



Key EPA Internet Tools for Watershed Management

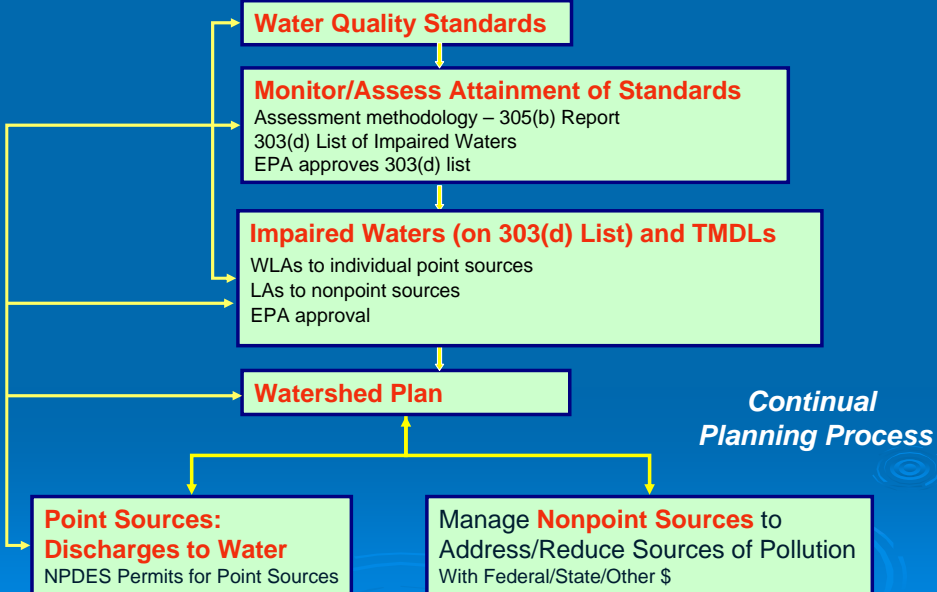
Ansu John
Tetra Tech, Inc.

March 28, 2007

Webcast Sponsored by EPA's Watershed Academy

1

Clean Water Framework Context



Training on CWA: www.epa.gov/watertrain/cwa

2

Consistent, Comprehensive Watershed Planning:
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

4

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



About
Help
Locate Your Watershed
Add Information
Search Information

Surf Your Watershed

Recent Additions | Contact Us | Print Version Search:

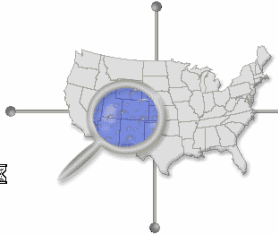
[EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > [Watersheds](#) > [Surf Your Watershed](#) > [Locate Your Watershed](#)

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)

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.

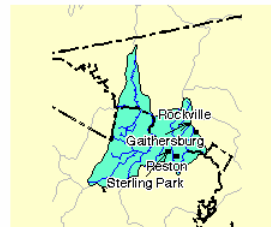
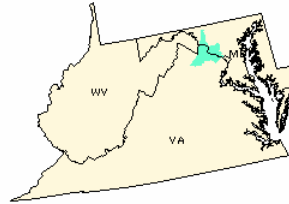
[Citizen-based Groups at work in this watershed](#) (Provided by [Adopt your Watershed](#))

[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 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](#)) [\[EXIT Disclaimer\]](#)

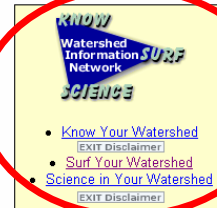
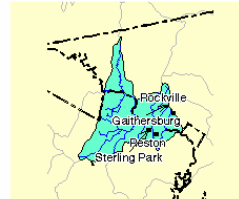
Assessments of Watershed Health

- [Impaired Water for this watershed](#)
- *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 \(1965-2000\)](#): 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

Contact Telephone: (301) 963-0625

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 spadeful 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

Geographic Keywords: Watershed (USGS Cataloging Code)

Citizens Groups

U.S. Environmental Protection Agency

Adopt Your Watershed

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[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
Description: New group working on the adoption of Captain Hickory Run

■ **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
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

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

Spotlight Watersheds at Work

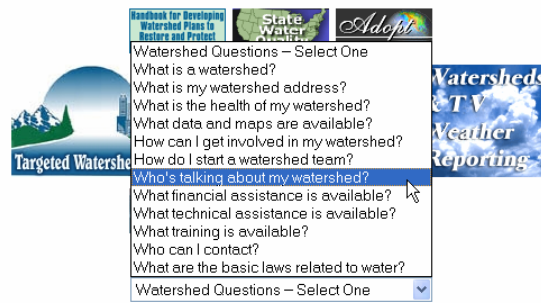
[We all live in a watershed](#) -- the area that drains to a common waterway, such as a stream, lake, estuary, wetland, aquifer, or even the ocean -- and our individual actions can directly affect it. Working together [using a watershed approach will help protect our nation's water resources](#).



