DATA COLLECTION PERIOD. THE STREAM'S HABITAT WAS SEVERELY IMPAIRED. 11 ORGANISMS WERE FOUND IN THE SAMPLE COLLECTED. THIS STREAM WILL HAVE TO BE EVALUATED FOR WAYS TO PREVENT FURTHER BANK EROSION.

THE EVALUATION OF TEXAS AVENUE TRIBUTARY SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE-YEAR SPAN 2003-2007. TEXAS AVENUE TRIBUTARY WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 42.8% OF THE TIME. ITS SECONDARY CONTACT USE 14.3% OF THE TIME. AS A RESULT, TEXAS AVENUE TRIBUTARY DID NOT SUPPORT ITS SWIMMABLE OR SECONDARY CONTACT RECREATION USES.

TEXAS AVENUE TRIBUTARY DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED IN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCHS OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE TEXAS AVENUE TRIBUTARY IS A TRIBUTARY OF THE ANACOSTIA RIVER, FISH MAY MIGRATE FROM THE RIVER INTO THE TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO TEXAS AVENUE TRIBUTARY.

THIS TRIBUTARY WAS ASSESSED AS HAVING A POTENTIAL ORGANIC ENRICHMENT/LOW DISSOLVED OXYGEN WATER QUALITY IMPAIRMENT. THIS DETERMINATION WAS BASED ON A BENTHIC MACROINVERTEBRATE BIOLOGICAL ASSESSMENT WHICH FOUND A DOMINANCE OF THE OLIGOCHAETA ORDER OF AQUATIC WORM IN THE SAMPLED STREAM REACH. A DOMINANCE OF

OLIGOCHAETE WORMS IS A STRONG INDICATOR OF ORGANIC ENRICHMENT WHICH CAN BE A MAJOR CAUSE OF LOW DISSOLVED OXYGEN CONCENTRATION (BANTA, 1993). WQMB HAS DETERMINED THAT ANY STREAM BENTHIC SAMPLE CONTAINING MORE THAN 20% OF OLIGOCHAETE DOMINANCE WILL BE CLASSIFIED AS HAVING AN ORGANIC ENRICHMENT/LOW DISSOLVED OXYGEN CAUSE.

Detail Report for TIDAL BASIN

ID: DCPTB01L_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	TIDAL BASIN	
	Location: ADJACENT TO THE JEFFERSON MEMORIAL AND THE WELL-KNOWN CHERRY TREES OF THE NATION'S CAPITOL	**Water Type:** FRESHWATER LAKE **Size:** 108.4 ACRES **Next Scheduled Monitoring Date:** N/A **Trophic Status:** N/A **Public Lake:** No

Use Information

	Attainment Status	Uses
Assessed:	Fully Supporting	Navigation Secondary Contact Recreation and Aesthetic Enjoyment
	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish

Types of Assessment

Assessment Type	Uses	Assessment Confidence
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Fecal Coliform	Primary Contact Recreation	Yes	

Source Information

Sources	Associated Causes	Confirmed?
Discharges from Municipal Separate Storm Sewer Systems	Fecal Coliform	

(MS4)

Comments On:

Overall Assessment

IMPOUNDMENT BORDERING THE MIDDLE POTOMAC AND THE WASHINGTON SHIP CHANNEL (PTB01). LOCATION OF THE JEFFERSON MEMORIAL AND THE WELL-KNOWN CHERRY TREES OF THE NATION'S CAPITOL. THE LAND SURROUNDING THE BASIN IS OWNED AND MANAGED BY THE U.S. NATIONAL PARK SERVICE.

THE TIDAL BASIN IS AN IMPOUNDMENT BORDERING THE MIDDLE POTOMAC AND THE WASHINGTON SHIP CHANNEL (PTB01). IT IS LOCATED ADJACENT TO THE JEFFERSON MEMORIAL AND THE WELL-KNOWN CHERRY TREES OF THE NATION'S CAPITOL. THE LAND SURROUNDING THE BASIN IS OWNED AND MANAGED BY THE U.S. NATIONAL PARK SERVICE. AMBIENT WATER QUALITY DATA FROM 2003 TO 2007 WERE ANALYZED FOR USE SUPPORT DECISIONS.

THE TIDAL BASIN DID SUPPORT ITS AQUATIC LIFE USE DUE TO A 25.9% VIOLATION OF THE pH STANDARD. NO VIOLATIONS IN TEMPERATURE AND DISSOLVED OXYGEN WATER QUALITY STANDARDS WERE SEEN.

USE SUPPORT DECISIONS FOR SWIMMABLE AND SECONDARY CONTACT RECREATION WERE MADE USING FECAL COLIFORM BACTERIA DATA. THE TIDAL BASIN DID NOT SUPPORT ITS SWIMMABLE USE AS IT EXCEEDED THE FECAL COLIFORM STANDARD OF 200 MPN/100 ML 30.4% OF THE TIME. HOWEVER, IT FULLY SUPPORTED ITS SECONDARY CONTACT RECREATION AS IT EXCEEDED THE FECAL COLIFORM STANDARD OF 1000 MPN/100 ML ONLY 6.5% OF THE TIME.

THE TIDAL BASIN ALSO DID NOT SUPPORT THE FISH CONSUMPTION USE. DETERMINATION OF THE FISH CONSUPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994 BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS.

THERE WERE NO KNOWN OBSTRUCTIONS IN THE TIDAL BASIN. THEREFORE, IT FULLY SUPPORTED ITS NAVIGATION USE.

BECAUSE OF THE ABOVE USE SUPPORT DECISIONS, THE TIDAL BASIN DID NOT SUPPORT THE OVERALL USE CLASSIFICATIONS FOR WATERS WITH MULTIPLE USES.

A STUDY TITLED "SEDIMENT CONTAMINATION STUDIES OF THE POTOMAC AND ANACOSTIA RIVERS AROUND THE DISTRICT OF COLUMBIA" WAS COMPLETED BY THE INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN IN 1992. THE STUDY INCLUDED THE TIDAL BASIN. RESULTS FROM THIS STUDY FOUND ELEVATED LEVELS OF TOTAL (THC) AND POLYCYCLIC HYDROCARBONS (PAHS) AT SAMPLED OUTFALLS AND STORM SEWERS TO THE TIDAL BASIN IN COMPARISON TO BASIN SEDIMENTS. RESULTS DID NOT INDICATE A SPECIFIC OUTFALL AS THE SOURCE. THE STUDY SUGGESTED THAT THE PRIMARY SOURCE FOR THESE HYDROCARBONS WAS MUCH MORE DIFFUSED AND PROBABLY RELATED TO VEHICULAR TRAFFIC.

Detail Report for WASHINGTON SHIP CHANNEL

ID: DCPWC04E_00 **State:** DC - 2008 **Single Cat.(User Cat.):** 5(N/A)

Water Information:	**WASHINGTON SHIP CHANNEL**	
	Location: DEEP EMBAYMENT OF THE POTOMAC BETWEEN HAINS POINT AND FORT MCNAIR. IT IS CONTIGUOUS TO THE POTOMAC AND ANACOSTIA RIVERS. THE NORTH END IS CONNECTED TO THE TIDAL BASIN (PWC04).	**Water Type:** ESTUARY **Size:** 0.3 SQUARE MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Fully Supporting	Navigation Protection and Propagation of Fish, Shellfish and Wildlife Secondary Contact Recreation and Aesthetic Enjoyment
	Not Supporting	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish

Types of Assessment

Assessment Type	Uses	Assessment Confidence
HABITAT	Navigation	GOOD
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Fecal Coliform	Primary Contact Recreation	Yes	

Comments On:

Overall Assessment

EVALUATIONS OF USE SUPPORT DECISIONS WERE PARTIALLY BASED ON A FIVE YEAR SATISTICAL EVALUATION (2003-2007) OF CONVENTIONAL AND FECAL COLIFORM BACTERIA WATER QUALITY DATA COLLECTED BY THE MAB.

FECAL COLIFORM BACTERIA VALUES EXCEEDED THE SWIMMABLE USE (200 MPN/100 ML) 45.4% OF THE TIME FOR THE FIVE YEAR PERIOD, WHILE VALUES EXCEEDED THE SECONDARY CONTACT USE (1000 MPN/100ML) 7.3% OF THE TIME. AS A RESULT THE WASHINGTON SHIP CHANNEL FULLY SUPPORTED ITS SECONDARY CONTACT USE. SEVERAL STORM SEWERS EMPTYING INTO THIS AREA ARE SUSPECTED OF CONTRIBUTING TO THE POLLUTION. BOATS MOORED AT LOCAL MARINAS ARE ALSO SUSPECTED SOURCES OF POLLUTION.

DISSOLVED OXYGEN AND TEMPERATURE OBSERVATIONS WERE IN GENERALLY IN FULL COMPLIANCE OF THEIR RESPECTIVE WATER QUALITY STANDARDS. pH OBSERVATIONS VIOLATED IT'S AQUATIC LIFE USE 9.1% OVER THE STUDY PERIOD. THE SHIPPING CHANNEL SUPPORTS THE AQUATIC LIFE USE.

DETERMINATION OF THE FISH CONSUMPTION USE WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994, BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP, OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS. THEREFORE, THE WASHINGTON SHIP CHANNEL DID NOT SUPPORT EPA FISH CONSUMPTION CRITERIA.

THE WASHINGTON SHIP CHANNEL FULLY SUPPORTED ITS NAVIGATION USE.

BECAUSE OF THE ABOVE USE SUPPORT DECISIONS, THE WASHINGTON SHIP CHANNEL DID NOT SUPPORT THE OVERALL USE CLASSIFICATION FOR WATERS WITH MULTIPLE USES.

