



# Key EPA Internet Tools for Watershed Management

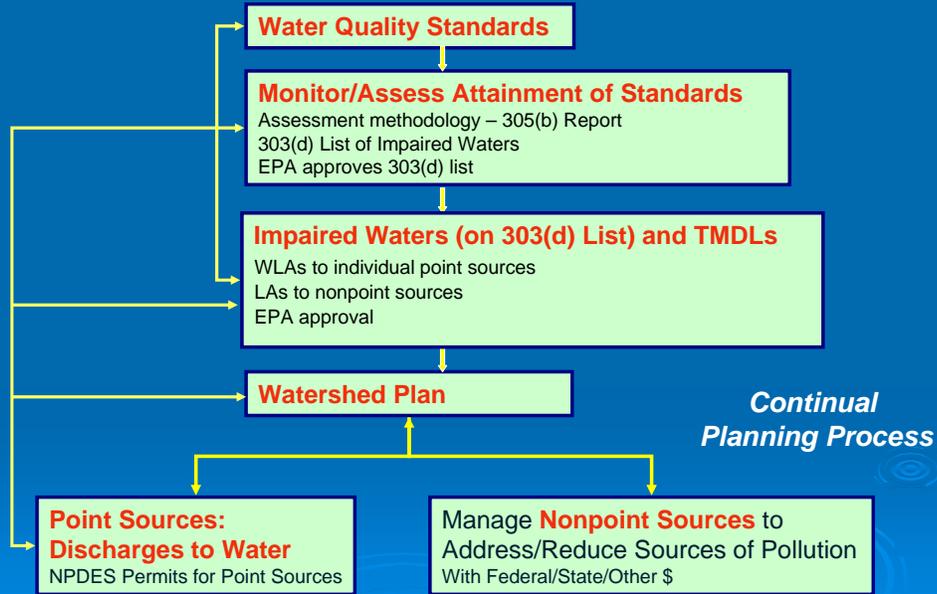
Ansu John  
Tetra Tech, Inc.

March 28, 2007

*Webcast Sponsored by EPA's Watershed Academy*

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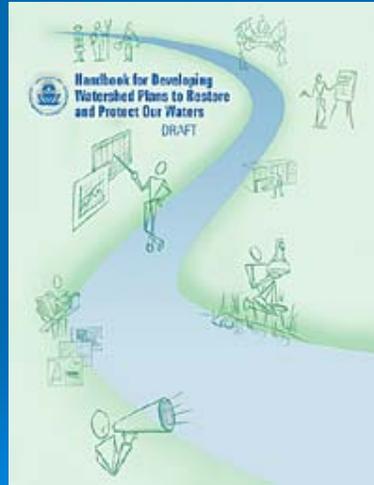
# Clean Water Framework Context



Training on CWA: [www.epa.gov/watertrain/cwa](http://www.epa.gov/watertrain/cwa)

Consistent, Comprehensive Watershed Planning:  
[www.epa.gov/owow/nps/watershed\\_handbook/](http://www.epa.gov/owow/nps/watershed_handbook/)

## Handbook for Developing Watershed Plans to Restore and Protect Our Waters (Draft)



# Six Steps in the Planning Process



**EPA Internet Tools to Address Each Step**

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EPA recommends using the following six steps in developing a watershed plan:

Building Partnerships

Characterizing Your Watershed

Setting Goals and Identifying Solutions

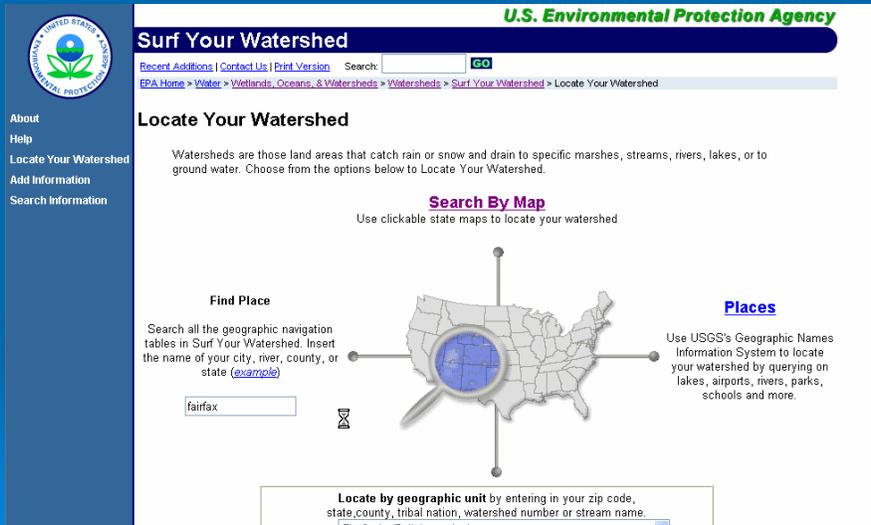
Design an Implementation Program

Implement the Watershed Plan

Measure Progress and Make Adjustments (adaptive management)

# Where to Start? Surf Your Watershed

## www.epa.gov/surf



The screenshot shows the EPA's "Surf Your Watershed" website. At the top right, it says "U.S. Environmental Protection Agency". Below that is the "Surf Your Watershed" header with a search bar containing "GO". A breadcrumb trail reads: "EPA Home > Water > Wetlands, Oceans, & Watersheds > Watersheds > Surf Your Watershed > Locate Your Watershed".

**Locate Your Watershed**

Watersheds are those land areas that catch rain or snow and drain to specific marshes, streams, rivers, lakes, or to ground water. Choose from the options below to Locate Your Watershed.

**Search By Map**  
Use clickable state maps to locate your watershed

**Find Place**  
Search all the geographic navigation tables in Surf Your Watershed. Insert the name of your city, river, county, or state (*example*)

**Places**  
Use USGS's Geographic Names Information System to locate your watershed by querying on lakes, airports, rivers, parks, schools and more.

**Locate by geographic unit** by entering in your zip code, state, county, tribal nation, watershed number or stream name.  
(Zip Code (5 digit number))

On the left side, there is a navigation menu with links for "About", "Help", "Locate Your Watershed", "Add Information", and "Search Information". A search box with the text "fairfax" is visible.

# Find 8-digit HUC through a “Place”

## Fairfax County, VA

Click on the map to zoom in on your watershed



[Current Population](#) (2000 U.S., county) [EXIT Disclaimer](#)

This county crosses 2 [watersheds](#).

# Watershed Profile

## Middle Potomac-Catoctin

### Watershed Profile

Watershed Name: Middle Potomac-Catoctin  
USGS Cataloging Unit: 02070008

[Environmental Websites Involving this Watershed](#)

Visit the [Envirofacts Warehouse](#) to retrieve environmental information from EPA databases on [Air](#), [Community Water Sources](#), [Water Dischargers](#), [Toxic Releases](#), [Hazardous Waste](#), and [Superfund Sites](#). Geographic searches include zip code, city, EPA Region, or county.

[Citizen-based Groups at work in this watershed](#) (Provided by [Adopt your Watershed](#))

[River Corridors and Wetlands Restoration Efforts](#)

[National Watershed Network](#) (provided by [Conservation Technology Information Center](#)) [EXIT Disclaimer](#)

### Assessments of Watershed Health

- [Impaired Water for this watershed](#)



Launches a variety of links including to other federal agencies.

# Links to Watershed Information

## [Environmental Websites Involving this Watershed](#)

Visit the [EPA's website](#) to retrieve environmental information from EPA databases on [Air](#), [Community Water Sources](#), [Water Dischargers](#), [Toxic Releases](#), [Hazardous Waste](#), and [Superfund Sites](#). Geographic searches include zip code, city, EPA Region, or county.



## [Citizen-based Groups at work in this watershed \(Provided by \[Adopt your Watershed\]\(#\)\)](#)

[River Corridors and Wetlands Restoration Efforts](#)

[National Watershed Network](#) (provided by [Conservation Technology Information Center](#)) [\[EXIT Disclaimer\]](#)

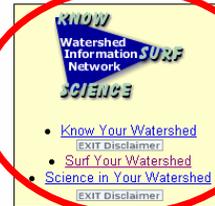
### Assessments of Watershed Health

- [Impaired Water for this watershed](#)
- [Assessed Waters by Watershed](#)
  - [Maryland](#)
  - [District of Columbia](#)
  - [Virginia](#)
  - [West Virginia](#)

### Information provided by the United States Geological Survey (USGS)

[\[EXIT Disclaimer\]](#)

- [Stream Flow](#) (Source: USGS)
- [Science in Your Watershed](#)
- [Water use data \(1985-2000\)](#): Information about the amount of water used and how it is used.
- [Selected USGS Abstracts](#)



# Environmental Web sites

U.S. Environmental Protection Agency

## Surf Your Watershed

[Recent Additions](#) | [Contact Us](#) | [Print Version](#) | [Search](#)

[EPA Home](#) > [Surf Your Watershed](#) > [Locate Your Watershed](#) > Environmental Websites Search

23 Environmental Websites found for: 02070008

### [C&O Canal Association](#)

**Summary:** The C&O Canal paralleled the mighty but unnavigable Potomac River and linked Cumberland, Maryland with the nation's capital, using an orderly system of locks to permit heavily laden coal boats to pass to successively lower levels from the mountains to tidewater. The mule teams that pulled the boats along the canal walked on the towpath, guided by the families of the boat captains.

**Provided by:** C&O Canal Association

**URL:** <http://www.CandOCanal.org/>

**Geographic Keywords:** Watershed (USGS Cataloging Code)

**Keywords:** Conservation, Monitoring, Recreation

**Contact:** Olivia Casasnovas

**Contact Email:** [canal@omdesigns.com](mailto:canal@omdesigns.com)

**Contact Telephone:** (301) 963-0825

**Last Updated:** 7/23/2004 10:11:33 AM

### [Chesapeake & Ohio Canal National Historical Park](#)

**Summary:** On November 5, 1823 the first Chesapeake and Ohio Canal Convention was held in Washington. Under consideration was a proposal to build a canal along the Potomac route from the nation's capital 360 miles to the Ohio River. The Chesapeake and Ohio Canal Company was chartered by the state of Virginia on January 27, 1824. In 1825 the act was confirmed by the state of Maryland and the U.S. Congress, and in 1826 by Pennsylvania. The new canal was greatly anticipated and deemed the "Great National Project". Actual construction began on Independence Day, July 4, 1828 with President John Quincy Adams capping a lavish opening ceremony by turning the first spade full of earth at Little Falls, Maryland. On that very same day a company with an untested means of transportation, the Baltimore and Ohio Railroad, laid the cornerstone for its new enterprise in Baltimore, Maryland. An unanticipated race for the use of the Potomac route had begun.

**Provided by:** National Park Service

**URL:** [http://www.nps.gov/choh/co\\_visit.htm](http://www.nps.gov/choh/co_visit.htm)

**Geographic Keywords:** Watershed (USGS Cataloging Code)

# Citizens Groups

U.S. Environmental Protection Agency

## Adopt Your Watershed

[Contact Us](#) | [Print Version](#) | [Search](#)

[EPA Home](#) > [Water](#) > [Wetlands, Oceans & Watersheds](#) > [Watersheds](#) > [Adopt Your Watershed](#) > [Catalog of Watershed Groups](#) > Search Using a Form Results

### Search Results

0-41 of 42 results for '(02070008)'

- **Group Name:** Captain Hickory Run Project  
**Contact:** Sarah Wilson  
Vienna, Virginia 22182  
**Contact Email:** [Babalu85@aol.com](mailto:Babalu85@aol.com)  
**Description:** New group working on the adoption of Captain Hickory Run

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- **Group Name:** Goose Creek Scenic Advisory Committee  
**Contact:** Helen E Casey  
**Contact Address:** 46753 Winchester Dr  
Sterling, Virginia 20164-2200  
**Contact Phone:** (703) 430-3668  
**Contact Email:** [GooseCreek2002@msn.com](mailto:GooseCreek2002@msn.com)  
**URL:** <http://www.loudoun.gov/advisory/gcsrab.htm>  
**Activity:** Restoration/Conservation Project  
**Description:** Mission: To help keep Goose Creek as scenic and as it is presently. All parties -- state, county and private consult with the Board when they cross, go under, or construct along Goose Creek. The Goose Creek Scenic Advisory Committee is appointed by the Director of Conservation & Recreation with the mandate to protect the scenic quality of Goose Creek.  
**Number of Volunteers:** 7

# USGS Stream Gage Stations

**USGS**  
 National Water Information System: Web Interface

Data Category: Real-time Geographic Area: United States GO

**USGS 01643395 SOPER BRANCH AT HYATTSTOWN, MD**  
**PROVISIONAL DATA SUBJECT TO REVISION**

Available data for this site Time-series: Real-time data GO

STATION.--01643395 SOPER BRANCH AT HYATTSTOWN, MONTGOMERY COUNTY, HYDROLOGIC UNIT 02070008,  
 LOCATION.--Lat 39°16'31.1", 1 on left bank 300 ft upstre Hyattstown.  
 DRAINAGE AREA.--1.17 mi2.  
 PERIOD OF RECORD.--February 2  
 GAGE.--Water-stage recorder.  
 REMARKS.--U.S. Geological Sur  
 COOPERATION.--Funding for the operation of this station is provided by the U.S. Environmental Protection Agency in cooperation with Montgomery County.

Time-series: Real-time data  
 Site home page  
 Site map  
 Time-series: Real-time data  
 Time-series: Daily data  
 Time-series: Daily statistics  
 Time-series: Monthly statistics  
 Time-series: Annual statistics  
 Surface-water: Peak streamflow  
 Surface-water: Field measurements  
 Offsite: EPA Surf your Watershed

Available Parameters	Output format	Days
<input type="checkbox"/> All 2 Available Parameters for this site	<input checked="" type="radio"/> Graph	7
<input checked="" type="checkbox"/> 00065 Gage height	<input type="radio"/> Graph w/ stats	(1-31)
<input checked="" type="checkbox"/> 00060 Discharge	<input type="radio"/> Graph w/o stats	
	<input type="radio"/> Table	
	<input type="radio"/> Tab-separated	

# Watershed Hub: www.epa.gov/owow/watershed

## Spotlight Watersheds at Work

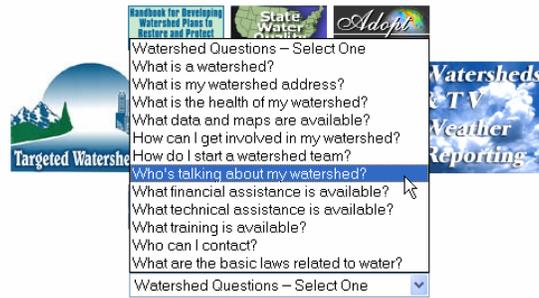
[We all live in a watershed](#) -- the area that drains to a common waterway, such as a stream, lake, estuary, wetland, aquifer, or even the ocean -- and our individual actions can directly affect it. Working together [using a watershed approach will help protect our nation's water resources](#).