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](#).



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

Watershed Online Information Sharing: 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](#)
- [EPA Public Listservers](#)
- [Standards and Applied Science Division WQS-NEWS](#)

Quarterly Newsletter on Watershed Topics

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

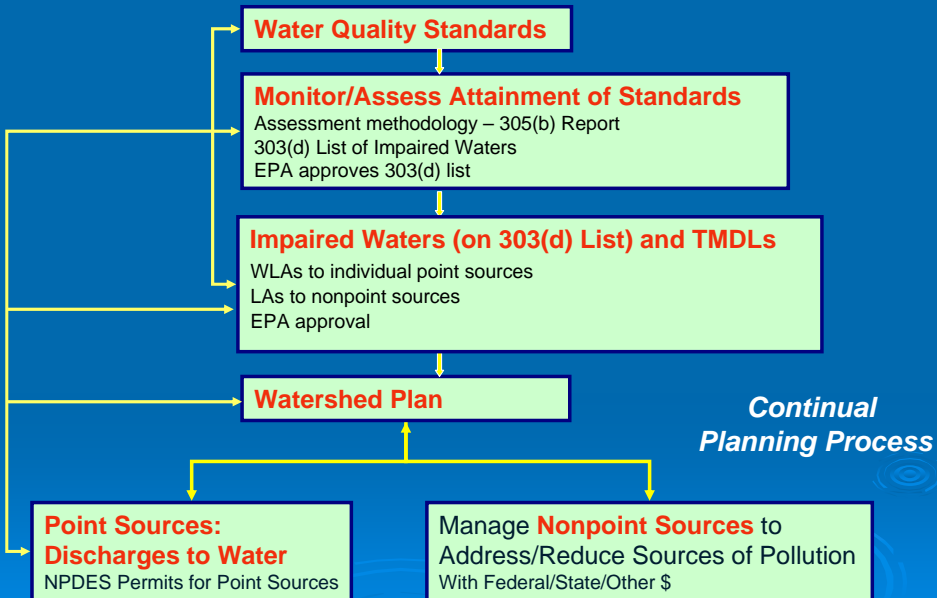
January 2007, #80

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

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National Sources: EPA Water Program Databases

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

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



Water Science Home

Water Quality Standards Home

Basic Information

Where You Live

Recent Actions

Laws & Regulations

Policy & Guidance

State, Tribal, & Territorial Standards

Database

Training, Meetings, & Educational Materials

Partnership with Tribes

U.S. Environmental Protection Agency

Water Quality Standards

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

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.

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

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

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

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

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

[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](#)
Detailed information on the current standards for all waters of the U.S.

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

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

WQS Database: www.epa.gov/wqsdatabase/



U.S. Environmental Protection Agency

Water Quality Standards Database

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

WQS Database Home
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What's New
Reports
Mapping
Demo
Data Summary
Diagram
Repository of
WQS Documents
Disclaimer



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.

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.

Find Designated Uses

U.S. Environmental Protection Agency



WQS Database Home

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Water Quality Standards Database

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

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.

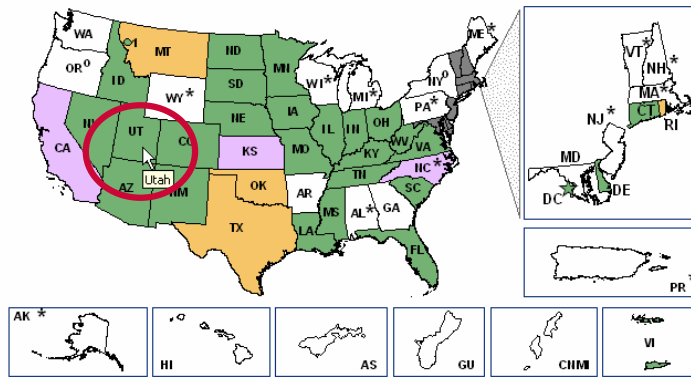
- [State Numeric Criteria:](#)

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.