SURVEYS CONDUCTED IN THE PAST SEVERAL YEARS REVEAL THE PRESENCE OF TOXICS IN SEDIMENTS. FISH TISSUE OF SAMPLES OF CERTAIN SPECIES SHOW ELEVATED LEVELS OF CONTAMINANTS INCLUDING CHLORDANE AND PCBs. BIOLOGICAL SAMPLES COLLECTED SUGGEST A SEVERELY STRESSED BENTHIC COMMUNITY. THE CAUSES OF STRESS MAY BE ATTRIBUTED TO URBAN STORM WATER RUNOFF FROM POLLUTED STREAMS ENTERING THE TIDAL POTOMAC ESTUARY, TO CSO EVENTS, AND TO THE IMPACT FROM ADJACENT INDUSTRIAL FACILITIES. REPORTS WITH MORE INFORMATION INCLUDE:

- "IMPACT OF DREDGING ON THE WATER QUALITY OF THE ANACOSTIA RIVER" BY THE INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN (ICPRB), 1993,
- "SEDIMENT CONTAMINATION STUDIES OD THE POTOMAC AND ANACOSTIA RIVER AROUND THE DISTRICT OF COLUMBIA," ICPRB, 1992,
- A FISH TISSUE SURVEY REPORT BY ICPRB, VELINSKY, 1993.
-"EMERGENT WETLAND ESTABLISHMENT UNDER DIFFERING HABITAT CONDITION IN THE ANACOSTIA AND POTOMAC RIVER BASIN," HORN POINT ENVIRONMENTAL LABORATORY, CEES AND MWCOG, 1991.
-STEUART PETROLEUM OIL SPILL, VERSAR, PINKNEY, 1993.

Detail Report for WATTS BRANCH DC

ID: DCTWB00R_01 **State:** DC - 2008 **Single Cat.(User Cat.):** 4A(N/A)

Water Information:	**WATTS BRANCH DC**	
	Location: ANACOSTIA RIVER TRIBUTARY, RUNS THROUGH KENILWORTH PARK WHICH IS A COVERED LANDFILL. SEGMENT 01 (TWB01) IS TOTALLY AFFECTED FROM ITS MOUTH TO 25 YARDS ABOVE THE FIRST LOWER BRIDGE IN THE PARK	**Water Type:** RIVER **Size:** 0.3 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Alterations in wetland habitats	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	

Fecal Coliform	Primary Contact Recreation Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment	Yes
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Channelization	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Other flow regime alterations Particle distribution (Embeddedness)	
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Illegal Dumping	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Other flow regime alterations Particle distribution (Embeddedness)	
Illegal Dumps or Other Inappropriate Waste Disposal	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Other flow regime alterations Particle distribution (Embeddedness)	
Residential Districts	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Other flow regime alterations Particle distribution (Embeddedness)	
Site Clearance (Land Development or Redevelopment)	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Other flow regime alterations Particle distribution (Embeddedness)	

Source Unknown	Fecal Coliform
Wet Weather Discharges (Non-Point Source)	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Other flow regime alterations Particle distribution (Embeddedness)
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Other flow regime alterations Particle distribution (Embeddedness)

Comments On:

Overall Assessment

ANACOSTIA RIVER TRIBUTARY, RUNS THROUGH KENILWORTH PARK WHICH IS A COVERED LANDFILL. SEGMENT 01 (TWB01) IS TOTALLY AFFECTED FROM ITS MOUTH TO 25 YARDS ABOVE THE FIRST LOWER BRIDGE IN THE PARK. THIS PORTION OF THE STREAM IS 23 FEET WIDE AND SHALLOW. ABOUT 80% OF THE STREAM'S WATERSHED IS URBAN RESIDENTIAL AND COMMERCIAL PROPERTY; LESS THAN 15% IS FORESTED.

THE LOWER PORTION OF WATTS BRANCH IS SIGNIFICANTLY AFFECTED BY ORGANIC AND TOXIC EFFECTS STEMMING FROM STORMWATER DISCHARGES AND SEWER LINE LEAKS.

THE EVALUATION OF WATTS BRANCH AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2003. WATTS BRANCH WAS NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. THIS SEGMENT'S HBI SCORE SUGGESTS NO APPARENT ORGANIC POLLUTION. CHIRONOMIDAE (GENERALIST THAT CAN THRIVE IN POLLUTED WATERS AND OLIGOCHAETA (SEWAGE LOVING ORGANISMS) ARE THE ONLY TWO TAXA FOUND. ONLY 5 ORGANISMS WERE FOUND IN THE SAMPLE COLLECTED AND THEY INCLUDED NO SENSITIVE ORGANISMS (EPT). THE SEGMENT'S HABITAT IS MODERATELY IMPAIRED. DO, PH, AND TEMPERATURE DATA COLLECTED DURING 2003-2007 INDICATED THAT THE STANDARD FOR THE PARAMETERS WAS SUPPORTED. TEMPERATURE AND D.O. HAD NO VIOLATIONS, WHILE PH HAD A VIOLATION OF 8.0%. TOXICS POSSIBLY PLAY A ROLE IN THE POOR QUALITY OF THE STREAM.

THE EVALUATION OF WATTS BRANCH SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE YEAR SPAN 2003-2007. WATTS BRANCH WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 81.8% OF THE TIME. ITS SECONDARY CONTACT USE 54.5% OF THE TIME. AS A RESULT, WATTS BRANCH DID NOT SUPPORT ITS SWIMMABLE OR SECONDARY CONTACT RECREATION USES.

DURING THE 2007 HABITAT ASSESSMENT IT WAS NOTED THAT THE RIGHT BACK FACING UPSTREAM HAD INCREASED RIPARIAN VEGETATION FROM 2003. THE WAS A HIGH VOLUME OF TRASH PRESENT.

WATTS BRANCH DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY ISSUED IN 1994 BY THE DC COMMISSIONER OF HEALTH. THE ADVISORY URGES BANNING CONSUMPTION OF CHANNEL CATFISH, CARP, OR EELS CAUGHT IN THE DISTRICT'S STRETCH OF THE POTOMAC AND ANACOSTIA RIVERS. BECAUSE WATTS BRANCH IS A TRIBUTARY OF THE ANACOSTIA RIVER, FISH MAY MIGRATE FROM THE RIVER INTO THE TRIBUTARY, THEREFORE THIS ADVISORY EXTENDS TO WATTS BRANCH.

Detail Report for WATTS BRANCH DC

ID: DCTWB00R_02 **State:** DC - 2008 **Single Cat.(User Cat.):** 4A(N/A)

Water Information:	**WATTS BRANCH DC**	
	Location: PRINCE GEORGE'S COUNTY MARYLAND LINE TO KENILWORTH PARK (TWB05 AND TWB06). IT FLOWS THROUGH A DENSELY-POPULATED RESIDENTIAL AREA WITH A SMALL NUMBER OF COMMERCIAL BUILDINGS. WATTS BRANCH (MD & DC) DRAINS 2583 ACRES	**Water Type:** RIVER **Size:** 3.7 MILES **Next Scheduled Monitoring Date:** N/A

Use Information

	Attainment Status	Uses
Assessed:	Not Supporting	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment
Not Assessed:	Not Assessed	Navigation

Types of Assessment

Assessment Type	Uses	Assessment Confidence
PHYSICAL/CHEMICAL	Protection and Propagation of Fish, Shellfish and Wildlife	GOOD
	Protection of Human Health related to Consumption of Fish and Shellfish	GOOD
PATHOGEN INDICATORS	Primary Contact Recreation	GOOD
	Secondary Contact Recreation and Aesthetic Enjoyment	GOOD

Cause Information

Causes	Associated Uses	Pollutant?	Confidence
Alterations in wetland habitats	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combination Benthic/Fishes Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Combined Biota/Habitat Bioassessments	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	
Debris/Floatables/Trash	Protection and Propagation of Fish, Shellfish and Wildlife	Yes	

Fecal Coliform	Primary Contact Recreation Protection and Propagation of Fish, Shellfish and Wildlife Protection of Human Health related to Consumption of Fish and Shellfish Secondary Contact Recreation and Aesthetic Enjoyment	Yes
Other flow regime alterations	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Particle distribution (Embeddedness)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes
Total Suspended Solids (TSS)	Protection and Propagation of Fish, Shellfish and Wildlife	Yes

Source Information

Sources	Associated Causes	Confirmed?
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Fecal Coliform	
Illegal Dumping	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness) Total Suspended Solids (TSS)	
Illegal Dumps or Other Inappropriate Waste Disposal	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness) Total Suspended Solids (TSS)	
Residential Districts	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments Debris/Floatables/Trash Fecal Coliform Other flow regime alterations Particle distribution (Embeddedness) Total Suspended Solids (TSS)	
Site Clearance (Land Development or Redevelopment)	Alterations in wetland habitats Combination Benthic/Fishes Bioassessments Combined Biota/Habitat Bioassessments	

	Debris/Floatables/Trash
	Fecal Coliform
	Other flow regime alterations
	Particle distribution (Embeddedness)
	Total Suspended Solids (TSS)
Source Unknown	Fecal Coliform
Wet Weather Discharges (Non-Point Source)	Alterations in wetland habitats
	Combination Benthic/Fishes Bioassessments
	Combined Biota/Habitat Bioassessments
	Debris/Floatables/Trash
	Fecal Coliform
	Other flow regime alterations
	Particle distribution (Embeddedness)
	Total Suspended Solids (TSS)
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	Alterations in wetland habitats
	Combination Benthic/Fishes Bioassessments
	Combined Biota/Habitat Bioassessments
	Debris/Floatables/Trash
	Fecal Coliform
	Other flow regime alterations
	Particle distribution (Embeddedness)
	Total Suspended Solids (TSS)

Comments On:

Overall Assessment

PRINCE GEORGE'S COUNTY MARYLAND LINE TO KENILWORTH PARK (TWB05 AND TWB06). IT FLOWS THROUGH A DENSELY-POPULATED RESIDENTIAL AREA WITH A SMALL NUMBER OF COMMERCIAL BUILDINGS. WATTS BRANCH (MD & DC) DRAINS 2583 ACRES. THE STREAM IS SUBTERRANEAN FOR ABOUT 1000 FEET IN DEANWOOD, NE; IT TRAVELS BENEATH PARTS OF DEANE STREET AS TWIN 16-FOOT BY 7-FOOT CONDUITS. THE ENTIRE WATERSHED IS TRAVERSED AND PARALLELED BY NUMEROUS SEWER LINES. ITS ONCE NUMEROUS TRIBUTARIES HAVE BEEN REPLACED BY STORMWATER DISCHARGE WHICH ENTER THE STREAM THROUGH OUT ITS LENGTH.