The screenshot displays the Watershed Hub website interface. At the top, there are three navigation links: "Handbook for Developing Watershed Plans to Restore and Protect Our Waters", "State Water Quality", and "Adopt YOUR WATERSHED". Below these are several featured content tiles: "Targeted Watersheds" (circled in red), "MISSISSIPPI RIVER BASIN", "Surf Your Watershed", "Watersheds & TV Weather Reporting", "Watershed Academy", "After the Storm", and "Catalog of Federal Funding for Watersheds" (circled in red). A dropdown menu labeled "Watershed Questions - Select One" is visible. The interface is decorated with icons of stacks of money and a graduation cap. Two large yellow arrows point from the bottom corners towards the "Targeted Watersheds" and "Catalog of Federal Funding for Watersheds" tiles. The number "12" is located in the bottom right corner of the blue background.

# Partners/Resources: Online Communities

## [Spotlight Watersheds at Work](#)

[We all live in a watershed](#) -- the area that drains to a common waterway, such as a stream, lake, estuary, wetland, aquifer, or even the ocean -- and our individual actions can directly affect it. Working together [using a watershed approach will help protect our nation's water resources](#).



The screenshot shows a website navigation menu with several items: 'Handbook for Developing Watershed Plans to Restore and Protect', 'State Water Planning', 'Adopt a Watershed', 'Targeted Watersheds', 'Watershed Questions - Select One', 'Watersheds & TV', and 'Weather Reporting'. The 'Watershed Questions - Select One' dropdown menu is open, displaying a list of questions: 'What is a watershed?', 'What is my watershed address?', 'What is the health of my watershed?', 'What data and maps are available?', 'How can I get involved in my watershed?', 'How do I start a watershed team?', 'Who's talking about my watershed?', 'What financial assistance is available?', 'What technical assistance is available?', 'What training is available?', 'Who can I contact?', and 'What are the basic laws related to water?'. A mouse cursor is pointing at the 'Who's talking about my watershed?' option.

[Watershed Questions](#) | [Watershed Glossary](#) | [Watershed Calendar](#)

# Watershed Online Information Sharing: [www.epa.gov/owow/watershed/information.html](http://www.epa.gov/owow/watershed/information.html)



## Join Listservers

- [WaterNews listserver](#) - get your water news directly from the source, the EPA's Office of Water
- [Watershed News](#)
- [The Volmonitor Listserver](#)
- [Biocriteria/Bioassessment Listserver](#)
- [National Ground Water Listserver](#)
- [EPA Public Listservers](#)
- [Standards and Applied Science Division WQS-NEWS](#)

# EPA Public Listservers

**LYRIS ListManager** Current Forum: You are: [not logged in](#)

[Messages](#)
[Search](#)
[Conference](#)
[My Account](#)
[My Forums](#)
[All Forums](#)
[About](#)

[Messages](#) :

**All Forums**

Name	Description	Members Only?	
<a href="#">316bforum</a>	Private - for States and EPA only	yes	<a href="#">subscribe</a>
<a href="#">aceupdate</a>	Notification of updates to the America's children and the environment website.	yes	<a href="#">subscribe</a>
<a href="#">adb</a>	Integrated Reporting: Electronic 305(b)/303(d)/TMDL	yes	<a href="#">subscribe</a>
<a href="#">aqcenter</a>	National Agriculture Compliance Assistance Center	yes	<a href="#">subscribe</a>
<a href="#">aging_initiati</a>	Listserver of the EPA Aging Initiative	yes	<a href="#">subscribe</a>
<a href="#">aqsdatabar</a>	For users of the AQS Data Mart and air quality analysts	yes	<a href="#">subscribe</a>
<a href="#">aquatoxinfo</a>	Private List of AQUATOX Users	yes	<a href="#">subscribe</a>
<a href="#">architectures</a>	ARCHITECTURES	yes	<a href="#">subscribe</a>
<a href="#">basinsinfo</a>	Private list for BASINS users	yes	<a href="#">subscribe</a>
<a href="#">bopsat</a>	BOPSAT group	yes	<a href="#">subscribe</a>
<a href="#">brownfields</a>	EPA Brownfields Program news	no	<a href="#">subscribe</a>
<a href="#">callcenter_oswa</a>	Superfund, TRI, EPCRA, RMP & Oil Infomation Center	yes	<a href="#">subscribe</a>
<a href="#">cameo</a>	EPA-NOAA CAMEO Team	yes	<a href="#">subscribe</a>
<a href="#">ceam-users</a>	Center for Exposure Assessment Modeling (CEAM) Discussion Group	yes	<a href="#">subscribe</a>
<a href="#">ceripubs</a>	A periodic announcement of new technology transfer products from US EPA's Center for Environmental Research Information	yes	<a href="#">subscribe</a>
<a href="#">cfefs</a>	CFEIS System status updates	yes	<a href="#">subscribe</a>
<a href="#">cfusers</a>	CFUsers	yes	<a href="#">subscribe</a>
<a href="#">chief</a>	Emission Factor & Inventory Group	yes	<a href="#">subscribe</a>
<a href="#">ciaq</a>	To facilitate the activities of the CIAQ	yes	<a href="#">subscribe</a>
<a href="#">cleanupnews</a>	Cleanup Newsletter	yes	<a href="#">subscribe</a>
<a href="#">climate_communicators</a>	Climate change communications, outreach, and	yes	<a href="#">subscribe</a>

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# Quarterly Newsletter on Watershed Topics

[www.epa.gov/owow/info/NewsNotes](http://www.epa.gov/owow/info/NewsNotes)



Nonpoint Source

## News-Notes

*The Condition of the Water-Related Environment  
The Control of Nonpoint Sources of Water Pollution  
The Ecological Management & Restoration of Watersheds*

A periodic report on the Condition of the Water-Related Environment, The Control of Nonpoint Sources of Water Pollution, and the Ecological Management and Restoration of Watersheds

Search all issues of News-Notes by Keyword:

**GO**



### Current Issue

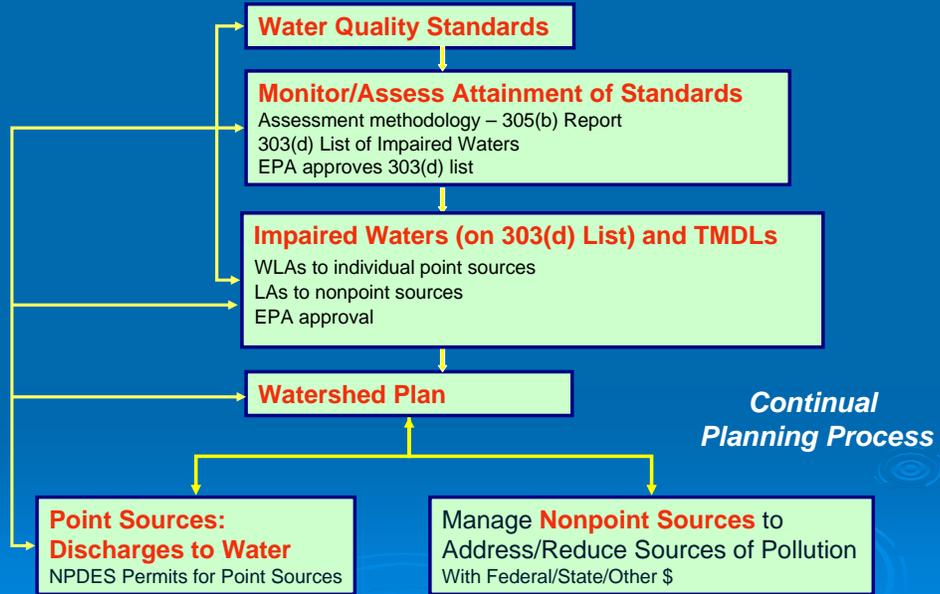
**January 2007, #80**

PDF (1.6 MB, 32 pages)

# Watershed Planning Steps

- Build Partnerships
- Characterize the Watershed
- Set Goals and Identify Solutions
- Design an Implementation Program
- Implement the Program
- Measure Progress, Make Necessary Adjustments

# Clean Water Framework Context



Training on CWA: [www.epa.gov/watertrain/cwa](http://www.epa.gov/watertrain/cwa)

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## National Sources: EPA Water Program Databases

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- A. Water Quality Standards
- B. Assessment
- C. Impairments and TMDL

# A. Water Quality Standards: www.epa.gov/waterscience/standards

**U.S. Environmental Protection Agency**

## Water Quality Standards

[Recent Additions](#) | [Contact Us](#) | [Print Version](#) Search:  [GO](#)

[EPA Home](#) > [Water](#) > [Water Science](#) > [Water Quality Standards](#)

**Water Science Home**  
Water Quality Standards are the foundation of the water quality-based pollution control program mandated by the Clean Water Act. Water Quality Standards define the goals for a waterbody by [designating its uses](#), [setting criteria](#) to protect those uses, and establishing provisions to protect waterbodies from pollutants.

**Water Quality Standards Home**  
[Drinking Water Standards](#) are found elsewhere on our Web site.

**Basic Information**  
[Basic Information](#)  
The importance of Water Quality Standards and how they fit into overall water quality protection.

**Where You Live**  
[Where You Live](#)  
Regional and state specific information.

**Recent Actions**  
[Recent Actions](#)  
Learn about current events, public meetings, documents, and actions.

**Laws & Regulations**  
[Laws & Regulations](#)  
Collection of legislative and federal requirements.

**Policy & Guidance**  
[Policy & Guidance](#)  
Library of documents, notices, and memoranda designed to help states, tribes, & territories comply with federal regulations addressing water quality standards.

**State, Tribal, & Territorial Standards**  
[State, Tribal & Territorial Standards](#)  
Detailed information on the current standards for all waters of the U.S.

**Database**  
[Database](#)  
Provides access to several reports with information about designated uses, waterbody names, and numeric water quality criteria.

**Training, Meetings, & Educational Materials**  
[Training, Meetings, & Educational Materials](#)  
We offer courses, conduct public meetings, and provide resources to help you understand the basics and new developments.

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# WQS Database: www.epa.gov/wqsdatabase/



The screenshot shows the EPA Water Quality Standards Database website. At the top right, it says "U.S. Environmental Protection Agency". Below that is a dark blue header with "Water Quality Standards Database" in white. To the left of the header is the EPA logo and a navigation menu with items like "WQS Database Home", "Basic Information", "What's New", "Reports", "Mapping", "Demo", "Data Summary", "Diagram", "Repository of WQS Documents", and "Disclaimer". The "Reports" item is circled in red. To the right of the header is a search bar with "GO" and a breadcrumb trail: "EPA Home > Water > Water Science > Standards > Database". Below the header is a main content area with a welcome message: "Welcome to the September 2005 release of the National Water Quality Standards Database (WQSDB), the eighth release since April 2001. The WQSDB provides access to EPA and state water quality standards (WQS) information in text, tables, and maps." There are three small images: a person fishing, a boat on water, and a water quality monitoring station. Below the images is a paragraph: "This Web site provides access to several WQS reports with information about designated uses, waterbody names, state numeric water quality criteria, and EPA recommended numeric water quality criteria. Using standard reports, you can compare WQS information across the nation. Click on the [Reports](#) to view WQSDB attributes." The word "Reports" in the link is circled in red.

# Find Designated Uses

U.S. Environmental Protection Agency



## Water Quality Standards Database

[Contact Us](#) | [Print Version](#) Search:

[EPA Home](#) > [Water](#) > [Water Science](#) > [Standards](#) > [Database](#) > [Reports](#)

WQS Database Home

Basic Information

What's New

Reports

Mapping

Demo

Data Summary

Diagram

Repository of

WQS Documents

Disclaimer

## Reports

Users may limit the records that appear in the report by entering values in the input fields for a given report. The resulting report contains only those records that meet the user-specified values. Below are the six WQSDB reports. To select and run a report, click on name of the report. The designated uses descriptions from "Palette only" states can be seen under "Designated Use and Waterbody Data Across States" and "Designated Use and Class Data by National DU" reports.

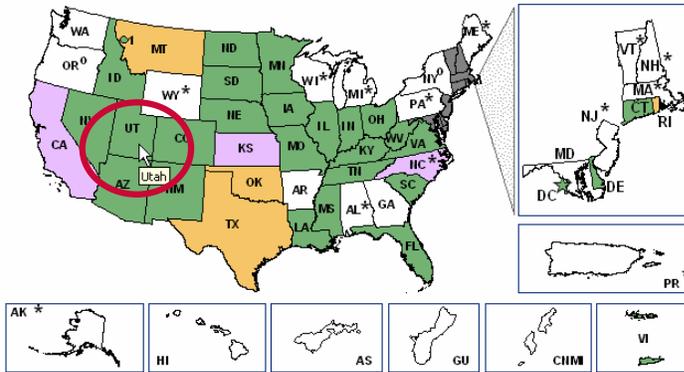
- [Designated Use and Waterbody Data by State:](#) This report is a summary of designated use and waterbody data. The user may select data for a particular state based on designated use(s) and waterbody name(s). The report includes: Entity ID, Waterbody Name, Waterbody Segment Description, State DU Code, State DU Name, State DU Description, State Specific DU Name and State Class Code.
- [Designated Use and Waterbody Data Across States:](#) This report relates designated use and waterbody data across States. The user may select data based on state(s), national designated use(s), and optionally a waterbody name. The report includes: National DU Name, State Code, State DU Code, State DU Name, State DU Description, State Specific DU Name, Class Code, Class Description, and Effective Date. It may also include Waterbody Name. This report is useful for checking information across boundaries.
- [Designated Use and Class Data by National DU:](#) The report includes: National DU Name, State DU Code, State DU Name, State DU Description, State Specific DU Name, State Class and State Class Description.
- [State Numeric Criteria:](#) This report identifies the state numeric criteria for each designated use. The user may select data based on state, pollutant(s), and condition(s) (e.g., hardness, temperature, and pH). The report includes: State DU Code, State DU Name, Waterbody Type, Pollutant, Acute/Chronic Flag, Condition Criteria, Pollutant Value, and Pollutant Unit.