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
- 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
UT-R-BEAR-0021	BEAR RIVER AND TRIBUTARIES FROM UTAH-WYOMING STATE LINE TO HEADWATERS (SUMMIT CO)		4	Agricultural	Protected for agricultural uses including irrigation of crops and stock watering.		
UT-R-BEAR-0021	BEAR RIVER AND TRIBUTARIES FROM UTAH-WYOMING STATE LINE TO HEADWATERS (SUMMIT CO)		3A	Cold Water Aquatic Life	Protected for cold water species of game fish and other cold water aquatic life.		
UT-R-BEAR-0021	BEAR RIVER AND TRIBUTARIES FROM UTAH-WYOMING STATE LINE TO HEADWATERS (SUMMIT CO)		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"

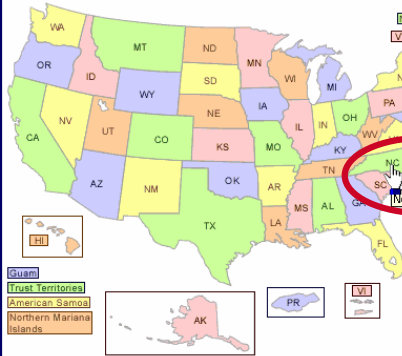
State, Tribal, & Territorial Standards: www.epa.gov/waterscience/wqs/

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.



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 \(PDF\)](#) (18 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

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"

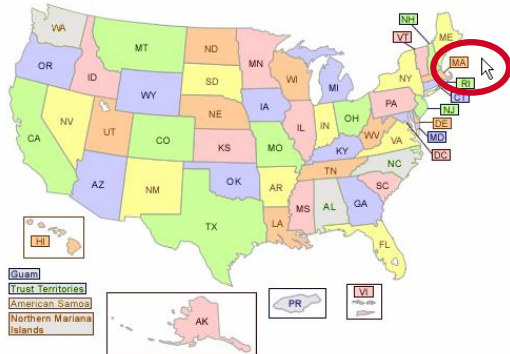
Explains Report headings like:

"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.

ALL
Alabama
Alaska

State: Alaska Waterbody Name: Search

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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 Impairments](#)
- [Causes of Impairment](#)
- [Probable Sources Contributing to Impairment](#)
- [Glossary](#)

National Assessment Database

[About this Database](#)

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





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

[Previous National Water
Quality Reports](#)

Overall Report Card

Massachusetts Assessed Waters Individual Use Support for Bays and Estuaries

[Description of this table](#)

<u>State Designated Use</u>	<u>Total Square Miles Assessed</u>	<u>Percent Good</u>	<u>Percent Threatened</u>	<u>Percent Impaired</u>	<div> <div>% Good</div> <div>% Threatened</div> <div>% Impaired</div> </div>
 Fish, Shellfish, and Wildlife Protection and Propagation	101.64	65.83	.00	34.17	<div><div></div><div></div><div></div></div>
 Recreation	174.07	82.07	.00	17.93	<div><div></div><div></div><div></div></div>
 Aquatic Life Harvesting	285.45	9.83	.00	90.68	<div><div></div><div></div><div></div></div>
 Aesthetic Value				10.25	<div><div></div><div></div><div></div></div>

The state assessed miles.

Massachusetts Top Causes of Impairments for Bays and Estuaries

[Description of this table](#)

#	<u>State Cause Name</u>	<u>Total Square Miles Impaired</u>
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

Table Legend:	Water Status is Good	Water Status is Threatened	Water Status is Impaired	Water Status has not been Assessed
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National Assessment Database

[About this Database](#)

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

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

[Previous National Water Quality Reports](#)

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

Selected Individual Waterbody: Blackstone River, 3.7-mile Section

Water Quality Attainments

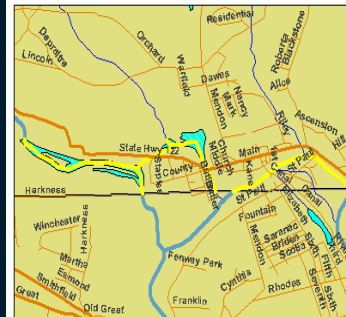
Designated Use Category	State Designated Use	Attainment Status	Threatened
Fish, Shellfish, and Wildlife Protection and Propagation	ALUS	NOT SUPPORTING	No
Aquatic Life Harvesting	FISH CONSUMPTION	NOT SUPPORTING	No
Recreation	PRIMARY CONTACT	PARTIAL SUPPORT	No
Recreation	SECONDARY CONTACT	PARTIAL SUPPORT	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 R](#)
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 3.96 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

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Intro to TMDLs

[Policy Documents](#)

[Technical Support Documents](#)

[Example TMDLs](#)

[Air Deposition](#)

[Litigation Status](#)

[Meetings/Training/Listservers](#)

[Other Links](#)

[TMDL Archives](#)