THE UPPER PORTION OF WATTS BRANCH IS SIGNIGICANTLY AFFECTED BY ORGANIC AND TOXIC EFFECTS FROM STORMWATER DISCHARGES AND PERSISTENT SEWAGE LINE LEAKS. THE UPPER PORTION OF WATTS IS TRAVERSED AND PARALLELED BY SEWAGE LINES AND ALMOST ALL OF ITS FIRST AND SECOND ORDER TRIBUTARIES HAVE BEEN PIPED. HYDROLOGIC MODIFICATION HAS TAKEN ITS TOLL ON THE HABITAT STRUCTURE OF WATTS. MUCH WORK HAS BEEN UNDERTAKEN TO STABILIZE THE STREAMBANKS BUT THE FORCE OF PEAK STORMFLOW OFTEN SCOURS THE STREAM.

THE EVALUATION OF WATTS BRANCH AQUATIC LIFE SUPPORT USE IS BASED ON A BIOASSESSMENT CONDUCTED IN 2003. WATTS BRANCH WAS FOUND NOT SUPPORTING OF ITS AQUATIC LIFE USE DESIGNATION. OLIGOCHAETA (SEWAGE LOVING ORGANISMS) WERE THE DOMINANT TAXA IDENTIFIED. THE STREAM SEGMENT'S HBI SCORE SUGGESTS SOME ORGANIC POLLUTION. HABITAT IS

SEVERELY IMPAIRED. NO SENSITIVE ORGANISMS WERE FOUND (EPT). D.O., PH AND TEMP FULLY SUPPORTED THE USE. STANDARDS FOR D.O. ONLY VIOLATED 0.0% OF THE TIME, PH VIOLATED 3.5% OF THE TIME, AND TEMPERATURE 0.0% DURING A 2003-2007 DATA COLLECTION PERIOD. THE PERCENTAGE OF GATHERER-COLLECTOR ORGANISMS FOUND SUGGEST POLLUTANTS ARE PRESENT BECAUSE THEY ARE GENERALIST AND CAN THRIVE IN POLLUTED WATERS. ONLY 13 INSECTS WERE FOUND THE SAMPLE COLLECTED. TAKING ALL THE ABOVE FACTORS INTO CONSIDERATION WOULD POSSIBLY SUGGEST THAT HABITAT AND ORGANICS CONTRIBUTE TO THE POOR QUALITY OF THE STREAM.

DURING THE 2007 HABITAT ASSESSMENT IT WAS NOTED THAT THERE IS NEW CONSTRUCTION BEING DONE IN THE IMMEDIATE VICINITY OF THE STREAM. SOME OF THE CONSTRUCTION CAN BE ATTRIBUTED TO STREAM RESTORATION PROJECTS.

THE EVALUATION OF WATTS BRANCH SWIMMABLE AND SECONDARY USES ARE BASED ON SURFACE FECAL COLIFORM DATA COLLECTED AND COMPILED FOR A FIVE YEAR SPAN 2003-2007. WATTS BRANCH WAS NOT IN COMPLIANCE FOR ITS SWIMMABLE USE 86.9% OF THE TIME. ITS SECONDARY CONTACT USE 67.3% OF THE TIME. AS A RESULT, WATTS BRANCH DID NOT SUPPORT EITHER OF ITS SWIMMABLE OR SECONDARY CONTACT RECREATION USES.

WATTS BRANCH DID NOT SUPPORT THE EPA FISH CONSUMPTION USE DESIGNATION. DETERMINATION OF FISH CONSUMPTION USE IS BASED ON A PUBLIC HEALTH ADVISORY THIS SEGMENT DID NOT SUPPORT THE FISH CONSUMPTION USE. DETERMINATION OF FISH CONSUMPTION WAS BASED ON A PUBLIC HEALTH ADVISORY ISSUED ON NOVEMBER 15, 1994, BY THE D.C. COMMISSIONER OF PUBLIC HEALTH. THE ADVISORY URGES NON-CONSUMPTION OF CATFISH, CARP OR EEL AND LIMITED CONSUMPTION OF OTHER FISH CAUGHT IN ALL DISTRICT OF COLUMBIA WATERS. THIS WATERBODY IS NOT SUPPORTING OF FISH CONSUMPTION.

APPENDIX 3.4
2003-2007
Statistical Summary Report
For
Dissolved Oxygen

Waterbody	Station Data Used	Min. Value	Max. Value	Avg. Value	Std. Dev.	Median Value	% Violation of WQ Std.
DCAKL00L	KNG01,KNG02	1.8	16.1	7.96	3.40	7.9	3.3%
DCANA00E SEG1	ANA19,ANA21 ANA24	1.7	16.8	9.00	3.39	8.4	1.0%
DCANA00E SEG2	ANA13	1.6	16.6	8.52	3.67	8.1	6.7%
DCPMS00E SEG1	PMS37,PMS44	4.6	19.6	10.5	3.61	9.6	0.0%
DCPMS00E SEG2	PMS10,PMS21	4.8	22.2	10.5	3.24	9.7	0.0%
DCPMS00E SEG3	PMS01	6.5	21.1	10.6	3.21	9.8	0.0%
DCPTB01L	PTB01	6.3	17.1	11.1	2.64	11.2	0.0%
DCPWC04E	PWC04	5.5	17.8	11.6	2.82	11.1	0.0%
DCRCR00R SEG1	RCR09	6.7	21.4	11.3	3.21	10.9	0.0%
DCRCR00R SEG2	RCR01	5.3	22.4	10.8	3.50	10.2	0.0%
DCTBK01R	TBK01	6.7	18.3	11.6	3.11	12.4	0.0%
DCTCO01L	TCO01,TCO06	5.8	21.0	10.2	3.31	9.2	0.0%
DCTDA01R	TDA01	6.2	13.9	10.7	2.47	11.9	0.0%
DCTDU01R	TDU01	7.1	17.2	10.5	2.84	10.7	0.0%
DCTFB02R	TFB02	6.0	15.9	10.3	3.37	9.6	0.0%
DCTFC01R	TFC01	5.0	13.7	8.97	2.52	8.6	0.0%
DCTFD01R	TFD01	2.2	14.7	8.70	3.12	8.9	5.3%
DCTHR01R	THR01	5.2	22.5	10.3	3.56	9.3	0.0%
DCTNA01R	TNA01	5.1	15.0	9.72	3.06	9.3	0.0%
DCTOR01R	TOR01	7.1	15.9	10.5	2.44	10.1	0.0%
DCTPB01R	TPB01	7.5	15.3	10.4	2.51	9.5	0.0%
DCTTX27R	TTX27	6.4	14.2	10.3	2.40	9.9	0.0%
DCTWB00R SEG1	TWB01	5.3	19.8	10.1	3.14	9.3	0.0%
DCTWB00R SEG2	TWB05,TWB06	5.7	18.4	11.0	2.98	10.7	0.0%
DCTFS01R	TFS01	7.5	14.5	10.7	2.37	10.1	0.0%

APPENDIX 3.4
2003-2007
Statistical Summary Report
For
Fecal Coliform (MPN/100 ml)

Waterbody	Station Data Used	Min. Value	Max. Value	Avg. Value	Std. Dev.	Median Value	Class“A” % Violation of WQ Std.	Class“B” % Violation of WQ Std.
DCAK00L	KNG01,KNG02	20	160000	4669	20331	500	81.2%	30.6%
DCANA00E SEG1	ANA19,ANA21 ANA24	20	13000	1031	2039	300	64.9%	24.6%
DCANA00E SEG2	ANA01,ANA08 ANA14	20	50000	1410	4946	500	72.5%	24.4%
DCPMS00E SEG1	PMS37,PMS44	20	5000	241	566	90	26.5%	2.6%
DCPMS00E SEG2	PMS10,PMS21	20	3000	296	603	80	23.7%	8.8%
DCPMS00E SEG3	PMS01	20	13000	375	1824	40	15.7%	3.9%
DCPTB01L	PTB01	20	1700	233	337	110	30.4%	6.5%
DCPWC04E	PWC04	20	1700	330	372	170	45.4%	7.3%
DCRCR00R SEG01	RCR09	40	90000	3878	14907	500	73.9%	26.1%
DCRCR00R SEG02	RCR01	20	50000	2465	7461	800	76.6%	42.5%
DCTBK01R	TBK01	70	160000	12371	39729	1200	75.0%	56.2%
DCTCO01L	TCO01,TCO06	20	13000	753	1783	170	46.3%	14.9%
DCTDA01R	TDA01	20	50000	3926	13271	145	50.0%	21.4%
DCTDU01R	TDU01	20	3000	300	717	40	23.5%	5.9%
DCTFB02R	TFB02	20	2200	461	855	140	33.3%	16.7%
DCTFC01R	TFC01	20	5000	861	1326	210	52.9%	29.4%
DCTFD01R	TFD01	20	13000	1111	3113	170	35.3%	11.8%
DCTHR01R	THRO1	20	35000	2085	5135	700	74.5%	41.2%
DCTNA01R	TNA01	230	160000	10722	35339	2300	100.0%	55.0%
DCTOR01R	TOR01	300	50000	9618	12265	6000	100.0%	81.2%
DCTPB01R	TPB01	20	1700	233	337	110	30.4%	6.5%
DCTTX27R	TTX27	20	3000	543	806	170	42.8%	14.3%
DCTWB00R SEG1	TWB01	20	13000	2434	3195	1200	81.8%	54.5%
DCTWB00R SEG2	TWB05,TWB06	20	240000	9873	29799	2200	86.9%	67.3%
DCTFS01R	TFS01	20	14000	1725	3978	200	50.0%	21.4%