**NOTE: This report only contains data for Missouri and Mississippi.**

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# Zoom Into Waterbody by State

Select a state to search



- Maps and Waterbody Tables
- Only Waterbody Tables
- Not Available (Work In Progress)
- Not Available
- 1 - Confederated Salish and Kootenai Tribes of the Flathead Reservation
- \* Designated Use Names Not Associated with Waterbody Tables
- o Designated Use Spreadsheets In Progress

# Pick the Waterbody

Method 1: Type a Waterbody Name into the text box below, and select the appropriate option for "Beginning with", "Exact match" or "Containing". For example, enter Lake Huron for the waterbody name and click "Containing" to locate a waterbody that contains the phrase "Lake Huron".

**Waterbody Name:**

Beginning with     Exact match     Containing

Method 2: Select all waterbodies by clicking on "All Waterbody Names" or click on one or more waterbody names. Use the scroll bar or type the first letter of a Waterbody Name to move down the list.

**Waterbody Name:**

- BARTON CREEK AND TRIBUTARIES FROM U.S. NATIONAL FOREST BOUNDARY TO HEADWATERS
- BASIN CREEK AND TRIBUTARIES JUAB AND TOOELE COUNTIES
- BEAR LAKE (UTAH PORTION)
- BEAR RIVER AND TRIBUTARIES FROM GREAT SALT LAKE TO UTAH-IDAHO BORDER EXCEPT AS LISTED BELOW
- BEAR RIVER AND TRIBUTARIES FROM UTAH-WYOMING STATE LINE TO HEADWATERS (SUMMIT COUNTY)
- BEAR RIVER AND TRIBUTARIES IN RICH COUNTY
- BEAR RIVER NATIONAL WILDLIFE REFUGE BOX ELDER COUNTY
- BEAVER CREEK AND TRIBUTARIES DAGGETT COUNTY
- BEAVER DAM WASH AND TRIBUTARIES FROM MOTOQUA TO HEADWATERS
- BEAVER LAKE

Click the Run Report button to view the report results. To clear all selections, click the Reset button.

# Database Report Result = Designated Uses of Selected Waterbody

Click on

- the Entity ID link to view EnviroMapper.
- the Waterbody Name to get the expanded text.
- this link to view state disclaimer data: [UT](#)
- the State DU Description to get the expanded text.



Note: A "No feature found" response from EnviroMapper means the data are in WQSDb but not in the RAD.

Waterbody Entity ID	Waterbody Name	Waterbody Segment Description	State DU Code	State DU Name	State DU Description	State Specific DU Name	Class Code
<a href="#">UT-R-BEAR-0021</a>	<a href="#">BEAR RIVER AND TRIBUTARIES FROM UTAH-WYOMING STATE LINE TO HEADWATERS (SUMMIT CO</a>		4	Agricultural	Protected for agricultural uses including irrigation of crops and stock watering.		
<a href="#">UT-R-BEAR-0021</a>	<a href="#">BEAR RIVER AND TRIBUTARIES FROM UTAH-WYOMING STATE LINE TO HEADWATERS (SUMMIT CO</a>		3A	Cold Water Aquatic Life	Protected for cold water species of game fish and other cold water aquatic life.		
<a href="#">UT-R-BEAR-0021</a>	<a href="#">BEAR RIVER AND TRIBUTARIES FROM UTAH-WYOMING STATE LINE TO HEADWATERS (SUMMIT CO</a>		2B	Secondary Recreation	Protected for secondary contact recreation such as boating, wading, or similar uses.		

Count of Waterbody, Specific DU, DU, and Class: 3

**Bonus: Selected Waterbody can be mapped in "EnviroMapper For Water"**

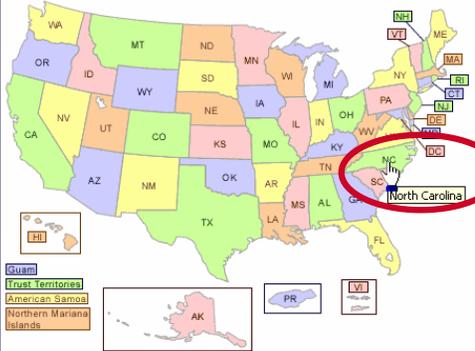
# State, Tribal, & Territorial Standards: [www.epa.gov/waterscience/wqs/](http://www.epa.gov/waterscience/wqs/)

## Water quality standards currently in effect

Click on the map or drop down menus below to find state water quality standards currently in effect. To view the designated uses of water bodies in table or map form for selected states, see EPA's [Water Quality Standards Database](#). Designated uses are one component of water quality standards.

[Tribes](#) | [Territories](#)

Choose a state from the map below or the list to the right.



Click on a State to View  
its WQS Documents/Codes

# State Documents: WQS Codes

## Repository of Documents

### North Carolina

You will need Adobe Acrobat Reader, available as a free download, to view some of the files linked on this page. Please see [EPA's PDF page](#) to learn more about PDF, and for a link to the free Acrobat Reader.

#### [Federal Regulations, 40 CFR 131.41](#)

(Effective December 16, 2004) Federal regulations establishing bacteria criteria for coastal and Great Lakes waters. This regulation is also known as the Beach Rule.

#### [Section .0100-.0200, Classifications and Water Quality Standards Applicable to Surface Waters and Wetlands of North Carolina \(PDF\)](#) (130 pages, 895 K)

(Effective October 3, 2003) Section .0100 contains the procedures for assignment of water quality standards. Section .0200 contains the classifications and water quality standards applicable to surface waters and wetlands of North Carolina.

#### [Thermal \(Temperature\) Variances to North Carolina Water Quality Standards \(PDF\)](#) (10 K, 1 page)

(Effective April 23, 2006) Information detailing variances from water quality standards for dischargers to North Carolina surface waters.

#### [Section .0300, Classifications and Water Quality Standards Applicable to Surface Waters and Wetlands of North Carolina \(PDF\)](#) (25 pages, 2.1 Mb)

Section .0300 addresses the assignment of stream classifications. The following documents contain water quality standards specific to the river basin identified. *Charts represent changes to the surface water classifications for specific waterbodies that are not reflected in the linked document.*

#### [Broad River Basin: Classifications and Water Quality Standards \(PDF\)](#) (1.9 pages, 1.1 Mb)

**Broad River Basin: Surface Water Reclassifications**

# QUESTIONS?



Online Participants: Submit questions online anytime.

Phone Participants: Please state your name and where you are calling from before your question.

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## B. Assessment

[www.epa.gov/waters/305b](http://www.epa.gov/waters/305b)

### 2002 National Assessment Database

The **2002 National Assessment Database** summarizes electronic information submitted by the states to EPA in the 2002 water quality reporting cycle. This information should not be used to compare water quality conditions between states or to identify statewide or national trends because of differences in state assessment methods and changes to EPA guidance. This represents the most recent electronically available state water quality information. We are currently assembling information for the 2004 reporting cycle.

This website is EPA's first-ever interactive summary of state-reported water quality information and allows the user to view assessments of individual waterbodies. It presents data in a format designed for quick reference by water quality professionals and those familiar with water quality reporting. EPA is working with the states to improve future electronic reporting.

Choose a state or territory from the map or pick list below to view its Water Quality Assessment Data. To view state data using an interactive mapping tool that displays a wide range of environmental information, go to [EnviroMapper for Water](#).

Alabama

#### National Assessment Database

[About this Database](#)

[Assessing Water Quality](#)  
(Questions and Answers)

[The 2002 National Assessment Database](#) (Fact Sheet)

[Previous National Water Quality Reports](#)

[EnviroMapper for Water](#)

#### [About this Database:](#)

Explains terms like: "Impaired", "Threatened"

Explains Report headings like:

"Assessed Waters, Individual Use Support for Bays and Estuaries:"

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# Clickable Map: Zoom Into Statewide Assessment Reports

**NOTE:** States and territories that are colored "gray" do not have electronic reports available at this time.



Search for water quality assessment information about a particular waterbody. Select the state of interest, and enter a waterbody name.

State: ALL  Waterbody Name:

Alabama  
Alaska

# State Report Sections: Type of Waterbody, Watersheds

## Assessment Data for the State of Massachusetts Year 2002

- [Total Assessed Waters of Massachusetts](#)
- [Assessed Waters of Massachusetts by Watershed](#)
- Water Quality by Waterbody Type
  - Rivers, Streams, and Creeks
    - [Individual Use Support for Assessed Waters](#)
    - [Water Quality Attainment for Assessed Waters](#)
    - [Top State Causes of Impairments](#)
    - [Top State Probable Sources of Impairments](#)
  - Lakes, Ponds, and Reservoirs
    - [Individual Use Support for Assessed Waters](#)
    - [Water Quality Attainment for Assessed Waters](#)
    - [Top State Causes of Impairments](#)
    - [Top State Probable Sources of Impairments](#)
  - Bays and Estuaries
    - [Individual Use Support for Assessed Waters](#)
    - [Water Quality Attainment for Assessed Waters](#)
    - [Top State Causes of Impairments](#)
    - [Top State Probable Sources of Impairment](#)
- [Causes of Impairment](#)
- [Probable Sources Contributing to Impairment](#)
- [Glossary](#)

National Assessment Database
<a href="#">About this Database</a>
<a href="#">Assessing Water Quality</a> (Questions and Answers)
<a href="#">The 2002 National Assessment Database</a> (Fact Sheet)
<a href="#">Previous National Water Quality Reports</a>

# Overall Report Card

## Massachusetts Assessed Waters Individual Use Support for Bays and Estuaries

Description of this table

State Designated Use	Total Square Miles Assessed	Percent Good	Percent Threatened	Percent Impaired	
Fish, Shellfish, and Wildlife Protection and Propagation	101.64	65.83	.00	34.17	
Recreation	174.07	82.07	.00	17.93	
Aquatic Life Harvesting	285.15	0.00	0.00	90.68	
Aesthetic Value	10.25				

The state assessed... miles.

### Massachusetts Top Causes of Impairments for Bays and Estuaries

Description of this table

#	State Cause Name	Total Square Miles Impaired
1	PATHOGENS	203.66
2	TOTAL TOXICS	58.08
3	PRIORITY ORGANICS	54.08
4	NUTRIENTS	21.72
5	ORGANIC ENRICHMENT/LOW DO	5.21
6	TEMPERATURE, WATER	4.80
7	TURBIDITY	4.70
8	TOTAL SUSPENDED SOLIDS (TSS)	4.60
9	UNKNOWN TOXICITY	4.00
10	OBJECTIONABLE DEPOSITS	2.00

# Watershed-based Report: Selected Individual Watershed

## Assessment Data for Massachusetts, Blackstone Watershed, Year 2002

**Other Water Assessment Information**  
The most current report available for this watershed is 2002.

[Description of this table](#)  
For a report glossary please click [here](#).

Click on the Water Name link to get 305(b) Lists/Assessment Unit Information Report

<b>Table Legend:</b>	Water Status is Good	Water Status is Threatened	Water Status is Impaired	Water Status has not been Assessed
----------------------	----------------------	----------------------------	--------------------------	------------------------------------

### National Assessment Database

[About this Database](#)  
[Assessing Water Quality](#)  
(Questions and Answers)  
[The 2002 National Assessment Database](#)(Fact Sheet)  
[Previous National Water Quality Reports](#)

<a href="#">Water Name</a>	<a href="#">Assessment Unit ID</a>	<a href="#">Location</a>	<a href="#">Map</a>	<a href="#">State</a>	<a href="#">Water Type</a>	<a href="#">Water Size</a>	<a href="#">Unit</a>	<a href="#">Water Status</a>
<a href="#">Aldrich Pond</a>	MA51002	Pink: Blackstone(51002) Sutton	<a href="#">Map Assessed Water</a>	MA	FRESHWATER LAKE	2 ACRES		IMPAIRED
<a href="#">Arcade Pond</a>	MA51003	Pink: Blackstone(51003) Northbridge	<a href="#">Map Assessed Water</a>	MA	FRESHWATER LAKE	18 ACRES		IMPAIRED
<a href="#">Auburn Pond</a>	MA51004	Pink: Blackstone(51004) Auburn	<a href="#">Map Assessed Water</a>	MA	FRESHWATER LAKE	16 ACRES		IMPAIRED

# Selected Individual Waterbody: Blackstone River, 3.7-mile Section

## Water Quality Attainments

Designated Use Category	State Designated Use	Attainment Status	Threatened
Fish, Shellfish, and Wildlife Protection and Propagation	ALUS	NOT SUPPORTING	No
Aquatic Life Harvesting	FISH CONSUMPTION	NOT SUPPORTING	No
Recreation	PRIMARY CONTACT	PARTIAL SUPPORT	No
Recreation	SECONDARY CONTACT	PARTIAL SUPPORT	No
Aesthetic Value	AESTHETICS	PARTIAL SUPPORT	No

■ Fully Supported 
 ■ Threatened 
 ■ Partially Supported 
 ■ Not Supported 
 ■ Not Assessed

Note: State Designated Uses reported as "Not Attainable" are no longer recognized under the 2002 Integrated Risk Management Strategy and are categorized as "Not Supported".

## Causes of Impairment

State Impairment	EPA Impairment Classification
NUTRIENTS	NUTRIENTS
PATHOGENS	PATHOGENS
TOTAL TOXICS	TOTAL TOXICS
FLOW ALTERATION	FLOW ALTERATIONS
PRIORITY ORGANICS	TOXIC ORGANICS
ODOR THRESHOLD NUMBER	TASTE AND ODOR



Click on the map above for an interactive Enviromapper session!

**Bonus: Map this section in "Enviromapper for Water"**

# Complement with In-Depth State Information

State of Massachusetts websites: [EXIT Disclaimer](#) [State 305\(b\) Water Quality Assessment Report\(s\)](#)  
[State Water Quality Program](#)

## MA: DEP Water Quality Assessment Reports

### Water Quality Assessment Reports

Listed alphabetically by watershed name.  
NOTE: Very large file sizes may significantly increase download times.