[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](#)



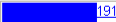









[Audio version of Sept. 28, 2005 Webcast Seminar on "The ABCs of TMDLs for Stakeholders"](#)

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

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
PATHOGENS	 305	35.07
FISH CONSUMPTION ADVISORY - POLLUTANT UNSPECIFIED	 251	14.55
OXYGEN DEPLETION	 191	11.07
CAUSE UNKNOWN - BIOLOGICAL INTEGRITY	 171	9.91
PH	 143	8.29
METALS (OTHER THAN MERCURY)	 119	6.90
PCBS	 70	4.06
AMMONIA	 49	2.84
NUTRIENTS	 33	1.91
TEMPERATURE	 32	1.86
PESTICIDES	 16	.93
MERCURY	 11	.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	AARONS CREEK	MAP 303(d)	ROANOKE		2004, 2002
VA	ACCOKEEK CREEK	MAP 303(d)	POTOMAC		2004, 2002
VA	ACCOTINK CREEK	MAP 303(d)	POTOMAC		2004, 2002
VA	ADAIR RUN	No Spatial Data	NEW		2004
VA	AIRFIELD POND (LOWER) UNNAMED TRIBUTARY	No Spatial Data	CHOWAN		2004
VA	AIRFIELD POND (UPPER) UNNAMED TRIBUTARY	No Spatial Data	CHOWAN		2004
VA	ALLEN CREEK	No Spatial Data	ROANOKE		2004, 2002
VA	ALLEN CREEK, UT	No Spatial Data	ROANOKE		2004
VA	ALMOND CREEK	No Spatial Data	LOWER JAMES		2004, 2002, 1998, 1996
VA	ANGOLA CREEK	MAP 303(d)	APPOMATOX		2004, 2002
VA	ANGOLA CREEK	MAP 303(d)	APPOMATOX		2004, 2002
VA	APPOMATTOX RIVER	MAP 303(d)	APPOMATOX		2004, 2002, 1998, 1996, 1994
VA	APPOMATTOX RIVER	MAP 303(d)	APPOMATOX		2004, 2002
VA	APPOMATTOX RIVER	MAP 303(d)	APPOMATOX		2004, 2002, 1998
VA	AQUIA CREEK	No Spatial Data	POTOMAC		2004
VA	ASSAMOOSICK SWAMP - UNT	MAP 303(d)	CHOWAN		2004, 2002
VA	ASSAMOOSICK SWAMP AND TRIBUTARIES, SEACORRIE SWAMP	No Spatial Data	CHOWAN		2004, 2002, 1998
VA	ASSAWOMAN CREEK AND WOMANS BAY	No Spatial Data	OCEAN		2004, 2002
VA	AUSTIN RUN	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
Hampton Roads	25	1.85
Lower Chesapeake Bay	5	.37
Lower Dan	15	1.11
Lower James	38	5.03
Lower Potomac	56	4.14
Lower Rappahannock	54	3.99
Lynnhaven-Poquoson	29	2.14
Mattaponi	8	.67
Maury	7	.52
Meherin	11	.81
Middle James-Buffer	24	1.77
Middle James-Willis	15	1.11
Middle New	14	1.03
Middle Potomac-Anacostia-Occoquan	23	1.70
Middle Potomac-Catocum	8	.67
Middle Roanoke	31	2.29

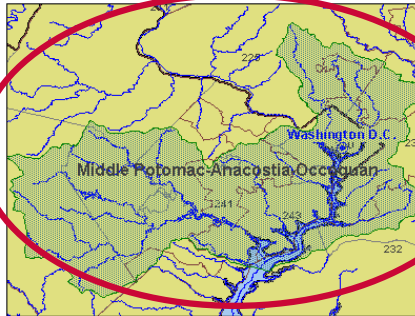
Drill down: Waterbodies in Selected Watershed (Middle Potomac-Anacostia-Occoquan)

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

- [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.

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

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

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

Use Tools to Query WATERS

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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! BUILD 03 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



Please ma'am....