APPENDIX 3.4
2003-2007
Statistical Summary Report
For
pH

Waterbody	Station Data Used	Min. Value	Max. Value	Avg. Value	Std. Dev.	Median Value	% Violation of WQ Std.
DCAKL00L	KNG01,KNG02	6.8	10.8	7.69	0.68	7.6	6.5%
DCANA00E SEG1	ANA19,ANA21 ANA24	6.5	8.6	7.49	0.42	7.5	1.0%
DCANA00E SEG2	ANA01,ANA08 ANA14	6.0	8.8	7.42	0.46	7.4	1.2%
DCPMS00E SEG1	PMS37,PMS44	6.7	9.1	7.88	0.50	7.9	9.6%
DCPMS00E SEG2	PMS10,PMS21	6.4	9.3	8.02	0.50	8.0	14.5%
DCPMS00E SEG3	PMS01	6.8	9.0	7.98	0.60	8.0	13.7%
DCPTB01L	PTB01	7.0	8.9	8.08	0.54	8.1	25.9%
DCPWC04E	PWC04	6.4	8.9	7.89	0.54	7.9	9.1%
DCRCR00R SEG1	RCR09	6.0	8.9	7.67	0.52	7.7	3.6%
DCRCR00R SEG2	RCR01	6.6	8.9	7.62	0.46	7.5	3.7%
DCTBK01R	TBK01	7.3	8.6	7.90	0.35	7.9	5.0%
DCTCO01L	TCO01,TCO06	7.0	9.2	7.93	0.45	7.9	7.2%
DCTDA01R	TDA01	7.0	8.7	7.79	0.52	7.7	11.8%
DCTDU01R	TDU01	6.8	8.7	7.79	0.52	7.7	10.0%
DCTFB02R	TFB02	6.8	9.2	7.59	0.67	7.6	10.0%
DCTFC01R	TFC01	6.6	8.4	7.45	0.59	7.4	0.0%
DCTFD01R	TFD01	6.4	8.8	7.40	0.74	7.4	5.3%
DCTHR01R	THR01	4.8	10.7	7.70	0.68	7.7	5.1%
DCTNA01R	TNA01	5.6	10.3	7.75	0.92	7.7	5.1%
DCTOR01R	TOR01	7.0	8.8	7.77	0.48	7.7	5.0%
DCTPB01R	TPB01	6.6	8.9	7.63	0.59	7.7	5.0%
DCTTX27R	TTX27	6.6	8.8	7.49	0.57	7.5	5.5%
DCTWB00R SEG1	TWB01	6.9	10.8	7.81	0.63	7.7	8.0%
DCTWB00R SEG2	TWB05,TWB06	6.6	10.7	7.78	0.59	7.8	3.5%
DCTFS01R	TFS01	6.9	10.4	7.88	0.90	7.8	15.4%

APPENDIX 3.4
2003-2007
Statistical Summary Report
For
Temperature

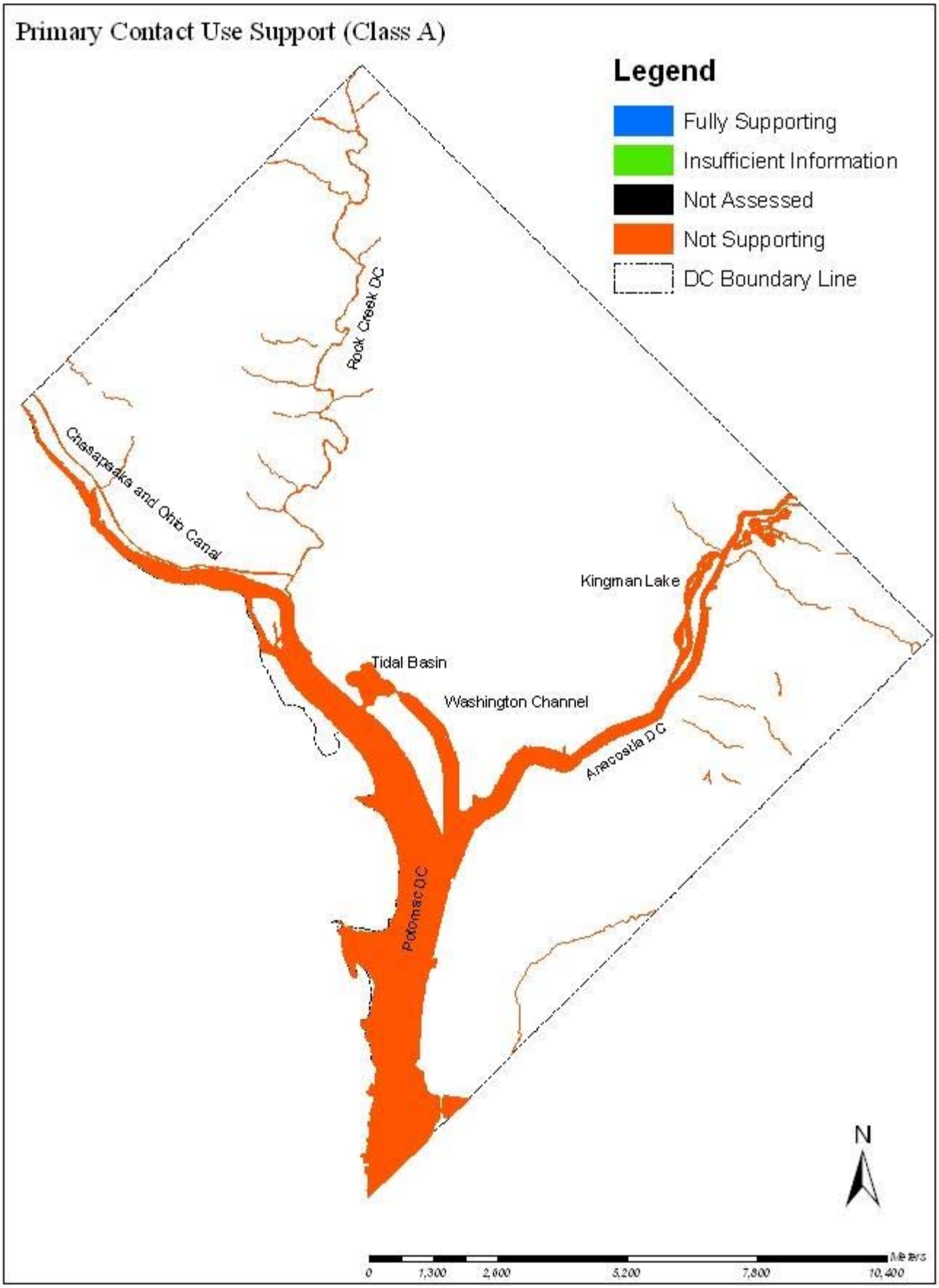
Waterbody	Station Data Used	Min. Value	Max. Value	Avg. Value	Std. Dev.	Median Value	% Violation of WQ
DCAKL00L	KNG01, KNG02	1.6	29.5	16.1	8.08	16.0	0.0%
DCANA00E SEG1	ANA19, ANA21, ANA24	0.2	29.8	16.9	8.78	17.3	0.0%
DCANA00E SEG2	ANA13	0.3	29.3	16.6	8.52	16.6	0.0%
DCPMS00E SEG1	PMS37, PMS44	1.3	32.0	16.2	8.93	17.0	0.0%
DCPMS00E SEG2	PMS10, PMS21	0.1	31.0	17.2	8.80	18.3	0.0%
DCPMS00E SEG3	PMS01	2.0	30.8	16.9	8.88	17.1	0.0%
DCPTB01L	PTB01	0.1	30.0	15.5	9.28	14.8	0.0%
DCPWC04E	PWC04	1.1	29.6	15.9	9.46	15.4	0.0%
DCRCR00R SEG1	RCR09	0.1	25.4	12.7	7.82	13.0	0.0%
DCRCR00R SEG2	RCR01	2.2	25.0	13.5	7.14	13.6	0.0%
DCTBK01R	TBK01	0.6	28.4	12.5	7.34	11.7	0.0%
DCTCO01L	TCO01, TCO06	0.2	30.3	18.2	8.22	19.9	0.0%
DCTDA01R	TDA01	4.2	23.7	13.5	5.54	13.0	0.0%
DCTDU01R	TDU01	0.7	24.5	13.2	7.70	12.3	0.0%
DCTFB02R	TFB02	0.5	21.7	12.3	7.09	14.2	0.0%
DCTFC01R	TFC01	0.02	22.8	13.0	6.71	11.5	0.0%
DCTFD01R	TFD01	0.5	22.2	12.2	6.55	10.9	0.0%
DCTHR01R	THR01	0.5	26.0	14.1	6.87	14.7	0.0%
DCTNA01R	TNA01	1.6	24.4	13.6	7.14	15.4	0.0%
DCTOR01R	TOR01	2.5	22.5	13.5	7.47	14.7	0.0%
DCTPB01R	TPB01	4.1	22.5	13.2	6.08	13.9	0.0%
DCTTX27R	TTX27	4.6	20.0	12.3	5.60	11.4	0.0%
DCTWB00R SEG1	TWB01	3.4	26.9	15.3	6.46	15.6	0.0%
DCTWB00R SEG2	TWB05, TWB06	0.2	25.2	13.4	6.75	13.7	0.0%
DCTFS01R	TFS01	0.6	22.3	12.3	7.05	13.1	0.0%