#### Blackstone River Basin - 1998

Section I: MS Word 564 KB | Section II: MS Word 350 KB  
Section III: MS Word 3 MB | Section IV: MS Word 2.8 MB

#### Boston Harbor - 1999

Section I: PDF 960 KB | Section II: PDF 973 KB  
Section IIIa: PDF 490 KB | Section IIIb: PDF 2.42 MB  
Section IIIc: PDF 1.01 MB | Section IIId: PDF 915 KB  
Section IV: PDF 1.07 MB

#### Buzzards Bay Watershed - 2000

Section I: PDF 822 KB | Section II: PDF 2.9 MB  
Section III: PDF 3.53 MB | Section IV: PDF

#### Cape Cod Watershed - 1999

PDF 3.86 MB

#### Charles River Basin Watershed - 1997/1998

Section I: MS Word 723 KB | Section II: MS Word 248 KB  
Section III: MS Word 2.7 MB | Section IV: MS Word 6.3 MB  
Errata sheet: MS Word 24 KB

# C. Impaired Waters and Total Maximum Daily Loads: www.epa.gov/waters/tmdl

**U.S. Environmental Protection Agency**

## Total Maximum Daily Loads

Recent Additions | Contact Us | Print Version Search:  **GO**

EPA Home > Water > Wetlands, Oceans, & Watersheds > TMDLs

[2006 Integrated Report Guidance Available](#)

**TMDL Reports**, providing a summary of the TMDL program, are available for EPA Regions and the states. Use the map to select a state or EPA Region for a TMDL report. A [national report may be viewed by clicking here](#). Click here to view a [text only version of this map](#).

**Features**

- [2006 Integrated Report Guidance](#)
- [Audio version of Sept. 28, 2005 Webcast Seminar on "The ABCs of TMDLs for Stakeholders"](#)

Visit <http://www.tmdls.net/> (EXIT Disclaimer) to see sample TMDLs and other important information on TMDLs

Click on a state (VA)

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# Example (1 of 2) Summary of Impairments for State of Virginia

## Causes of Impairment

**NOTE:** Click on the underlined "Cause of Impairment Reported" value to see a listing of those waters with that cause of impairment. Click on the underlined "General Impairment Name" to see the detailed state-reported impairment names.

General Impairment Name	Cause of Impairment Reported	Percent of Reported
<a href="#">PATHOGENS</a>	<a href="#">605</a>	35.07
<a href="#">FISH CONSUMPTION ADVISORY - POLLUTANT UNSPECIFIED</a>	<a href="#">251</a>	14.55
<a href="#">OXYGEN DEPLETION</a>	<a href="#">191</a>	11.07
<a href="#">CAUSE UNKNOWN - BIOLOGICAL INTEGRITY</a>	<a href="#">171</a>	9.91
<a href="#">PH</a>	<a href="#">143</a>	8.29
<a href="#">METALS (OTHER THAN MERCURY)</a>	<a href="#">119</a>	6.90
<a href="#">PCBS</a>	<a href="#">70</a>	4.06
<a href="#">AMMONIA</a>	<a href="#">49</a>	2.84
<a href="#">NUTRIENTS</a>	<a href="#">33</a>	1.91
<a href="#">TEMPERATURE</a>	<a href="#">32</a>	1.86
<a href="#">PESTICIDES</a>	<a href="#">16</a>	.93
<a href="#">MERCURY</a>	<a href="#">11</a>	.64

# Drill Down: All Waterbodies Listed for Pathogen Impairments

**Query Parameters:**

State = VA

Parent Impairment = PATHOGENS

**NOTE:** Click on the underlined Waterbody Name for a detailed Listed Water Report. Click on the underlined "MAP 303(d)" literal for a map of the Listed Water.

State	Waterbody Name	Map of Listed Water	State Basin Name	Location	Cyles Listed
VA	<a href="#">AARONS CREEK</a>	<a href="#">MAP 303(d)</a>	ROANOKE		2004, 2002
VA	<a href="#">ACCOKEEK CREEK</a>	<a href="#">MAP 303(d)</a>	POTOMAC		2004, 2002
VA	<a href="#">ACCOTINK CREEK</a>	<a href="#">MAP 303(d)</a>	POTOMAC		2004, 2002
VA	<a href="#">ADAIR RUN</a>	No Spatial Data	NEW		2004
VA	<a href="#">AIRFIELD POND (LOWER) UNNAMED TRIBUTARY</a>	No Spatial Data	CHOWAN		2004
VA	<a href="#">AIRFIELD POND (UPPER) UNNAMED TRIBUTARY</a>	No Spatial Data	CHOWAN		2004
VA	<a href="#">ALLEN CREEK</a>	No Spatial Data	ROANOKE		2004, 2002
VA	<a href="#">ALLEN CREEK, UT</a>	No Spatial Data	ROANOKE		2004
VA	<a href="#">ALMOND CREEK</a>	No Spatial Data	LOWER JAMES		2004, 2002, 1998, 1996
VA	<a href="#">ANGOLA CREEK</a>	<a href="#">MAP 303(d)</a>	APPOMATOX		2004, 2002
VA	<a href="#">ANGOLA CREEK</a>	<a href="#">MAP 303(d)</a>	APPOMATOX		2004, 2002
VA	<a href="#">APPOMATTOX RIVER</a>	<a href="#">MAP 303(d)</a>	APPOMATOX		2004, 2002, 1998, 1996, 1994
VA	<a href="#">APPOMATTOX RIVER</a>	<a href="#">MAP 303(d)</a>	APPOMATOX		2004, 2002
VA	<a href="#">APPOMATTOX RIVER</a>	<a href="#">MAP 303(d)</a>	APPOMATOX		2004, 2002, 1998
VA	<a href="#">AQUJA CREEK</a>	No Spatial Data	POTOMAC		2004
VA	<a href="#">ASSAMOOSICK SWAMP - UNT</a>	<a href="#">MAP 303(d)</a>	CHOWAN		2004, 2002
VA	<a href="#">ASSAMOOSICK SWAMP AND TRIBUTARIES, SEACORRIE SWAMP</a>	No Spatial Data	CHOWAN		2004, 2002, 1998
VA	<a href="#">ASSAWOMAN CREEK AND WOMANS BAY</a>	No Spatial Data	OCEAN		2004, 2002
VA	<a href="#">AUSTIN RUN</a>	No Spatial Data	POTOMAC		2004

## Example (2 of 2) Summary of Impairments for State of Virginia

**Waters Listed by Watershed**

Watershed Name	Number of Waters on List	Percent of Reported
<a href="#">Hampton Roads</a>	25	1.85
<a href="#">Lower Chesapeake Bay</a>	5	.37
<a href="#">Lower Dan</a>	15	1.11
<a href="#">Lower James</a>	38	5.03
<a href="#">Lower Potomac</a>	56	4.14
<a href="#">Lower Rappahannock</a>	54	3.99
<a href="#">Lynnhaven-Poquoson</a>	29	2.14
<a href="#">Mattaponi</a>	9	.67
<a href="#">Maury</a>	7	.52
<a href="#">Meherin</a>	11	.81
<a href="#">Middle James-Buffer</a>	24	1.77
<a href="#">Middle James-Willis</a>	15	1.11
<a href="#">Middle New</a>	14	1.03
<a href="#">Middle Potomac-Anacostia-Occoquan</a>	23	1.70
<a href="#">Middle Potomac-Catowah</a>	9	.67
<a href="#">Middle Roanoke</a>	31	2.29

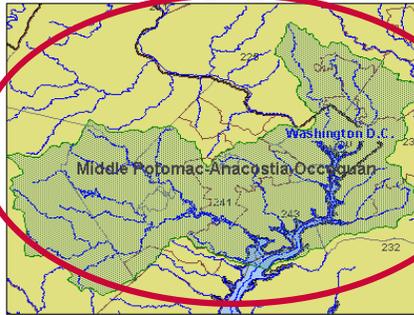
# Drill down: Waterbodies in Selected Watershed (Middle Potomac-Anacostia-Occoquan)

## Section 303(d) List Fact Sheet for Watershed MIDDLE POTOMAC-ANACOSTIA-OCOQUAN

- [Number of Waters Listed by State](#)
- [Waters Listed by Waterbody](#)
- [Causes of Impairment](#)
- [Approved TMDLs by Pollutant](#)
- [Approved TMDLs by Year](#)
- [TMDL Document Search](#)

Click for individual waterbody segments

Click [here](#) to see metadata for this report.



Click to launch  
Enviomapper  
For Water

Click on the map above for an interactive Enviomapper session!

# Individual Segment Selected from Virginia Watershed: (Lower Anacostia River)

## Listed Water Information

**CYCLE : 2004**

Click [here](#) to see metadata for this report.

**Cycle:** 2004    **State:** DC    **List ID:** DC\_01\_DCANA00E\_01  
**Waterbody Name:** LOWER ANACOSTIA RIVER  
**State Basin Name:** ANACOSTIA RIVER  
**Listed Water Map Link:** [MAP 303\(d\)](#)

### State Impairments:

State Impairment	Parent Impairment	Priority	Rank	Targeted Flag	Anticipated TMDL Submittal
BIS(2-ETHYLHEXYL) PHTHALATE	OTHER TOXIC ORGANICS	HIGH			
CHRYSENE	OTHER TOXIC ORGANICS	HIGH			
DIOXIN	DIOXINS	HIGH			
MERCURY	MERCURY	HIGH			
SELENIUM	METALS (OTHER THAN MERCURY)	HIGH			
TOTAL RESIDUAL CHLORINE	CHLORINE	HIGH			

## Additional Information: TMDL Studies on Selected Segment (Lower Anacostia River )

### Total Maximum Daily Load (TMDL) Information:

Note: Click on the underlined TMDL Document Name for a detailed TMDL Document Report.

<b>TMDL Document Name</b>	<b>Status</b>	<b>Actual TMDL Establishment Date</b>	<b>TMDL Pollutant Description</b>	<b>TMDL Pollutant Type</b>	<b>State Impairment</b>
<a href="#"><u>LOWER ANACOSTIA RIVER</u></a>	APPROVED/ESTABLISHED	DEC-14-2001	BOD	POINT/NONPOINT SOURCE	BOD
<a href="#"><u>LOWER ANACOSTIA RIVER</u></a>	APPROVED/ESTABLISHED	AUG-28-2003	FECAL COLIFORM	POINT/NONPOINT SOURCE	FECAL COLIFORM
<a href="#"><u>LOWER ANACOSTIA RIVER</u></a>	APPROVED/ESTABLISHED	AUG-29-2003	ARSENIC	POINT/NONPOINT SOURCE	METALS (OTHER THAN MERCURY)
<a href="#"><u>LOWER ANACOSTIA RIVER</u></a>	APPROVED/ESTABLISHED	AUG-29-2003	COPPER	POINT/NONPOINT SOURCE	METALS (OTHER THAN MERCURY)
<a href="#"><u>LOWER ANACOSTIA RIVER</u></a>	APPROVED/ESTABLISHED	AUG-29-2003	LEAD	POINT/NONPOINT SOURCE	METALS (OTHER THAN MERCURY)
<a href="#"><u>LOWER ANACOSTIA RIVER</u></a>	APPROVED/ESTABLISHED	AUG-29-2003	ZINC	POINT/NONPOINT SOURCE	METALS (OTHER THAN MERCURY)
<a href="#"><u>LOWER ANACOSTIA RIVER</u></a>	APPROVED/ESTABLISHED	OCT-31-2003	OIL AND GREASE	POINT/NONPOINT SOURCE	OIL AND GREASE
<a href="#"><u>LOWER ANACOSTIA RIVER</u></a>	APPROVED/ESTABLISHED	AUG-29-2003	CHLORDANE	POINT/NONPOINT SOURCE	ORGANICS

# WATERS integrates water program databases: www.epa.gov/waters

**U.S. Environmental Protection Agency**

## Watershed Assessment, Tracking & Environmental Results

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[EPA Home](#) > [Water](#) > WATERS



**WATERS (Watershed Assessment, Tracking & Environmental Results)** unites water quality information that was previously available only from several independent and unconnected databases.

EPA gathers water quality information to address public concerns such as:

- How healthy is my watershed?
- Can I drink the water?
- Can I eat the fish?
- Is it safe to swim in the water?

To answer these questions EPA must examine data from several different databases. WATERS has the power to connect these databases and display the information by generating maps and reports.

**QUICK LINKS**

- [NHDPPlus](#)  
[EXIT Disclaimer](#)
- [EnviroMapper for Water](#)
- [Web Services](#)
- [TMDL Reports](#)
- [National Assessment Database](#)
- [Water Quality Standards Database](#)

[About WATERS](#) | [Tools](#) | [Data](#) | [Documents](#) | [Reporting](#)

Use Tools to Query WATERS

# www.epa.gov/waters/tools

- Generate Reports from Multiple Databases
- Visualize Waterbody Information On a Map

## WATERS Tools

- **EnviroMapper for Water**

EnviroMapper for Water is a web-based Geographic Information System (GIS) application that dynamically displays information about bodies of water in the United States. This interactive tool allows you to create customized maps that portray the nation's surface waters along with a collection of environmental data. Find out about the health of a river near where you live.

- **WATERS Services** - The WATERS services are database and web based services providing user application friendly interfaces to complex analyses. These services make extensive use of the NHD and indexed program data in the RAD, and also integrate other WATERS program data in selected services. Designed as modular units, the services are being developed within a common architecture and each service will be available as it is completed.

- **Ask WATERS**

~~NEW!~~ **VERSION 1.0** - Ask WATERS answers multi-program questions that draw on information from the databases linked through WATERS. This tool generates cross-program calculations, examines spatial relationships between programs, performs nationwide analyses, produces multi-program inventory reports for a given geographic area, and investigates interstate water quality issues.

- **WATERS Expert Query Tool**

WATERS Expert Query Tool is a web-based application that allows you to create your own queries to display or extract data concerning impaired and assessed waters and associated, approved Total Maximum Daily Loads.

### WATERS Directory

What kind of **information** can I find out using WATERS?

Where can I **view** this information?

Where can I access the **data**?

How does WATERS help EPA Office of Water meet its mission **goals and needs**?

How does WATERS use **geography** to integrate OW program data?

What is the **design structure** of WATERS?

Ask WATERS:  
[www.epa.gov/waters/tools/ask\\_waters](http://www.epa.gov/waters/tools/ask_waters)



*Please ma'am....*

Ask WATERS answers multi-program questions that draw on information from the databases linked through WATERS.



# Example Simple Query

## ASK Questions WATERS

Click [here](#) to find your question based on applicable program, keyword, or metadata search.