APPENDIX 3.4
2003-2007
TOTAL SUMMARY REPORT
WATER QUALITY STANDARD
% VIOLATION

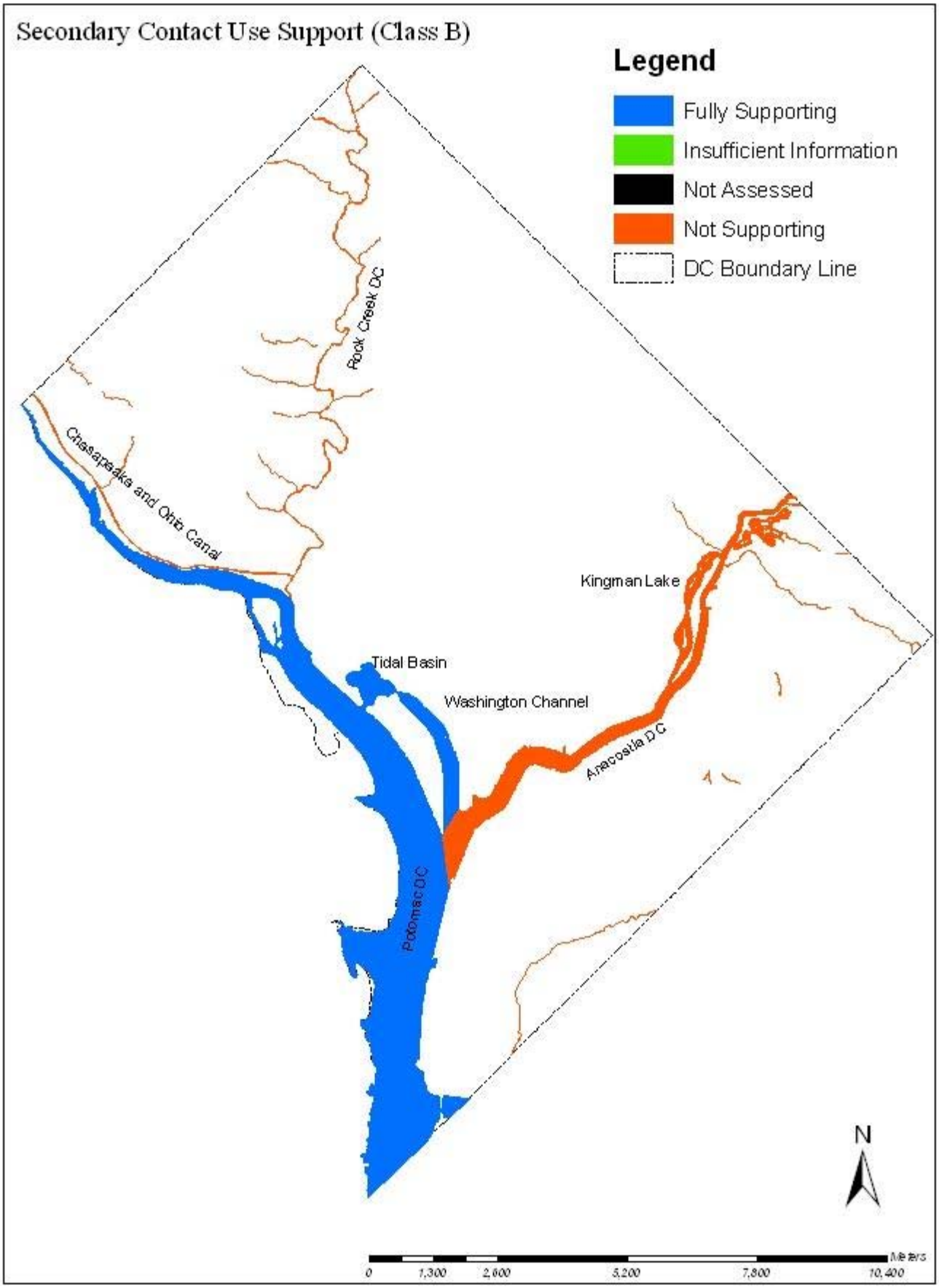
Waterbody	Station Data Used	Temp % Violation	pH % Violation	DO % Violation	Class A Fecal Coliform % Violation	Class B Fecal Coliform % Violation
DCTKV01R	TKV01	0.0%	0.0%	0.0%	50.0%	11.1%
DCTSO01R	TSO01	0.0%	0.0%	0.0%	71.4%	42.8%
DCTDO01R	TDO01	0.0%	5.9%	0.0%	53.3%	26.7%
DCTMH01R	TMH01	0.0%	0.0%	0.0%	68.7%	25.0%
DCTPY01R	TPY01	0.0%	0.0%	0.0%	63.6%	18.2%
DCTPO01R	TPO01	0.0%	0.0%	0.0%	57.1%	28.6%
DCTLU01R	TLU01	0.0%	0.0%	0.0%	81.2%	25.0%
DCTBR01R	TBR01	0.0%	10.5%	0.0%	93.3%	86.7%
DCTFE01R	TFE01	0.0%	5.9%	0.0%	69.2%	30.8%
DCTNS01R	TNS01	0.0%	0.0%	0.0%	69.2%	30.8%
DCTPI01R	TPI01	0.0%	0.0%	0.0%	50.0%	16.7%

APPENDIX 3.4
2003-2007
Total Summary Report
Water Quality Standard
% Violation

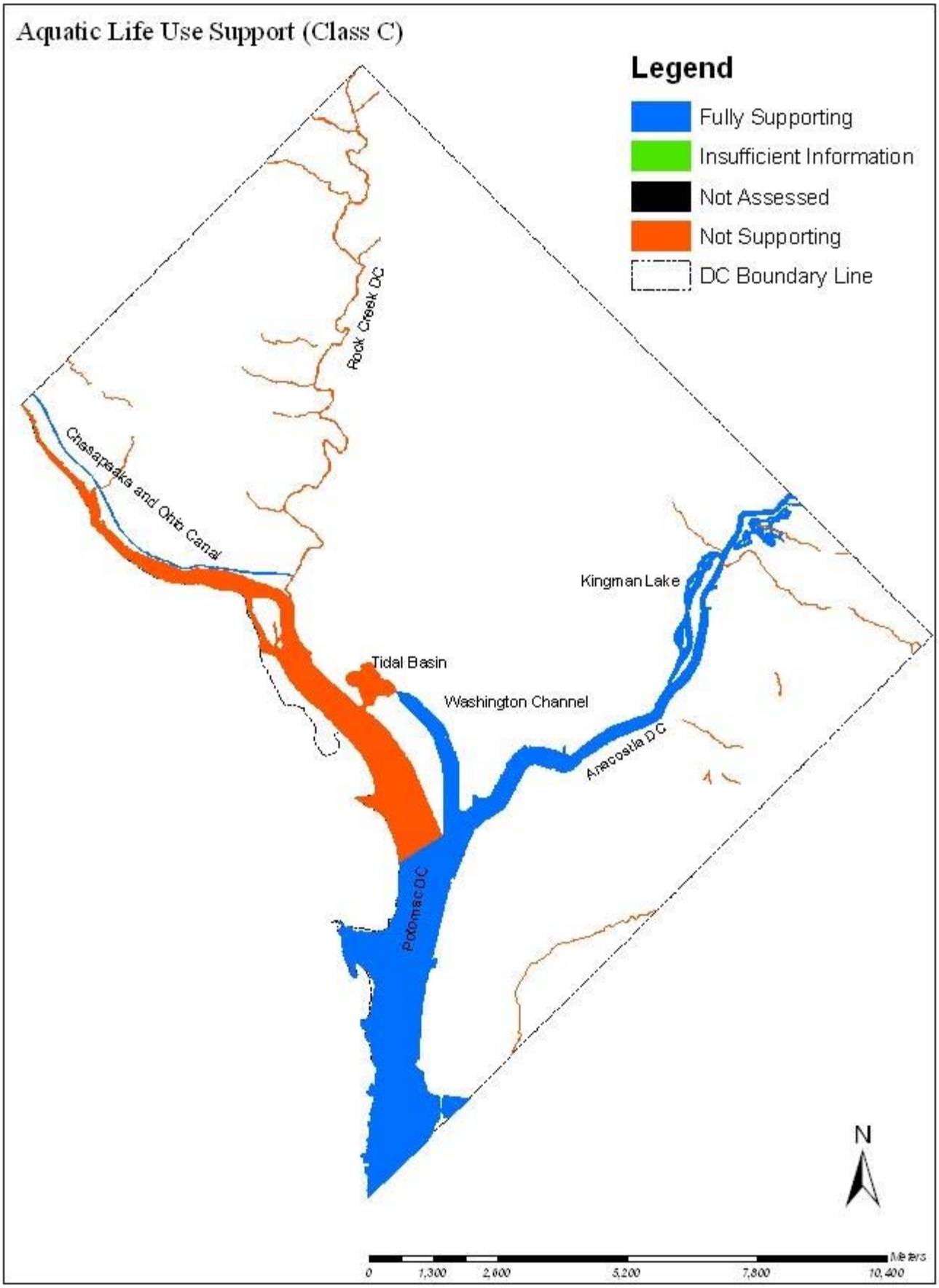
Waterbody	Station Data Used	Temp % Violation	pH % Violation	DO % Violation	Class A Fecal Coliform % Violation	Class B Fecal Coliform % Violation
DCAKL00L	KNG01, KNG02	0.0%	6.5%	3.3%	81.2%	30.6%
DCANA00E SEG1	ANA19, ANA21 ANA24	0.0%	1.0%	1.0%	64.9%	24.6%
DCANA00E SEG2	ANA01, ANA08 ANA13, ANA14	0.0%	1.2%	6.7%	72.5%	24.4%
DCPMS00E SEG1	PMS37, PMS44	0.0%	9.6%	0.0%	26.5%	2.6%
DCPMS00E SEG2	PMS10, PMS21	0.0%	14.5%	0.0%	23.7%	8.8%
DCPMS00E SEG3	PMS01	0.0%	13.7%	0.0%	15.7%	3.9%
DCPTB01L	PTB01	0.0%	25.9%	0.0%	30.4%	6.5%
DCPWC04E	PWC04	0.0%	9.1%	0.0%	45.4%	7.3%
DCRCR00R SEG1	RCR09	0.0%	3.6%	0.0%	73.9%	26.1%
DCRCR00R SEG2	RCR01	0.0%	3.7%	0.0%	76.6%	42.5%
DCTBK01R	TBK01	0.0%	5.0%	0.0%	75.0%	56.2%
DCTCO01L	TCO01,TCO06	0.0%	7.2%	0.0%	46.3%	14.9%
DCTDA01R	TDA01	0.0%	11.8%	0.0%	50.0%	21.4%
DCTDU01R	TDU01	0.0%	10.0%	0.0%	23.5%	5.9%
DCTFB02R	TFB02	0.0%	10.0%	0.0%	33.3%	16.7%
DCTFC01R	TFC01	0.0%	0.0%	0.0%	52.9%	29.4%
DCTFD01R	TFD01	0.0%	5.3%	5.3%	35.3%	11.8%
DCTHR01R	THR01	0.0%	5.1%	0.0%	74.5%	41.2%
DCTNA01R	TNA01	0.0%	5.1%	0.0%	100.0%	55.0%
DCTOR01R	TOR01	0.0%	5.0%	0.0%	100.0%	81.2%
DCTPB01R	TPB01	0.0%	5.0%	0.0%	30.4%	6.5%
DCTTX27R	TTX27	0.0%	5.5%	0.0%	42.8%	14.3%
DCTWB00R SEG1	TWB01	0.0%	8.0%	0.0%	81.8%	54.5%
DCTWB00R SEG2	TWB05,TWB06	0.0%	3.5%	0.0%	86.9%	67.3%
DCTFS01R	TFS01	0.0%	15.4%	0.0%	50.0%	21.4%