**NOTE:** Click on the displayed Question to start your Ask WATERS Query!  
Click on the Associated Programs to see a Report Description.

EPA Program Management Questions	
Question	Associated Programs (Click on link to see Report Description)
<a href="#">What TMDLs are associated with PCS facilities?</a>	<a href="#">Total Maximum Daily Load (TMDL) / NTTS / 303(d)</a>
<a href="#">What causes of impairments for an impaired water have been de-listed and what were their reasons for de-listing?</a>	<a href="#">Total Maximum Daily Load (TMDL) / NTTS / 303(d)</a>
<a href="#">How many CWNS 2000 facilities and projects have needs and in what categories are their needs?</a>	<a href="#">Clean Watersheds Needs Survey / CWNS 2000</a>
<a href="#">What CWNS 2000 facilities and projects have needs documented to federal standards?</a>	<a href="#">Clean Watersheds Needs Survey / CWNS 2000</a>
<a href="#">What are the current and projected flows for publicly owned wastewater treatment facilities?</a>	<a href="#">Clean Watersheds Needs Survey / CWNS 2000</a>
<a href="#">How many people are served by publicly owned wastewater treatment facilities?</a>	<a href="#">Clean Watersheds Needs Survey / CWNS 2000</a>
<a href="#">What are the federal needs and flow measures for CWNS 2000 facilities?</a>	<a href="#">Clean Watersheds Needs Survey / CWNS 2000</a>
<a href="#">What are the federal needs and population data for CWNS 2000 facilities?</a>	<a href="#">Clean Watersheds Needs Survey / CWNS 2000</a>

Web Page Has Many More Questions



# Specify Region/State and Date Range

**ASK WATERS**

**Enter Report Selection Criteria for:  
What causes of impairments for an impaired water  
have been de-listed and what were their reasons  
for de-listing?**

[Return to Ask WATERS Question List](#)

**Geographic Location Criteria**

EPA Region: No Region Selected

State: MD - Maryland  
ME - Maine  
MI - Michigan  
MN - Minnesota  
MO - Missouri

Run Report Reset

**Date Search Criteria**

Enter either fiscal years (eg. 2002) or complete dates in MM-DD-YYYY format (eg. 10-24-1996).

Between dates: 01-01-2005 AND 01-01-2007

Run Report Reset

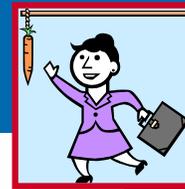
## Result: Waters De-listed in Michigan

FISCAL YEAR DELISTED	EPA DELISTED DATE	REGION	STATE	WATER BODY NAME	LIST ID	CAUSE DESCRIPTION	CYCLE	DELISTED REASON
2006	05-JUN-06	5	MI	ALDER CREEK	MI082821K	NUISANCE PLANT GROWTHS	2004	Change in impairment terminology
2006	05-JUN-06	5	MI	BASS RIVER	MI082801H	PATHOGENS	2004	TMDL Approved or established by EPA (4a)
2006	05-JUN-06	5	MI	BASS RIVER	MI082801H	MACROINVERTEBRATE COMMUNITY RATED POOR	2004	TMDL Approved or established by EPA (4a)
2006	05-JUN-06	5	MI	BASS RIVER	MI082801H	FISH AND MACROINVERTEBRATE COMMUNITIES RATED POOR	2004	TMDL Approved or established by EPA (4a)
2006	05-JUN-06	5	MI	BASS RIVER	MI082801H	FISH COMMUNITY RATED POOR	2004	TMDL Approved or established by EPA (4a)
2006	05-JUN-06	5	MI	BEAR CREEK (TYLER CREEK)	MI082811E	PATHOGENS	2004	TMDL Approved or established by EPA (4a)
2006	05-JUN-06	5	MI	BEAR LAKE	MI082701A	ALGAL BLOOMS	2004	Resegmented
2006	05-JUN-06	5	MI	BEAR LAKE	MI082701A	PHOSPHORUS	2004	Resegmented

www.epa.gov/waters/enviomapper

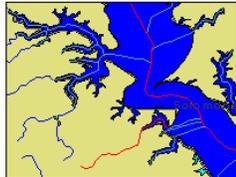
-Integrate Waterbody Information Visually

-Perform Queries Visually



## EnviroMapper for Water

**EnviroMapper**  
for Water



DISPLAY	LABEL ALL	ACTIVE	MAP FEATURES
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Impaired Waters</a>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Water Quality Standards</a>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Assessed Waters</a>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Beaches</a>

NEW! VERSION 3.0

[What's new in Version 3.0?](#) [Training Exercise](#) [Video Demo](#)

**Welcome to EnviroMapper for Water!** EnviroMapper for Water is a web-based Geographic Information System (GIS) application that dynamically displays information about bodies of water in the United States. This interactive tool allows you to create customized maps that portray the nation's surface waters along with a collection of environmental data. Click on the graphic to the left to generate maps using EnviroMapper for Water!

The application can be used to view environmental information from the national level down to community level (within one mile), and provides the ability to pan, zoom, label and print maps. You can also link to text reports after identifying a specific waterbody of interest. Have you always wondered about the health of a river near where you live? Now you can find out by creating a map using EnviroMapper for Water.

Check the [status](#) of data availability.

# Default National Scale Interface

The screenshot shows the EnviroMapper for Water interface. At the top, it features the EPA logo and the text "EnviroMapper for Water" with "Feedback" and "EM Home" links. The main area is divided into three sections: a "MAP FEATURES" list on the left, a central "Map View" showing a map of the United States, and a "Map Tools" panel on the right. The "MAP FEATURES" list includes categories like "Interstates", "National Estuary Programs", "Congressional Districts", "Watersheds", "Counties", "States", "Impaired Waters Areas", "Water Quality Standards Areas", "Assessed Waters Areas", "Beaches Areas", "Sewage No Discharge Zones Areas", and "Nonpoint Source Protection Areas". The "Map View" shows a map of the United States with a red circle around it. The "Map Tools" panel includes a "Click on map ID:" field, a "Start New Map" button, a "Zoom In" button, a "Zoom to View" dropdown menu, a "Recenter Map" button, a "Show Location" button, an "Identify Active Feature" button, an "Add" dropdown menu, and an "Active Feature Label" field. A "Help" button is located below the map. A red circle highlights the "Help" button and the text below it: "First time users are encouraged to click on the Help Button (just below the map) to display information on EnviroMapper features and map controls." Three yellow boxes with red borders point to the "MAP FEATURES" list, the "Map View", and the "Map Tools" panel, labeled "Map Features or 'Data Layers'", "Map View", and "Map Tools" respectively. A "Message Area" label points to the text below the map. The number "50" is displayed in the bottom right corner.

United States Environmental Protection Agency **EnviroMapper for Water** Feedback EM Home

MAP FEATURES

- Interstates
- National Estuary Programs
- Congressional Districts
- Watersheds
- Counties
- States
- Impaired Waters Areas
- Water Quality Standards Areas
- Assessed Waters Areas
- Beaches Areas
- Sewage No Discharge Zones Areas
- Nonpoint Source Protection Areas

Update Map 5544 Miles Wide (National) Help

Click on map ID: Start New Map

Zoom In By 2X Zoom to View Local Recenter Map Show Location Identify Active Feature Add Active Feature Label

Printable Map

Click on compass to pan map

Zoom To Area Menu

First time users are encouraged to click on the Help Button (just below the map) to display information on EnviroMapper features and map controls.

Map Features or "Data Layers"

Map View

Map Tools

Message Area

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# Multiple Ways to Zoom In

Click on the **Zoom To Selected Area** button to zoom to:

<input type="radio"/> the <u>State</u> of:	
<input checked="" type="radio"/> a <u>County</u> within the state of:	<div style="border: 1px solid black; padding: 5px;">Alabama Alaska Arizona Arkansas California Colorado Connecticut Delaware District of Columbia Florida Georgia</div>
<input type="radio"/> a <u>City</u> within the state of:	
<input type="radio"/> a <u>Hydrologic Cataloging Unit</u> within the state of:	
<input type="radio"/> a <u>ZIP Codes</u> (5 digits):	<input type="text"/>
<input type="radio"/> an <u>EPA Region</u> :	Select EPA Region ▾
<input type="radio"/> a <u>National Estuary Program</u> :	Select National Estuary Program ▾
<input type="radio"/> an <u>Aggregate Ecoregion</u> :	Select Aggregate Ecoregion ▾
<input type="radio"/> a <u>Level III Ecoregion</u> :	Please select a Level III Ecoregion ▾
<input type="radio"/> an <u>Area Centered at Latitude and Longitude</u> : (in <u>Degree</u> ° <u>Minute</u> ' <u>Second</u> " format)	Latitude: DD ° MM ' SS.SS " Longitude: -DDD ° MM ' SS.SS "

# County Scale

The screenshot displays a GIS application interface. On the left is a 'MAP FEATURES' legend with a list of layers such as 'Nutrient Station', 'Major Roads', 'Rivers', and 'Watersheds'. A red oval highlights this legend. The main map area shows a county-level view of Fleming County, Kentucky, with a scale bar indicating '29 Miles Wide (State)'. A red oval highlights this scale bar. On the right is a control panel with a 'Zoom In' button and a 'Zoom Tool' button, both highlighted with red ovals. A red arrow points from the 'Zoom Tool' button to a text box at the bottom.

**Map Features Change with Map Scale**  
More Data Layers Available at County Level

# Zoom Scale < 25 miles wide

The screenshot displays a GIS application interface. On the left is a legend titled 'MAP FEATURES' with columns for 'DISPLAY', 'LABEL ALL', and 'ACTIVE'. The 'Streets' feature is checked and circled in green. The 'Surface Waters' feature is also checked and circled in red. The main map area shows a network of roads and water features in a region of Kentucky. A red circle on the map indicates a '7 Miles Wide (Local)' view. The control panel on the right includes a 'Click on map to:' section with 'Zoom In' and 'Zoom to View' buttons highlighted. Other controls include 'Locator Map', 'Start New Map', 'Recenter Map', 'Show Location', 'Printable Map', 'Identify Active Feature', and 'Add Active Feature Label'.

National Hydrography Dataset = "Surface Water" Map Feature  
Visible at Map View Scales < 25 miles

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Please check with Tommy Dabolt: high-res NHD based on 1:24,000 scale USGS  
topos, View scale equivalent = 25 miles?

# Map Features: Turn Display On/Off Then, Update Map

The screenshot displays a GIS application interface. On the left is a 'MAP FEATURES' legend with columns for 'DISPLAY', 'LABEL', and 'ACTIVE'. The 'Streets' and 'Surface Waters' categories are circled in red. The 'Streets' row has a checked box in the 'ACTIVE' column. The 'Surface Waters' row has a checked box in the 'ACTIVE' column. The 'Update Map' button is also circled in red. The central map shows a network of roads and water bodies. On the right is a control panel with a 'Click on map to:' section containing 'Zoom In', 'Zoom to View', 'Local', 'Recenter Map', 'Show Location', 'Identify Active Feature', and 'Add' buttons. Below this is a compass and a 'Printable Map' button. At the bottom of the control panel are 'Multi-color Menu' and 'Zoom To Area Menu' buttons.

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# Example Internet Map Application

The screenshot displays a web-based map application interface. On the left, there is a vertical navigation menu with options: '+', '1', 'st.', '3', 'city', '5', '6', '7', 'state', '9', '10', and '-'. Below this menu are icons for 'small map' and 'map'. The main map area shows a street grid with various streets labeled, including Lee Hwy, George Mason Dr, and Washington Blvd. A red star icon marks a location, and a pop-up information window is displayed over it. The pop-up window contains the following text:

**Westover Market**  
5863 Washington Blvd  
Arlington, VA  
Phones: (703) 536-5040  
[More Info](#)  
[Web Search](#)  
[Driving Directions](#)

At the bottom left of the map, there is a scale bar showing 200 m and 1000 ft, and a copyright notice: © 2005 Yahoo! Inc. At the bottom right, there is another copyright notice: © 2005 NAV/TEO. A red arrow points from a yellow text box to the pop-up window.

Point on A Map Has More Information Available for Display

# Identify a Map Feature (the Active Map Feature)

The screenshot displays a GIS application interface. On the left is a legend titled "MAP FEATURES" with a "DISPLAY LABEL ALL" section. The "ACTIVE" section contains a list of features with checkboxes. The "Impaired Waters" feature is checked and circled in red. A red arrow points from this feature to a yellow box at the bottom left containing the text "Click the Radio Button to Make Map Feature Active".

The main map area shows a topographic map of a region with a red dot and a label "Flemingsburg". A red arrow points from the dot to a yellow box at the bottom center containing the text "Pointer Becomes Selector Hand".

On the right is a control panel. The "Identify Active Feature" tool is circled in red. A red arrow points from this tool to a yellow box at the bottom right containing the text "Identify Active Feature Tool".

At the bottom right of the slide is the page number "56".

Click the Radio Button to Make Map Feature Active

Pointer Becomes Selector Hand

Identify Active Feature Tool

# Identify Feature Also Performs a Query on the Database

**Identified Impaired Waters Feature Is Selected in Map View**

**Hyperlink to Selected Feature in the Impaired Waters/TMDL Database**

**Bonus: Other Data for the Identified Feature**

**57**

The screenshot displays a GIS application interface. On the left is a legend titled 'MAP FEATURES' with categories like 'Facilities', 'Clean Watersheds Needs', 'Nutrient Stations', 'Water Quality Stations', 'Streets', 'Railroads', 'ZIP Codes', 'National Estuary Programs', 'Congressional Districts', 'Federal Lands', 'Watersheds', 'Tribal Lands', 'Aggregate Ecoregions', 'Level III Ecoregions', 'Counties', 'States', 'Surface Waters', 'Impaired Waters', 'Water Quality Standards', and 'Assessed Waters'. The main map area shows a river network in Kentucky, with a red dot indicating a selected feature near Flemingsburg. A scale bar shows '7 Miles Wide (Local)'. On the right is a control panel with options for 'Click on map to:', 'Zoom In', 'Zoom to View', 'Local', 'Recenter Map', 'Show Location', 'Identify Active Feature', 'Add', 'Active Feature Label', 'Multi-color Menu', and 'Zoom To Area Menu'. Below the map is a results panel with the following content:

Impaired Waters features: [KY492236\\_01](#)

Other water program features located at click point:  
Water Quality Standards  
[KY05100101\\_2](#)   
[KY05100101200070\\_9](#)

# Hyperlink to Data Pull from Database

The screenshot displays a GIS web application interface. On the left is a legend titled "MAP FEATURES" with various categories and checkboxes. The central map shows a river network with a red circle highlighting a specific feature labeled "KY492236\_01". Below the map is a data table with the following content:

Impaired Waters features:	
<a href="#">KY492236_01</a>	<input type="checkbox"/>

Other water program features located at click point:  
Water Quality Standards

<a href="#">KY05100101_2</a>	<input type="checkbox"/>
<a href="#">KY05100101200070_G</a>	<input type="checkbox"/>

On the right side of the interface, there are navigation and map controls, including a locator map of Ohio and Kentucky, zoom controls, and a compass.