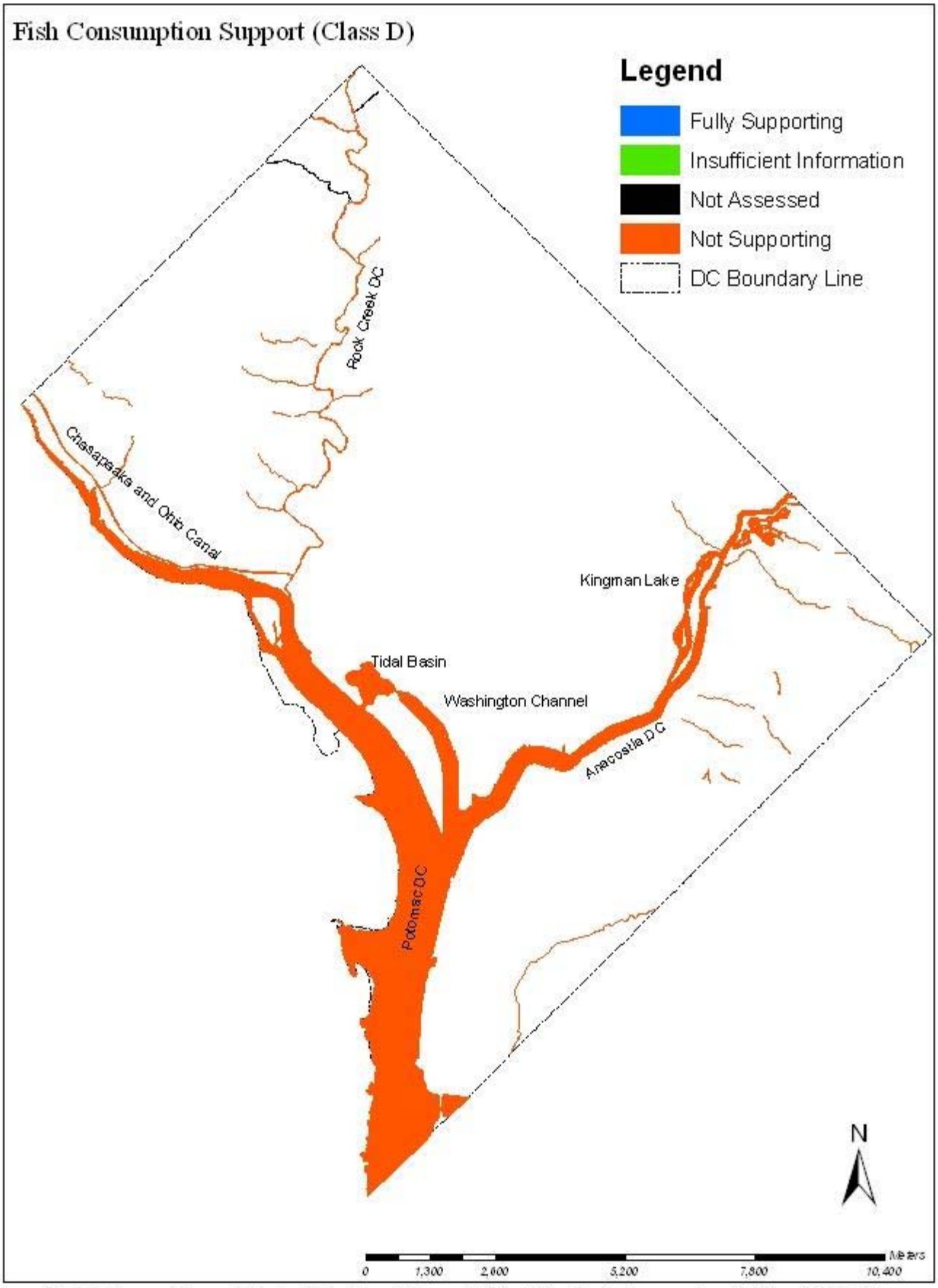
Appendix 3.5: Degree of Support for the Protection of Primary Contact Recreation



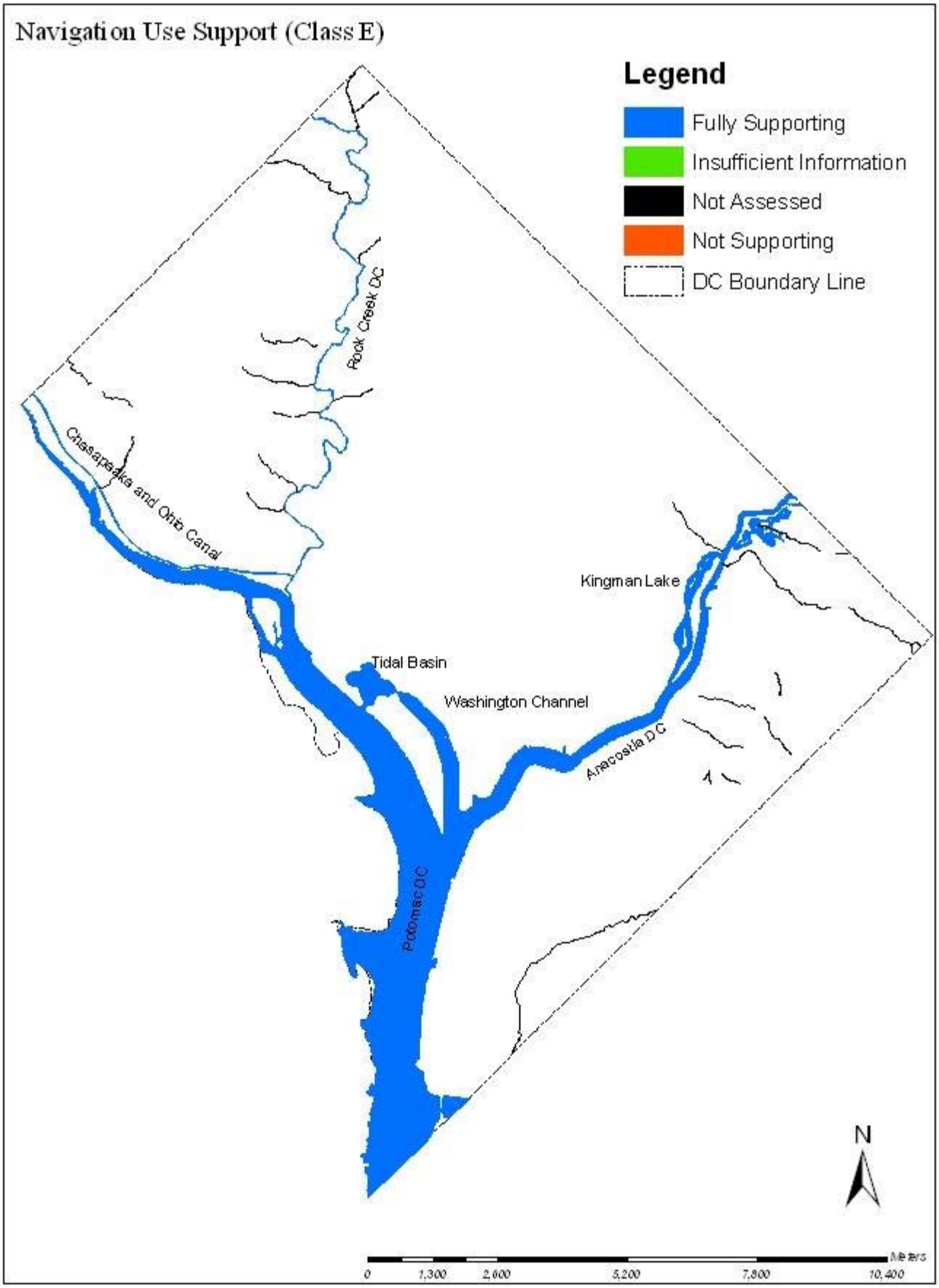
Appendix 3.6: Degree of Support for the Protection of Secondary Contact and Aesthetic Enjoyment



Appendix 3.7: Degree of Support for the Protection and Propagation of Fish, Shellfish and Wildlife



Appendix 3.8: Degree of Support for the Protection of Human Health Related to the Consumption of Fish and Shellfish



Appendix 3.9: Degree of Support for Navigation

Categorization of District of Columbia Waters

Category 1- All designated uses are attained and no use is threatened.

No DC waters fit this category.

Category 2- Some, but not all, of the designated uses are attained and no use is threatened. The attainment status of the remaining designated uses is unknown as insufficient data exists to make an attainment determination.

No DC waters fit this category.

Category 3- Insufficient data exists to determine whether any designated uses are attained.

Category 4- Water is impaired or threatened for one or more designated uses, but a TMDL is not needed.
See subcategories below.

Category 5- Water is impaired or threatened for one or more designated uses and a TMDL is needed.

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 3

Category 3- Insufficient data exists to determine whether any designated uses are attained.

303d Assessment Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	TMDL Establishment Date
2008	02070010	DCPTF	Potomac Tidal Fresh	DO		
2008	02070010	DCATF	Anacostia Tidal Fresh	DO		

[1] The waterbody segments as delineated by the Chesapeake Bay Program.

The District has adopted water quality standards for dissolved oxygen, water clarity and chlorophyll a in accordance with the Chesapeake Bay Water Quality Criteria Guidance Document published in 2003 (EPA, 2003). DDOE WQD worked with the Chesapeake Bay Program to assess the tidal waters in the District using the 2003 guidance document and all the addendums published through 2007. For the 2008 listing, the tidal waters were assessed for the 30-day DO attainment.

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4A

Category 4A- All TMDLs needed to result in designated use attainment have been approved or established by EPA.

303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	TMDL Establishment Date
1998	02070010	DCTWB00R	Upper Watts Branch-segment 2	Bacteria Organics Total Suspended Solids	High High High	Oct 2003 Oct 2003
1998	02070010	DCTWB00R	Lower Watts Branch-segment 1	Bacteria Organics Total Suspended Solids	High High High	Oct 2003 Oct 2003 Oct 2003
1998	02070010	DCAKL00L	Kingman Lake	Bacteria Organics Metals Oil and Grease	High High High High	Oct 2003 Oct 2003 Oct 2003 Oct 2003
1998	02070010	DCTDU01R	Fort DuPont Creek	Bacteria Metals	High High	Oct 2003 Oct 2003

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4A

303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	TMDL Establishment Date
1998	02070010	DCTFD01R	Fort Davis Tributary	Bacteria Metals	Medium Medium	Oct 2003 Oct 2003
1998	02070010	DCTFS01R	Fort Stanton Tributary	Bacteria Organics Metals	Medium Medium Medium	Oct 2003 Oct 2003 Oct 2003
1998	02070010	DCTFC01R	Fort Chaplin Tributary	Bacteria Metals	High High	Oct 2003 Oct 2003
1998	02070010	DCTPB01R	Popes Branch	Bacteria Organics Metals	Medium Medium Medium	Oct 2003 Oct 2003 Oct 2003
1998	02070010	DCTTX27R	Texas Avenue Tributary	Bacteria Organics Metals	Medium Medium Medium	Oct 2003 Oct 2003 Oct 2003
1998	02070010	DCRCR00R	Upper Rock Creek-segment 2	Bacteria Organics Metals	Medium Medium Medium	Feb 2004 Feb 2004 Feb 2004

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4A

303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	TMDL Establishment Date
1998	02070010	DCRCR00R	Lower Rock Creek-segment 1	Organics Bacteria Metals	Medium Medium Medium	Feb 2004 Feb 2004 Feb 2004
1998	02070010	DCTOR01R	Oxon Run	Bacteria Organics Metals	Medium Medium Medium	Dec 2004 Dec 2004 Dec 2004
1998	02070010	DCPWC04E	Washington Ship Channel	Bacteria Organics pH	Low Low Low	Dec 2004 Dec 2004 Dec 2004
1998	02070010	DCTBK01R	Battery Kemble Creek	Bacteria Metals	Low Low	Dec 2004 May 2005
1998	02070008	DCTDA01R	Dalecarlia Tributary	Bacteria Organics	Low Low	Dec 2004 May 2005

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4A

303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	TMDL Establishment Date
1998	02070010	DCTCO01L	Chesapeake and Ohio Canal	Bacteria	Low	Dec 2004
1998	02070010	DCTNA01R	Nash Run	Bacteria Organics Metals	Medium Medium Medium	Oct 2003 Oct 2003 Oct 2003
1998	02070010	DCPMS00E	Upper Potomac River-segment 3	Bacteria Organics	High High	Dec 2004 Oct 2007
1998	02070010	DCPMS00E	Middle Potomac River-segment 2	Bacteria Organics	High High	Dec 2004 Oct 2007

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4A

303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	TMDL Establishment Date
1998	02070010	DCPMS00E	Lower Potomac River-segment 1	Bacteria Organics	High High	Dec 2004 Oct 2007
1998	02070010	DCTFB01R	Foundry Branch	Bacteria Metals	Low Low	Dec 2004 May 2005
1998	02070010	DCTBR01R	Broad Branch	Organics	Low	Feb 2004
1998	02070010	DCTDO01R	Dumbarton Oaks	Organics	Low	Feb 2004
1998	02070010	DCTFE01R	Fenwick Branch	Organics	Low	Feb 2004
1998	02070010	DCTKV01R	Klingle Valley Creek	Organics	Low	Feb 2004
1998	02070010	DCTLU01R	Luzon Branch	Organics	Low	Feb 2004

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4A

303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	TMDL Establishment Date
1998	02070010	DCTMH01R	Melvin Hazen Valley Branch	Organics	Low	Feb 2004
1998	02070010	DCTNS01R	Normanstone Creek	Organics	Low	Feb 2004
1998	02070010	DCTPI01R	Pinehurst Branch	Organics	Low	Feb 2004
1998	02070010	DCTPO01R	Portal Branch	Organics	Low	Feb 2004
1998	02070010	DCTPY01R	Piney Branch	Organics Metals	Low Low	Feb 2004 Feb 2004
1998	02070010	DCTSO01R	Soapstone Creek	Organics	Low	Feb 2004
1998	02070010	DCPTN01L	Tidal Basin	Bacteria Organics	Low Low	Dec 2004 Dec 2004

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4A

303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	TMDL Establishment Date
1998	02070010	DCTHR01R	Hickey Run	Bacteria Organics	High High	Oct 2003 Oct 2003
1998	02070010	DCANA00E	Lower Anacostia River-segment 1	BOD Bacteria Organics Metals Total Suspended Solids Oil and Grease Total PCBs	High High High High High High High	Dec 2001 Oct 2003 Oct 2003 Oct 2003 July 2007 Oct 2003 Oct 2007
1998	02070010	DCANA00E	Upper Anacostia River-segment 2	BOD Bacteria Organics Metals Total Suspended Solids Oil and Grease Total PCBs	High High High High High High High High	Dec 2001 Oct 2003 Oct 2003 Oct 2003 July 2007 Oct 2003 Oct 2007

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4A

*BOD means biochemical oxygen demand
*The chemicals for which the Organics TMDL for Upper and Lower Watts Branch, Kingman Lake, Fort Stanton Tributary, Nash Run, Pope's Branch, Texas Avenue Tributary, Hickey Run, Upper and Lower Anacostia River have been approved are chlordane, DDD, DDE, DDT, Dieldrin, Heptachlor Epoxide, PAH1, PAH2, PAH3 and Total PCBs.
*The chemicals for which the Metals TMDL for Kingman Lake, Fort Dupont Creek, Fort Chaplin Tributary, Fort Stanton Tributary, Nash Run, Pope's Branch, Texas Avenue Tributary, Hickey Run, Upper and Lower Anacostia River have been approved are Arsenic, Cooper, Lead, and Zinc.
*The chemicals for which the Organics TMDL for Upper Potomac River, Middle Potomac River and Lower Potomac River have been approved is Total PCBs.
*Bacteria TMDLs have been approved for fecal coliform bacteria.
[1]- last position of alphanumeric code represents the waterbody type. E- estuary, R-river, stream, L- impoundment, lake

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4B

Category 4B- TMDL not required. Other pollution control requirements (such as permits, strategies) are expected to address all waterbody/pollutant combinations and result in attainment of all water quality standards in a reasonable period of time.

No DC waters fit this category.

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES
Category 4C

Category 4C- Impaired or threatened waters for one or more designated uses. TMDL is not required as impairment is not caused by a pollutant.

No DC waters fit this category

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES

Category 5

Category 5- Water is impaired or threatened for one or more designated uses and a TMDL is needed**.**

303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	Targeted for TMDL within 2 years	TMDL Establishment Date
2002	02070010	DCTNA01R	Nash Run	Bis(2-ethylhexyl)phthalate 4,4'-DDE Dioxin	High	N	Dec 2012
1998	02070010	DCPMS00E	Middle Potomac River-segment 2	pH	High	N	May 2011
2002	02070010	DCTFB02R	Foundry Branch	DO	Medium	N	Aug 2013
2002	02070010	DCTBR01R	Broad Branch	Fecal coliform	Medium	N	Aug 2013
2002	02070010	DCTDO01R	Dumbarton Oaks	Fecal coliform	Low	N	Apr 2014
2002	02070010	DCTFE01R	Fenwick Branch	Fecal coliform	Low	N	Apr 2014

DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES

Category 5

303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	Targeted for TMDL within 2 years	TMDL Establishment Date
2002	02070010	DCTKV01R	Klingle Valley Creek	Fecal coliform	Low	N	Apr 2014
2002	02070010	DCTLU01R	Luzon Branch	Fecal Coliform	Medium	N	Aug 2013
2002	02070010	DCTMH01R	Melvin Hazen Valley Branch	Fecal Coliform	Low	N	Apr 2014
2002	02070010	DCTNS01R	Normanstone Creek	Fecal coliform	Low	N	Apr 2014
2002	02070010	DCTPI01R	Pinehurst Branch	Fecal coliform	Medium	N	Aug 2013
2002	02070010	DCTPO01R	Portal Branch	Fecal coliform	Medium	N	Aug 2013
2002	02070010	DCTPY01R	Piney Branch	Fecal coliform	Low	N	Apr 2014
2002	02070010	DCTSO01R	Soapstone Creek	Fecal Coliform	Medium	N	Aug 2013
2002	02070010	DCPTB01L	Tidal Basin	pH	Medium	N	Aug 2014