# Pop-up Box: Information Reported from Impaired Waters/TMDL Database

## Listed Water Information

**CYCLE : 2004**

Click [here](#) to see metadata for this report.

Cycle: 2004 State: KY State ID: KY492236\_01

Waterbody Name: FLEMING CREEK

Listed Water Map Link: [Map](#)

### State List IDs:

Cycle	State List ID
2002	KY492236_01
2004	KY492236_01

History of Listing

### State Impairments:

State Impairment	Parent Impairment	Priority	Rank	Targeted Flag	Anticipated TMDL Submittal
ORGANIC ENRICHMENT/LOW DO PHOSPHORUS	OXYGEN DEPLETION NUTRIENTS	1			

Reason for Impairment

# Bonus: Information for Identified Segment from WQS Database



The screenshot displays the EPA Water Quality Standards Database interface. At the top left is the EPA logo. The main header reads "Water Quality Standards Database" with the EPA name to its right. Below the header is a search bar with a "GO" button and a breadcrumb trail: "EPA Home > Water > Water Science > Standards > Database". The central heading is "Designated Use Data". Below this, the following information is listed: Entity ID: KY05100101\_2, Reach Code: KY, and Waterbody Name: FLEMING CREEK (circled in red). Below the text is a table with three columns: State DU Name, State DU Description, and Effective Date. The table lists three designated uses: Primary Contact Recreation Water, Secondary Contact Recreation Water, and Warm Water Aquatic Habitat, all with an effective date of DEC 08, 1999. A link for "WQSDR Reports" is located at the bottom of the table.

Entity ID: KY05100101\_2  
Reach Code: KY  
Waterbody Name: FLEMING CREEK  
Waterbody type:

State DU Name	State DU Description	Effective Date
Primary Contact Recreation Water	Waters suitable for full body contact recreation during the recreation season of May 1 through October 31.	DEC 08, 1999
Secondary Contact Recreation Water	Waters that are suitable for partial body contact recreation, with minimal threat to public health due to water quality.	DEC 08, 1999
Warm Water Aquatic Habitat	Any surface water and associated substrate capable of supporting indigenous warm water aquatic life.	DEC 08, 1999

[WQSDR Reports](#)

**Note: Three Designated Uses for Fleming Creek**

# Point Sources: Discharges to Water

The screenshot displays a GIS application interface. On the left, a 'MAP FEATURES' legend lists various categories with checkboxes for 'DISPLAY', 'LABEL ALL', and 'ACTIVE'. The 'Facilities' category is expanded, and 'Discharges To Water' is checked and circled in red. Other categories include Superfund Sites, Hazardous Waste, Toxic Releases, Air Releases, Others, Multiple, Clean Watersheds Needs, Community Landmarks, Nutrient Stations, Water Quality Stations, STORET, Legacy Data Center, Streets, Railroads, ZIP Codes, National Estuary Programs, Congressional Districts, Federal Lands, and Watersheds. The main map area shows a geographical view with several red square markers representing point sources near a location labeled 'Flemingsburg'. A scale bar indicates '7 Miles Wide (Local)'. On the right, a 'Locator Map' shows the current view's location within a larger regional context. Below the locator map, a 'Click on map to:' menu includes options for 'Zoom In', 'Zoom to View', 'Recenter Map', and 'Identify Active Feature', with the latter being circled in red. Other map controls include 'Start New Map', 'Printable Map', and 'Multi-color Menu'.

*Permit Compliance System database tracks facilities with permits to discharge effluent to waters of the United States. (These permits are called "NPDES Permits")*

# Identify Feature Also Performs a Query on the Database



Hyperlink to Data Pull From the Permit Compliance System Database

# Pop-up Box: Information Reported from PCS Database

**U.S. Environmental Protection Agency**  
**Water Discharge Permits (PCS)**

Recent Additions | Contact Us | Print Version | EF Search:  **GO**  
EPA Home > Envirofacts > PCS > Query Results

**Query Results** Report an Error

PCS

NPDES: Equal To: KYG640009

Results are based on data extracted on FEB-27-2007

**Note:** Click on the underlined CORPORATE LINK value for links to that company's environmental web pages.  
Click on the underlined MAPPING INFO value to obtain mapping information for the facility.  
Click on the underlined NPDES value to view detailed reports on the facility.  
[Go To Bottom Of The Page](#)

**Facility Information**

<u>FACILITY NAME:</u> FLEMINGSBURG WTP	<u>NPDES:</u> <a href="#">KYG640009</a>
<u>CITY:</u> FLEMINGSBURG	<u>PERMIT ISSUED DATE:</u> SEP-19-2004
<u>STATE:</u> KY	<u>PERMIT EXPIRED DATE:</u> AUG-31-2009
<u>ZIP CODE:</u> 41041	
<u>COUNTY NAME:</u> FLEMING	<u>SIC CODE:</u> 4941 WATER SUPPLY
<u>REGION:</u> 4	<u>MAPPING INFO:</u> <a href="#">MAP</a>
<u>MAILING NAME:</u> FLEMINGSBURG WTP	

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# Detailed Reports from PCS

## Facility Information

**FACILITY NAME(1)** : FLEMINGSBURG WTP **NPDES** : KYG640009

**FACILITY NAME(2)** :

Select from the reports listed below (Defaults to All Reports):

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> Facility                        | <input checked="" type="checkbox"/> Permit Documents                    | <input checked="" type="checkbox"/> Permit Tracking  |
| <input checked="" type="checkbox"/> Inspections                     | <input checked="" type="checkbox"/> Outfalls/Pipe Schedules             | <input checked="" type="checkbox"/> Limits <input checked="" type="radio"/> Short Format <input type="radio"/> Long Format |
| <input checked="" type="checkbox"/> Measurements and Violations     | <input checked="" type="checkbox"/> Compliance Schedules and Violations | <input checked="" type="checkbox"/> Evidentiary Hearings   |
| <input checked="" type="checkbox"/> Pretreatment Inspections/Audits | <input checked="" type="checkbox"/> Pretreatment Performance Summary    |  |

Example Detailed Report: Measurements and Violations  
(parameters in discharge that the facility is required to monitor and report)

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# Measurements / Violations Report: Data for Permit-Required Parameters



**Detailed Reports**

Results are based on data extracted on FEE

Find

Find what:

Match whole word only    Direction:  Up  Down

Search the page for selected parameters

**Measurements and Violations**

**FACILITY NAME (1):** FLEMINGSBURG WTP    **NPDES:** KYG640009

**FACILITY NAME (2):**    **LIMIT TYPE:** 5 = FINAL

**PIPE NUMBER:** 001    **SEASON NUM:** 0

**REPORT DESIGNATOR:** 1    **PARAMETER CODE:** 01400 = PH

**PIPE SET QUALIFIER:** 9    **MONITORING LOCATION:** 1 = EFFLUENT GROSS VALUE

**MODIFICATION NUM:** 0

Example parameter: pH

MONITORING PERIOD END DATE	DISCHARGE IND	QTY MAXIMUM	QTY AVERAGE	CONC MAXIMUM	CONC AVERAGE	CONC MINIMUM	RNC DETECTION CODE	RNC DETECTION DATE	RNC RESOLUTION CODE	RNC RESOLUTION DATE	MEASUREMENT VIOLATION CODE
30-SEP-2006				7.6		7.0					E00 = MEASUREMENT ONLY, NO VIOLATION NO VIOL
31-JUL-2006				7.33		7.31					E00 = MEASUREMENT ONLY, NO VIOLATION NO VIOL
30-JUN-2006				7.46		7.30					E00 = MEASUREMENT ONLY, NO VIOLATION NO

# QUESTIONS?



Online Participants: Submit questions online anytime.

Phone Participants: Please state your name and where you are calling from before your question.

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# Back to Enviromapper for Water for Water Quality Monitoring Data from STORET

The screenshot displays the Enviromapper interface. On the left, the 'MAP FEATURES' legend is visible, with 'Water Quality Stations' and 'STORET' circled in red. The central map shows a topographic view of the West of Flemingsburg area, with a green dot representing the identified STORET station. The right-hand control panel includes a 'Click on map to:' section with options like 'Zoom Out', 'Zoom to View', and 'Identify Active Feature', which is also circled in red. Other controls include 'Update Map', '7 Miles Wide (Local)', 'Help', 'Locator Map', and 'Printable Map'.

*West of Flemingsburg, STORET station identified*

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# STORET Station Data Pull in Message Area

**MAP FEATURES**

- Facilities
- Clean Watersheds Needs
- Community Landmarks
- Nutrient Stations
- Water Quality Stations
- STORET
- Legacy Data Center
- Streets
- Railroads
- ZIP Codes
- National Estuary Programs
- Congressional Districts
- Federal Lands
- Watersheds
- Tribal Lands
- Aggregate Ecoregions
- Level III Ecoregions
- Counties
- States
- Surface Waters
- Impaired Waters
- Water Quality Standards
- Assessed Waters
- Reaches

**STORET Water Quality Stations Features:**

L25  
Organization ID: NKUWATER  
Station Name: FLEMING CREEK, FLEMING  
Station Type: Surfacewater

**Other water program Features located at click point:**

Water Quality Standards  
KY05100101200170\_g

Click to Open STORET Pop-up Box, with Data for Site

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# STORET Database Query Results: Summary of Available Data



U.S. Environmental Protection Agency

## STORET

[Recent Additions](#) | [Contact Us](#) | [Print Version](#) Search:

[EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > [Monitoring and Assessing Water Quality](#) > STORET > Station Information

**Station:** L25 FLEMING CREEK, FLEMMING

**Organization:** NKUWATER Northern Kentucky University



Parameters  
Monitored at  
this Station

Station Information	
<b>Primary Type</b>	River/Stream
<b>Secondary Type</b>	None
<b>Latitude/Longitude</b>	Latitude 38.376487, Longitude -83.807737, UNKNWN
<b>Elevation</b>	
<b>State</b>	KENTUCKY
<b>County</b>	FLEMING
<b>Hydrologic Unit</b>	

	Number of Results	Date Range
<a href="#">Dissolved oxygen (DO)</a>	7	1998-07-14 2003-09-06
<a href="#">Fecal Coliform</a>	8	1998-07-14 2003-09-06
<a href="#">Precipitation</a>	8	1998-07-14 2003-09-06
<a href="#">pH</a>	8	1998-07-14 2003-09-06
<a href="#">Specific conductance</a>	7	1998-10-12 2003-09-06
<a href="#">Temperature, water</a>	7	1998-07-14 2003-09-06
<a href="#">Alkalinity, Total (total hydroxide+carbonate+bicarbonate)</a>	5	1998-10-12 2003-09-06
<a href="#">Chloride</a>	5	1998-10-12 2003-09-06

Parameters = Characteristics (STORET Terminology)

# Drill Down for Data

The screenshot shows the STORET interface with the following elements:

- Header:** U.S. Environmental Protection Agency logo and STORET title.
- Navigation:** Links for Recent Additions, Contact Us, Print Version, and a search bar with a 'GO' button.
- Breadcrumbs:** EPA Home > Water > Wetlands, Oceans, & Watersheds > Monitoring and Assessing Water Quality > STORET > Data Warehouse
- Title:** Regular Results by Station (stormod\_)
- Section:** Station
- Form:** A search form with a dropdown for 'ORG ID' (selected: INKOWATER, Northern Kentucky University), radio buttons for 'Search Type' (selected: Search by Station ID), a 'Select Station Alias Type' dropdown (selected: STANDARD), and a 'Look Up' button.
- Search String:** An empty text input field with a 'Search Stations' button below it.
- Table:** A table with columns: Org ID, Station ID, Alias Type, Station Alias, Station Name. The first row is highlighted: INKOWATER, I25, N/A, N/A, FLEMING CREEK, FLEMING.

Selected Station and Selected Parameter (*Characteristic*)  
Create a Customized Query in the STORET Interface

# Scroll Down for Characteristic

**Characteristic**

Use the Characteristic Search to create a list of up to 50 Characteristics

Characteristic Search  Search By CHARACTERISTIC NAME

Hide Taxonomic Names

Characteristic Name

Dissolved oxygen (DO)
-----------------------

*Selected Characteristic = Dissolved Oxygen  
Use Characteristic Search for Additional Characteristics*

Click Continue to Receive Data File (Prepared By STORET) via E-mail

# STORET: [www.epa.gov/storet](http://www.epa.gov/storet)

U.S. Environmental Protection Agency

## STORET

[Recent Additions](#) | [Contact Us](#) | [Print Version](#) Search:

[EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > [Monitoring and Assessing Water Quality](#) > STORET

### Welcome to STORET, EPA's largest computerized environmental data system.

STORET (short for STORage and RETrieval) is a repository for water quality, biological, and physical data and is used by state environmental agencies, EPA and other federal agencies, universities, private citizens, and many others. Take a minute to browse around our site or click on the water drop to retrieve monitoring data!