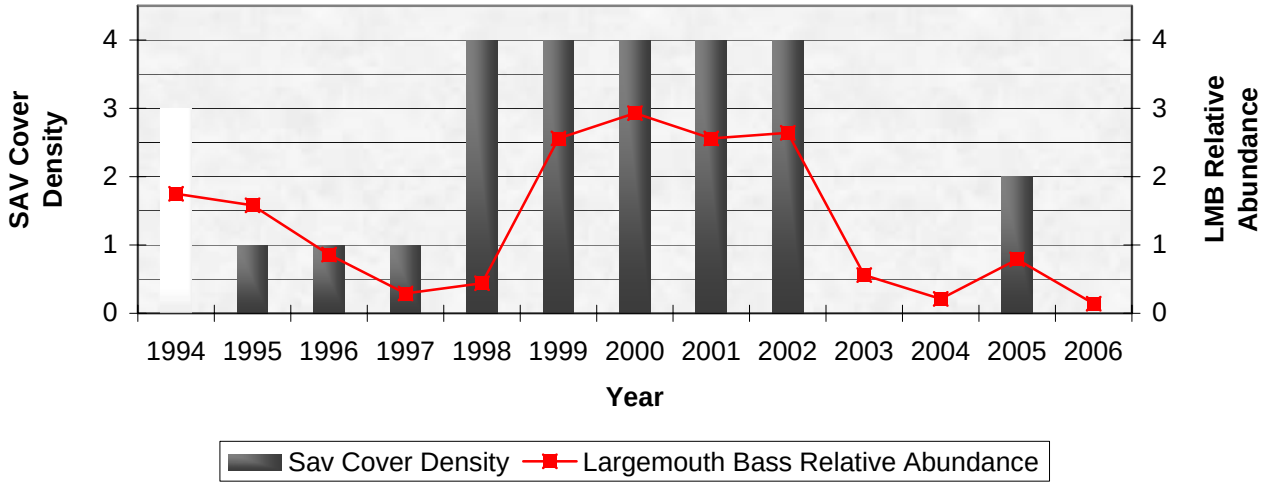
DISTRICT OF COLUMBIA
LIST OF IMPAIRED WATERBODIES

Category 5

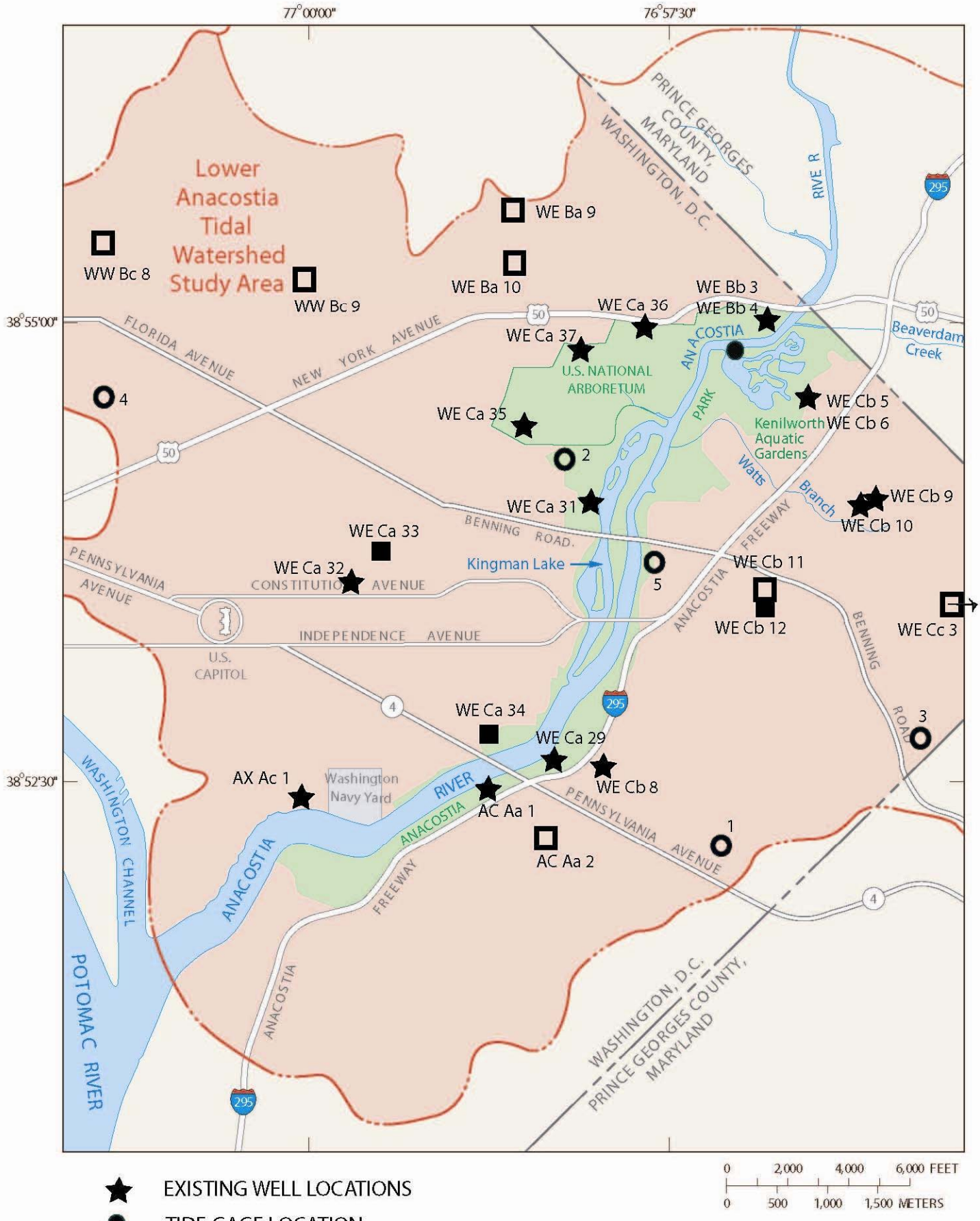
303d Listing Year	Geographic Location	WBID[1]	WB Name	Pollutant(s) or Pollutant Categories Causing Impairment	Priority Ranking for TMDL Development	Targeted for TMDL within 2 years	TMDL Establishment Date
2002	02070010	DCTHR01R	Hickey Run	Bis(2-ethylhexyl)phthalate Chlorine(total Residual)	High	N	Dec 2012
2006	02070010	DCANA00E	Lower Anacostia River-segment 1	Trash	High	N	March 2012
2006	02070010	DCANA00E	Upper Anacostia River-segment 2	Trash	High	N	March 2012

*BOD means biochemical oxygen demand
*The chemicals for which the Organics TMDL for Soapstone Creek, Broad Branch, Dumbarton Oaks, Fenwick Branch, Klingle Valley Creek, Luzon Branch, Melvin Hazen Valley Branch, Normanstone Creek, Pinehurst Branch, Portal Branch, and Piney Brach have been developed are Chlordane, DDD, DDE,DDT, Dieldrin, Heptachlor Epoxide, PAH1, PAH2, PAH3 and TPCBs.
*The chemicals for which the Metals TMDL for Piney Branch has been developed are Arsenic, Copper, Lead, and Zinc.
* Bacteria TMDLs are develop for fecal coliform bacteria.
[1]- last position of alphanumeric code represents the waterbody type. E- estuary, R-river, stream, L- impoundment, lake

Appendix 3.11
Relative Abundance of Harvestable Largemouth Bass vs. SAV Cover Density at Electrofishing Site P2E



GROUND WATER ASSESSMENT APPENDICES



★ EXISTING WELL LOCATIONS

● TIDE GAGE LOCATION

■ NEW 2-INCH WELL LOCATIONS

□ NEW 1-INCH WELL LOCATIONS

○ 2 BOREHOLE LOCATION, NO WELL INSTALLED. NUMBER CORRESPONDS TO LIST ON PAGE 9.

Appendix 5.1 Well Locations

APPENDIX 5.2
SUMMARY OF GROUND WATER PROTECTION PROGRAMS

Programs or Activities	Check	Implementation Status	Responsible State Agency
Active SARA Title III Program	✓	Fully established	HSEMA
Ambient ground water monitoring system	✓	Under development	DDOE
Aquifer vulnerability assessment[1]	✓	Fully established	DDOE
Aquifer mapping[2]	✓	Under development	DDOE
Aquifer characterization	✓	Under development	DDOE
Comprehensive data management system[3]	✓	Under development	DDOE
EPA-endorsed Core Comprehensive State Ground Water protection Program (CSGWPP)	✓	Under development	DDOE
Ground water discharge permits			
Ground water Best Management Practices			
Ground water legislation	✓	Fully established	DDOE
Ground water classification	✓	Fully established	DDOE
Ground water quality standards	✓	Fully established	DDOE
Interagency coordination for ground water protection initiatives	✓	Under development	DDOE
Nonpoint Source Controls			
Pesticide State Management Plan	✓	Fully established	DDOE
Pollution Prevention Program	✓	Under Development	DDOE
Resource Conservation and Recovery Act (RCRA) Primacy	✓	Fully established	DDOE
State Superfund[4]			
State RCRA Program incorporating more stringent requirements than RCRA Primacy	✓	Fully established	DDOE
State septic system regulations			
Underground storage tank installation requirements	✓	Fully established	DDOE
Underground Storage Tank Remediation Fund	✓	Fully established	DDOE
Underground Storage Tank Permit Program	✓	Fully established	DDOE
Underground Injection Control Program			
Vulnerability assessment for drinking water/wellhead	✓	Fully established	DDOE

Well abandonment regulations	✓	Pending	DDOE
Wellhead Protection Program (U.S. EPA-approved)			
Well installation regulations	✓	Pending	DDOE

HSEMA - Homeland Security and Emergency Management Agency
DDOE - District Department of the Environment

(1) Aquifer Vulnerability Assessment
The District of Columbia's ground water vulnerability to contamination was assessed in 1992 by the DC Water Resources Research Center (WRRC) in a report entitled *Urban Land Use Activities and The Ground Water: A Background Survey of the District of Columbia* (WRRC, 1992). The probability of ground water contamination was mapped and ranked accordingly. D.C. recognizes that this report is over ten years old and needs to be revised and hopes to do so in the near future.

(2) Aquifer Mapping
D.C. in conjunction with the USGS is collecting and reviewing available data to map the aquifers the Anacostia Watershed. D.C. hopes to have a preliminary map completed within the near future.

(3) Comprehensive Data Management System
All data collected during the joint DC-USGS projects completed up to 2005 have been maintained and managed by the USGS. This data is readily available on the USGS website (www.usgs.gov) and will continue to grow as more projects are funded. This data includes chemical, locational, and geological information. Monitoring well data are included in the regional ground water database maintained by the USGS for DC and other states, and will be available in GIS formats in the near future.

(4) State Superfund
Although the District of Columbia does not have a State Superfund or CERCLA program, the WQD provides regulatory oversight under the DC Water Pollution Control Act at CERCLIS, Superfund, RCRA, and any other sites with reported ground water contamination. The WQD also provides regulatory oversight and attends meetings at CERCLA/NPL sites in D.C. whenever appropriate.