#### Features

[Download Data](#)

**New!** [WQX](#) - Information about the Future of STORET

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Try the 3-page STORET Data Warehouse Exercise

[About STORET](#) | [Data Owner's Corner](#) | [Updates and Downloads](#) | [Obtaining Water Quality Data](#)  
| [Useful Links](#) | [Commonly Asked Questions](#)

# Download Data for Selected Location

**STORET Data Warehouse**  
Data refreshed as of February 27, 2007



**Query Options**

<b>STORET Warehouse Watershed Summary</b> <a href="#">Summary of Results by Watershed</a>	<a href="#">Tell Us What You Think!</a>
<b>STORET Station Descriptions</b> <a href="#">Stations by Geographic Location</a> <a href="#">Stations by Organization and Station ID</a>	<b>Make a Map</b> Create a map of monitoring locations from STORET using either <a href="#">EnviroMapper for Water</a> or <a href="#">Window to My Environment</a> .
<b>STORET Regular Results</b> (Non-Biological Physical and Chemical Result Data) <a href="#">Regular Results by Geographic Location</a> <a href="#">Regular Results by Station</a> <a href="#">Regular Results by Project</a>	<b>Data Logger Results</b> Download a delimited text file of results reported to STORET from Automated Data Loggers. These results, which cannot yet be downloaded via the query options at the left, will be in the form of a self-extracting compressed file (450K) which may be saved on disk and will expand when executed. In its uncompressed form, this file requires 14.8 MB of disk space.
<b>STORET Biological Results</b> <a href="#">Biological Results by Geographic Location</a> <a href="#">Biological Results by Station</a> <a href="#">Biological Results by Project</a>	<b>Data Quality Documentation</b> Select from among available reports which document the standards, methods, practices, and other metadata supplied by data owners to document the quality of the monitoring results found in the National STORET Data Warehouse. * Adobe Acrobat® Reader required.
<b>STORET Habitat Results</b> <a href="#">Habitat Results by Geographic Location</a>	<b>Training Exercise</b> A step-by-step guide for first-time users of the STORET Data



STORET

U.S. Environmental Protection Agency

[Recent Additions](#) | [Contact Us](#) | [Print Version](#) Search:    
[EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > [Monitoring and Assessing Water Quality](#) > STORET > Data Warehouse

### Regular Results by Geographic Location (stormodb)

#### Geographic Location

Select a single type of location search that you wish to perform (state/county, latitude/longitude, or HUC). Then enter the corresponding search criteria.

<input checked="" type="radio"/> State/County	<b>State Name</b> KENTUCKY	<b>County Name</b> ALL	<input type="button" value="Look Up"/>
<input type="radio"/> Latitude/Longitude (in decimal degrees)	<b>West Limit</b> 180 W	<b>North Limit</b> 90 N <small>Opens a popup window for county selection</small>	<b>East Limit</b> 0 W
<input type="radio"/> Drainage Basin/HUC	<b>Cataloging Unit</b> ALL	<input type="button" value="Look Up"/>	

# Wildcard (%) Search for Characteristics

**Characteristic**

Use the Characteristic Search to create a list of up to 50 Characteristics

**Characteristic Search**

**Search By** CHARACTERISTIC NAME

Hide Taxonomic Names

Characteristic Name

*Control + Click for Multiple Selections*

# Submit Search

**Characteristic**

Use the Characteristic Search to create a list of up to 50 Characteristics

**Characteristic Search**  **Search By** CHARACTERISTIC NAME v

Hide Taxonomic Names

Characteristic Name

---

BOD, Biochemical oxygen demand  
Fecal Coliform  
Dissolved oxygen (DO)

# Choose Fields from Database (*Default, Pre-selected Fields Work Great!*)

**Select Data Elements for Report**

<input type="checkbox"/> Org ID	<input type="checkbox"/> Actual Activity Lat/Long*	<input type="checkbox"/> Converted Result Value
<input checked="" type="checkbox"/> Org Name	<input type="checkbox"/> Conv Actual Activity Lat/Long*	<input type="checkbox"/> Converted Result Unit
<input checked="" type="checkbox"/> Station ID	<input type="checkbox"/> Well Number	<input type="checkbox"/> Result Comment
<input type="checkbox"/> Station Name	<input type="checkbox"/> Pipe Number	<input type="checkbox"/> Result Free Text
<input checked="" type="checkbox"/> Station Location Info*	<input type="checkbox"/> Additional Act Location Info*	<input type="checkbox"/> Weight Basis
<input checked="" type="checkbox"/> Station Lat/Long*	<input checked="" type="checkbox"/> Activity Depth	<input type="checkbox"/> Temperature Basis
<input type="checkbox"/> Conv Station Lat/Long*	<input checked="" type="checkbox"/> Activity Depth Unit	<input type="checkbox"/> Duration Basis
<input type="checkbox"/> Station Types*	<input type="checkbox"/> Activity Upper Depth	<input type="checkbox"/> Particle Size Basis
<input type="checkbox"/> S/G/O Indicator	<input type="checkbox"/> Activity Rel Depth	<input type="checkbox"/> Distance Measured From
<input checked="" type="checkbox"/> Visit Num	<input type="checkbox"/> Activity Lower Depth	<input type="checkbox"/> Distance Measured To
<input type="checkbox"/> Visit Start*	<input type="checkbox"/> Upr Lwr Depth Unit	<input checked="" type="checkbox"/> Analytical Proc ID
<input type="checkbox"/> Visit Stop*	<input type="checkbox"/> Activity Depth Ref Point	<input type="checkbox"/> Additional Anal Proc Info*
<input type="checkbox"/> Trip ID	<input type="checkbox"/> Sample Collection ID	<input type="checkbox"/> Lab Remark
<input type="checkbox"/> Trip Name	<input type="checkbox"/> Field Gear ID	<input type="checkbox"/> Dilution Ind
<input checked="" type="checkbox"/> Activity ID	<input type="checkbox"/> Field Gear Config ID	<input type="checkbox"/> Recovery Ind
<input checked="" type="checkbox"/> Activity Start*	<input type="checkbox"/> Sample Preservation*	<input type="checkbox"/> Correction Ind
<input type="checkbox"/> Activity Stop*	<input type="checkbox"/> Portable Data Logger	<input type="checkbox"/> Other Lab Info*
<input checked="" type="checkbox"/> Activity Medium	<input checked="" type="checkbox"/> Characteristic Name	<input type="checkbox"/> Num of Repts
<input type="checkbox"/> Activity Matrix	<input type="checkbox"/> CAS Num	<input type="checkbox"/> Precision
<input checked="" type="checkbox"/> Activity Type	<input type="checkbox"/> EPA Registry Num	<input type="checkbox"/> Bias
<input checked="" type="checkbox"/> Activity Category-Rep Num	<input type="checkbox"/> IIS Num	<input type="checkbox"/> Conf Level
<input type="checkbox"/> Activity Intent	<input checked="" type="checkbox"/> Sample Fraction	<input type="checkbox"/> Correction for Bias Ind
<input type="checkbox"/> Activity Comment	<input checked="" type="checkbox"/> Value Type	<input type="checkbox"/> Result Document/Graphic Name
<input type="checkbox"/> Field Set	<input checked="" type="checkbox"/> Statistic Type	<input type="checkbox"/> Result Document/Graphic URL
<input type="checkbox"/> Actual Point Type	<input checked="" type="checkbox"/> Result Value as Text	<input type="checkbox"/> Activity Document/Graphic Name
<input type="checkbox"/> Actual Point Sequence	<input type="checkbox"/> Result Value as Number	<input type="checkbox"/> Activity Document/Graphic URL
<input type="checkbox"/> Actual Point Name	<input checked="" type="checkbox"/> Units	



**Caution: Eyes Might Start to Glaze Over**



# Download Prepared Data

U.S. Environmental Protection Agency

## STORET

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### Download Results (stormdb)

You have requested to download monitoring Results

The size of your report download is **22.4KB**

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or, for large files, you may click below to compress before download

[Compress data file now...](#)

[Help](#)

---

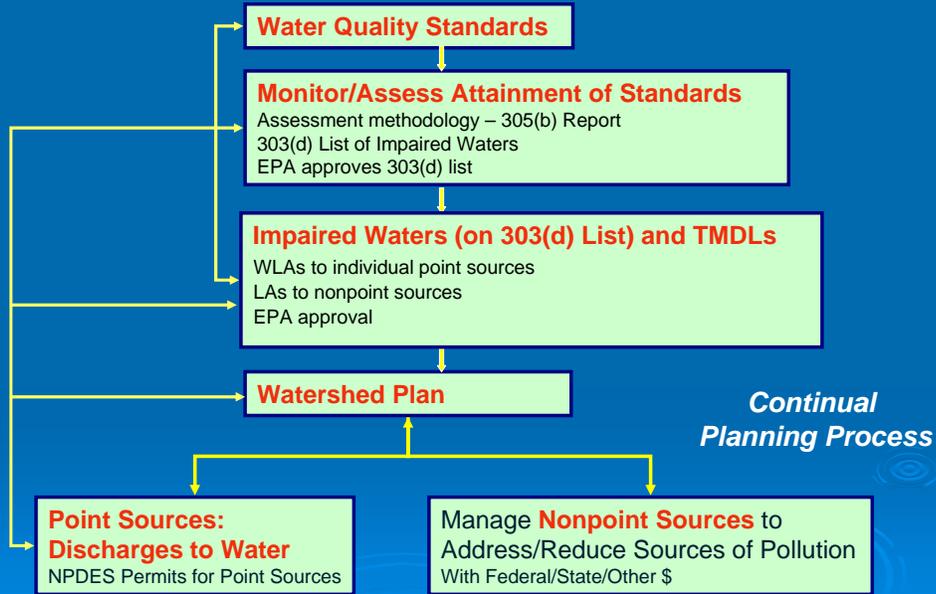
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*Left-click: Download to Specified Location on Your Computer  
Right-click: Open Comma-delimited Text File in Browser*

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# Clean Water Framework Context



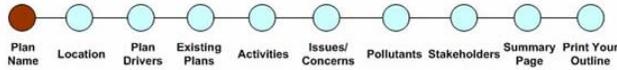
Training on CWA: [www.epa.gov/watertrain/cwa](http://www.epa.gov/watertrain/cwa)

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## April Webcast: The Watershed Plan Builder

EPA's new interactive Web-based tool designed to promote the development of comprehensive watershed protection and restoration plans.

### Watershed Plan Builder



**Registration opens: [April 9, 2007](#)**

# Watershed Planning Steps

- Build Partnerships
- Characterize the Watershed
- Set Goals and Identify Solutions
- Design an Implementation Program
- Implement the Program
- Measure Progress, Make Necessary Adjustments

# Show Me the Money

## www.epa.gov/owow/funding.html



U.S. Environmental Protection Agency

### Watershed Funding

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[EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > Watershed Funding

- Watershed Funding Home
- Requests for Proposals
- EPA Watershed Funding Programs
- Additional Federal Funding Opportunities
- Databases and Funding Opportunities
- Sustainable Funding
- Sustainable Funding Planning Tools
- Resources for Nonprofit Organizations
- Resources for State and Local Governments
- Resources for Funders



Committed watershed organizations and state and local governments need adequate resources to achieve the goals of the Clean Water Act and improve our nation's water quality. To support these efforts, the U.S. Environmental Protection Agency (EPA) has created this Web site to provide tools, databases, and information about sources of funding to practitioners and funders that serve to protect watersheds.



[Requests for Proposals](#)



[Sustainable Funding Planning Tools and Training](#)



[EPA Watershed Funding Programs](#)



[Resources for Nonprofit Organizations](#)



[Additional Federal Funding Opportunities](#)



[Resources for State and Local Governments](#)



[Databases of Funding Opportunities](#)



[Resources for Funders](#)



[Sustainable Funding](#)

#### Features

##### Grant Opportunities:

[2006/2007 Request for Targeted Watershed Grants \(TWG\) Project Implementation Proposals](#)

[2006/2007 Request for Proposals for Capacity Building Grants](#)

[Integrating Clean Water, Drinking Water and Land Use Planning Efforts](#)

## Catalog of Federal Funding Sources for Watershed Protection

1

Type of Assistance:

Select All  
Grants  
Loans

2

Eligible Organization:

Select All  
Business  
Community/Watershed Group

3

Match Required:

Select All  
Yes  
No

4

Keywords:

- |  |  |
|--|--|
| <input type="checkbox"/> Air Quality/Deposition    | <input type="checkbox"/> Outreach/Education              |
| <input type="checkbox"/> Agriculture               | <input type="checkbox"/> Partnerships                    |
| <input type="checkbox"/> Best Management Practices | <input type="checkbox"/> Point Source Control            |
| <input type="checkbox"/> Coastal Waters            | <input type="checkbox"/> Planning                        |
| <input type="checkbox"/> Drinking water            | <input type="checkbox"/> Pollution Prevention            |
| <input type="checkbox"/> Economic Development      | <input type="checkbox"/> Research                        |
| <input type="checkbox"/> Enforcement/Compliance    | <input type="checkbox"/> Restoration                     |
| <input type="checkbox"/> Fisheries                 | <input type="checkbox"/> Solid Waste                     |
| <input type="checkbox"/> Floodplain/Riparian Zones | <input type="checkbox"/> Source Water Protection         |
| <input type="checkbox"/> Forests                   | <input type="checkbox"/> Stormwater Management           |
| <input type="checkbox"/> Ground Water              | <input type="checkbox"/> Wastewater                      |
| <input type="checkbox"/> Invasive Species          | <input type="checkbox"/> Water Conservation              |
| <input type="checkbox"/> Land Acquisition          | <input checked="" type="checkbox"/> Watershed Management |
| <input type="checkbox"/> Monitoring                | <input type="checkbox"/> Wetlands                        |
| <input type="checkbox"/> Nonpoint Source Control   | <input checked="" type="checkbox"/> Wildlife Habitat     |

# Results by Table: Programs and Overview

[Previous Page](#)      [Next Page](#)      Page 2

page 2 of 13

Program Name <small>(Click for further program information)</small>	Overview	FY 2007 Funding Levels
<a href="#">Coastal Program</a>	<p>The U.S. Fish and Wildlife Service (FWS) Coastal Program works to conserve healthy coastal habitats on public or private land for the benefit of fish, wildlife, and people in 22 specific coastal areas. The program forms cooperative partnerships designed to (1) protect coastal habitats by providing technical assistance for conservation easements and acquisitions; (2) restore coastal lands, uplands, and riparian areas; and (3) remove barriers to fish passage in coastal watersheds and estuaries. Program biologists provide restoration assistance and financial assistance to federal and state agencies, local and state governments, businesses, private landowners, and conservation organizations such as local land trusts and watershed councils.</p>	<p>\$12.9 million estimated (Total program funding, half may be available for assistance.)</p>
<a href="#">Coastal Services Center Cooperative Agreements</a>	<p>The National Oceanic and Atmospheric Administration (NOAA) guides the conservation and management of coastal resources through a variety of mechanisms, including collaboration with the coastal resource management programs of the nation's states and territories. The mission of the NOAA Coastal Services Center (CSC) is to support the environmental, social, and economic well being of the coast by linking people, information, and technology. The vision of the NOAA Coastal Services Center is to be the most useful government organization to those who manage and care for our nation's coasts.</p>	<p>\$27 million estimated</p>
<a href="#">Coastal Zone Management Administration Awards</a>	<p>This program assists states in implementing and enhancing Coastal Zone Management (CZM) programs that have been approved by the Secretary of Commerce. Funds are available for projects in areas such as coastal wetlands management and protection, natural hazards management, public access improvements, reduction of marine debris, assessment of impacts of coastal growth and development, special area management planning, regional management issues, and demonstration projects with potential to improve coastal zone management.</p>	<p>\$73.5 million estimated</p>

Click to Drill Down for  
 Additional Details  
 On Funding Program

# Details of Funding Program

Funding Program Name: Coastal Program	
<b>Application Deadline</b>	Contact your local Coastal Program office to find out if there are deadlines.
<b>When Funds are Available</b>	Check with the individual Coastal Program location
<b>Average annual number of applicants</b>	Not available
<b>Typical percentage of applicants funded</b>	Not available
<b>Is a matched amount required?</b>	
<b>Match Amount</b>	Match is encouraged.
<b>Funding Level FY 2005</b>	\$11.7 million
<b>Funding Level FY 2006</b>	\$13 million
<b>Funding Level FY 2007</b>	\$12.9 million estimated (Total program funding, half may be available for assistance.)
<b>Typical lowest amount awarded</b>	\$5,000
<b>Typical highest amount awarded</b>	\$50,000
<b>Typical median amount awarded</b>	\$15,000
<b>Other details on funding</b>	This program provides financial assistance in the form of cooperative agreements. The listed budget includes both administrative costs and project funding.
<b>Primary Address</b>	U.S. Department of the Interior U.S. Fish and Wildlife Service Branch of Habitat Restoration, Division of Fish and Wildlife Management and Habitat Restoration 4401 North Fairfax Drive, Room 400 Arlington, VA 22203
<b>Primary Telephone</b>	(703) 358-2201
<b>Primary Email</b>	Please contact by telephone or mail



# Watershed Hub: www.epa.gov/owow/watershed

U.S. Environmental Protection Agency

## Watersheds

Recent Additions | [Contact Us](#) Search:  All EPA  This Area

You are here: [EPA Home](#) » [Water](#) » [Wetlands, Oceans, & Watersheds](#) » [Watersheds](#)

### Spotlight Watersheds at Work

[We all live in a watershed](#) -- the area that drains to a common waterway, such as a stream, lake, estuary, wetland, aquifer, or even the ocean -- and our individual actions can directly affect it. Working together [using a watershed approach will help protect our nation's water resources](#).

- The Watershed Approach
- Regulations/Policy
- Watershed Academy
- Watershed Projects
- Watershed Funding
- Laws
- Publications
- Conferences
- Technical Tools
- Outreach
- For More Information
- Watershed Links





## Watershed Academy

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[EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > [Watersheds](#) > [Watershed Academy](#) > Watershed Academy

**New!** [Audio version of "Implementing TMDLs and Trading Through the National Estuary Program" Webcast is now available](#)

The Watershed Academy is a focal point in EPA's Office of Water for providing training and information on implementing watershed approaches.



- [Watershed Academy Web](#) offers more than 50 free, self-paced training modules
- [Watershed Management Training Certificate](#), awarded to those that complete 15 required modules and seminars
- [Webcast Seminars](#) sponsored monthly - See schedule for upcoming seminars and listen to audio version of past seminars
- [Live watershed-related training courses](#)
- [Information Transfer Series](#) which includes key watershed documents

[Water](#) | [Wetlands, Oceans & Watersheds](#) | [Watershed Protection](#)

### Features

[Watershed Academy Webcast Seminars](#)

[Growth and Water Resources Watershed Academy Web Module](#)

- Web-Based Training
- Webcast Seminars
- Live Training Courses
- Publications
- Academy Highlights
- Watershed Training Links
- Site Map
- Academy Archives

**Get A Certificate from EPA's Watershed Academy by Completing 15 On-line, Self-Paced Training Courses**



## Watershed Academy Web

[Contact Us](#) | [Print Version](#) Search:  [GO](#)

[EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > [Watersheds](#) > [Watershed Academy](#) > Watershed Academy Web

### Online Training in Watershed Management

Watershed Academy  
Web Home  
Introduction  
Certificate Program  
Best PC Settings to  
Use  
Special Message for  
Trainers  
Contributing Authors  
PDF Print-Friendly  
Versions



#### Module Themes

[Introductory/Overview Modules](#)  
[Watershed Ecology Modules](#)  
[Watershed Change Modules](#)  
[Analysis and Planning Modules](#)  
[Management Practices Modules](#)  
[Community/Social/Water Law Modules](#)

Welcome to the Watershed Academy's Distance Learning Program -- **Watershed Academy Web**. This Web site offers a variety of self-paced training modules that represent a basic and broad introduction to the watershed management field. The modules are organized by the six themes listed above. Modules vary in the time they to complete, from ½ hour to 2 hours. Fifteen of them (marked with asterisks \* below) are the core modules for the Watershed Academy [Certificate Program](#).



## Polluted Runoff (Nonpoint Source Pollution)

[Recent Actions](#) | [Contact Us](#) | [Print Version](#) Search:  [GO](#)  
[EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > [Polluted Runoff \(Nonpoint Source Pollution\)](#)

What is NPS

**NPS Categories**

[Publications & Info Resources](#)

[Education Resources](#)

[Funding](#)

[Outreach](#)

[CWA Section 319](#)

[CZARA Section 6217](#)

[State-EPA NPS Partnership](#)

[Training/Meetings](#)

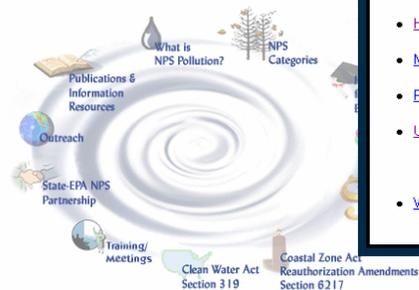
[Polluted Runoff](#)

[For Kids!](#)

**New:** [New Section 319 Nonpoint Source Success Stories](#)

[National Management Measures to Control Nonpoint Source Pollution from Hydrologic](#)

[Draft Handbook for Developing Watershed Plans to Restore and Protect Our Watersheds](#)



### NPS Categories

- [Acid Mine Drainage](#)
- [Agriculture](#)
- [Forestry](#)
- [Hydromodification/Habitat Alteration](#)
- [Marinas/Boating](#)
- [Roads, Highways, and Bridges](#)
- [Urban](#)
  - [Low-Impact Development](#)
- [Wetland/Riparian Management](#)

**Polluted Runoff (Nonpoint Source Pollution)**

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[EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > [Polluted Runoff \(Nonpoint Source Pollution\)](#) > [NPS Categories](#) > [Urban](#)

**Urban**

**EPA Sites**

- [National Management Measures to Control Nonpoint Source Pollution from Urban Areas](#)

This guidance helps citizens and municipalities in urban areas protect bodies of water from polluted runoff that can result from everyday activities. These scientifically sound techniques are the best practices known today. The guidance will also help states to implement their nonpoint source control programs and municipalities to implement their Phase II Storm Water Permit Programs.

- [Low-Impact Development \(LID\) page](#)

- [EPA Smart Growth page](#)

This web site provides information to help create communities that promote the sustainability of America's environment, economy, and quality of life.

- [Watershed Based Wetlands and Water Resource Protection \(PDF\)](#) ( 5MB, 30 pages)

This powerpoint presentation contains a description of a modelling methodology which was used in New Castle County, DE to identify priority natural resource areas which need protection during the watershed build-out process. GIS tools and impervious surface cover overlays were used to identify wetlands, forested tracts, riparian buffers and open spaces areas that needed to be protected through zoning and plan review mechanisms in order to preserve or restore the subwatershed as the watershed. This methodology and presentation were developed by the University of Delaware, Water Resources Agency, Institute for Public Administration.

# Example Link: Technical Guidance Document on Urban BMPs

## National Management Measures to Control Nonpoint Source Pollution from Urban Areas

Publication Number EPA 841-B-05-004, November 2005

This guidance helps citizens and municipalities in urban areas protect bodies of water from polluted runoff that can result from everyday activities. These scientifically sound techniques are the best practices known today. The guidance will also help states to implement their nonpoint source control programs and municipalities to implement their Phase II Storm Water Permit Programs.

[Download or order this document](#)

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### How can the Urban Management Measures Help Improve Water Quality in Your Watershed?

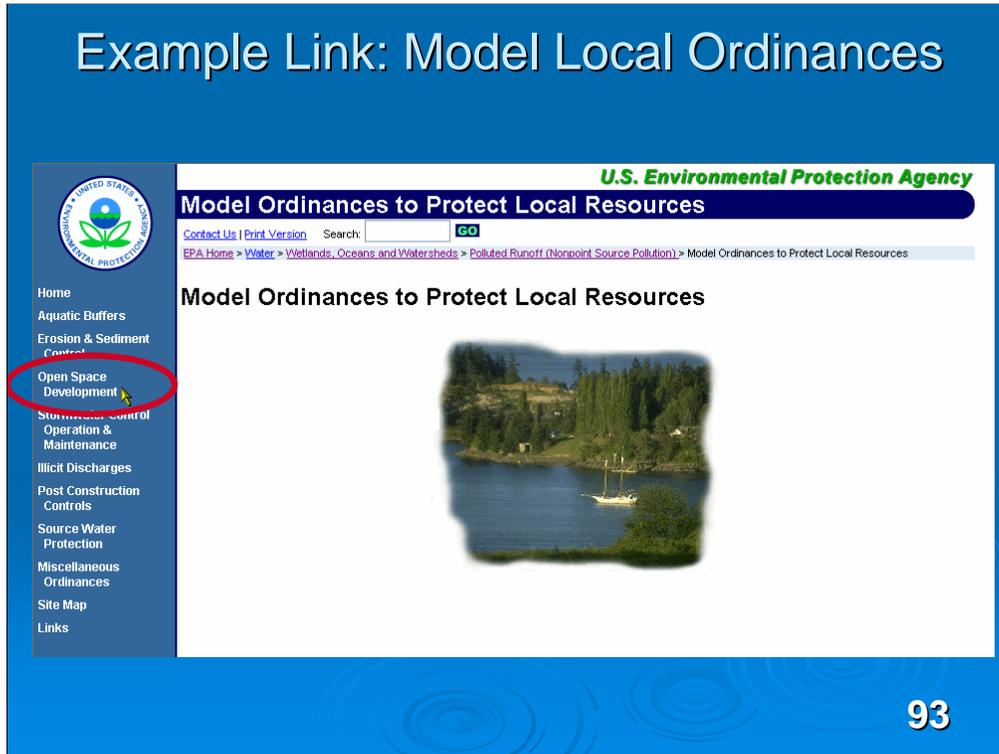
#### Background

- [Why is EPA concerned about water quality in urban areas?](#)
- [What are the urban sources and pollutants of concern?](#)
- [What is EPA doing about urban nonpoint source pollution?](#)
- [How does this guidance relate to the NPDES Storm Water Permit Program?](#)
- [Does the information in this guidance represent regulatory requirements?](#)

#### What YOU can do!

- [What can I do about urban nonpoint source pollution?](#)
- [How do I know whether the guidance will be helpful to me?](#)
- [Where can I get a copy of the guidance?](#)

# Example Link: Model Local Ordinances



The screenshot displays the EPA website's navigation menu on the left, with 'Open Space Development' highlighted by a red circle. The main content area features the title 'Model Ordinances to Protect Local Resources' and a photograph of a lake with a boat. The page header includes the EPA logo and the text 'U.S. Environmental Protection Agency'.

**U.S. Environmental Protection Agency**

## Model Ordinances to Protect Local Resources

[Contact Us](#) | [Print Version](#) Search:  [GO](#)

[EPA Home](#) > [Water](#) > [Wetlands, Oceans and Watersheds](#) > [Polluted Runoff \(Nonpoint Source Pollution\)](#) > Model Ordinances to Protect Local Resources

### Model Ordinances to Protect Local Resources



- Home
- Aquatic Buffers
- Erosion & Sediment Control
- Open Space Development**
- Stormwater Control
- Operation & Maintenance
- Illicit Discharges
- Post Construction Controls
- Source Water Protection
- Miscellaneous Ordinances
- Site Map
- Links

# Example Ordinance

U.S. Environmental Protection Agency



## Model Ordinances to Protect Local Resources

Contact Us | Print Version Search:

EPA Home > Water > Wetlands, Oceans and Watersheds > Polluted Runoff (Nonpoint Source Pollution) > Model Ordinances to Protect Local Resources > Open Space Development

Home

Aquatic Buffers

Erosion & Sediment Control

Open Space Development

Stormwater Control Operation & Maintenance

Illicit Discharges

Post Construction Controls

Source Water Protection

Miscellaneous Ordinances

Site Map

Links

### Open Space Development

Open space development, also called "cluster development," is an alternative site planning technique that concentrates dwelling units in a compact area to reserve undeveloped space elsewhere on the site. In this technique, lot sizes, setbacks, and frontage distances are minimized to allow for open space. The typical open space development creates less impervious cover and reduces the need to clear and grade 35 percent to 60 percent of the site. Open space areas are often used for neighborhood recreation, stormwater management facilities, or conservation purposes. Open space preserved in a natural condition needs little maintenance and helps to reduce and sometimes to treat stormwater runoff from development.

The [model open space ordinance](#) is intended to be a guide. It contains language that fosters development that is substantially consistent with many local zoning standards yet allows for modifications from the original standards to ensure appropriate, fair, and consistent decision making. The model ordinance sets guidelines for management of open space and the amount of open space required on a site, but it is not intended to be a "one size fits all" document.

 When you see this symbol, it is time to make a decision or get more information.

Certain issues are not covered in this ordinance because many localities provide for them in other ordinances or they are too specific to each community. For example, language on road widths is not included because it is often a part of subdivision or other ordinances. Although most ordinances contain a section on the development review process, such language was not included because the review process varies widely by locality.

In addition to the model ordinance, this section includes other information you might find useful in drafting an open space development ordinance:

[Model Ordinances Language](#)

[Ordinances & Supporting Materials](#)



# QUESTIONS?



Online Participants: Submit questions online anytime.

Phone Participants: Please state your name and where you are calling from before your question.

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Need More Info?  
Check Out [Additional Resources](#)

We Welcome Your Comments.  
Please fill out the [Feedback Form](#)