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

**ASK
WATERS**

Choose query type:

Simple Query

Expert Query

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Example Simple Query

ASK WATERS Questions

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)
What TMDLs are associated with PCS facilities?	Total Maximum Daily Load (TMDL) / NTTS / 303(d)
What causes of impairments for an impaired water have been de-listed and what were their reasons for de-listing?	Total Maximum Daily Load (TMDL) / NTTS / 303(d)
How many CWNS 2000 facilities and projects have needs and in what categories are their needs?	Clean Watersheds Needs Survey / CWNS 2000
What CWNS 2000 facilities and projects have needs documented to federal standards?	Clean Watersheds Needs Survey / CWNS 2000
What are the current and projected flows for publicly owned wastewater treatment facilities?	Clean Watersheds Needs Survey / CWNS 2000
How many people are served by publicly owned wastewater treatment facilities?	Clean Watersheds Needs Survey / CWNS 2000
What are the federal needs and flow measures for CWNS 2000 facilities?	Clean Watersheds Needs Survey / CWNS 2000
What are the federal needs and population data for CWNS 2000 facilities?	Clean Watersheds Needs Survey / CWNS 2000

Web Page Has Many More Questions

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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).

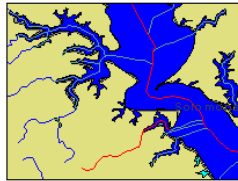
Between dates: 01-01-2005 AND 01-01-2007

Run Report Reset

Result: Waters De-listed in Michigan

<u>FISCAL YEAR</u> <u>DELISTED</u>	<u>EPA</u> <u>DELISTED</u> <u>DATE</u>	<u>REGION</u>	<u>STATE</u>	<u>WATER BODY NAME</u>	<u>LIST ID</u>	<u>CAUSE DESCRIPTION</u>	<u>CYCLE</u>	<u>DELISTED</u> <u>REASON</u>
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

-Perform Queries Visually



DISPLAY	LABEL ALL	ACTIVE		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>		Impaired Waters
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>		Water Quality Standards
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>		Assessed Waters
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>		Beaches

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

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, there is an EPA logo and the text 'United States Environmental Protection Agency'. The main title 'EnviroMapper for Water' is in a stylized font, followed by 'Feedback' and 'EM Home' links. The interface is divided into three main sections: a 'MAP FEATURES' list on the left, a central map area, and a 'Map Tools' panel on the right. The 'MAP FEATURES' list includes various 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 central map area shows a map of the United States with a red circle highlighting the map view. Below the map, there is a 'Help' button and a message area. The 'Map Tools' panel includes a 'Click on map to: Locator Map' section with buttons for 'Zoom In', 'Zoom Out', 'Zoom to View', 'Recenter Map', 'Show Location', 'Identify Active Feature', and 'Add'. There is also a 'Zoom To Area Menu' and a 'Printable Map' button. A red circle highlights the 'Map Tools' panel. A red arrow points from the 'Map Features' list to a yellow box labeled 'Map Features or "Data Layers"'. A red arrow points from the 'Help' button to a yellow box labeled 'Message Area'. A red arrow points from the 'Map Tools' panel to a yellow box labeled 'Map Tools'. A red circle highlights the 'Help' button and the message area below it, with a text box stating: '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"

Message Area

Map Tools

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

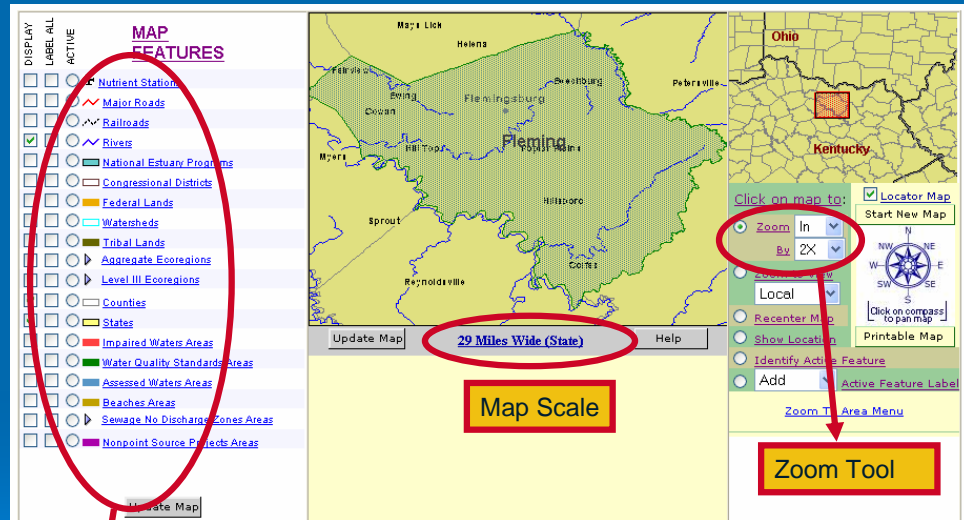
Multiple Ways to Zoom In

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>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>D</u> egree° <u>M</u> inute' <u>S</u> econd" format)	Latitude: DD ° MM ' SS.SS " Longitude: -DDD ° MM ' SS.SS "

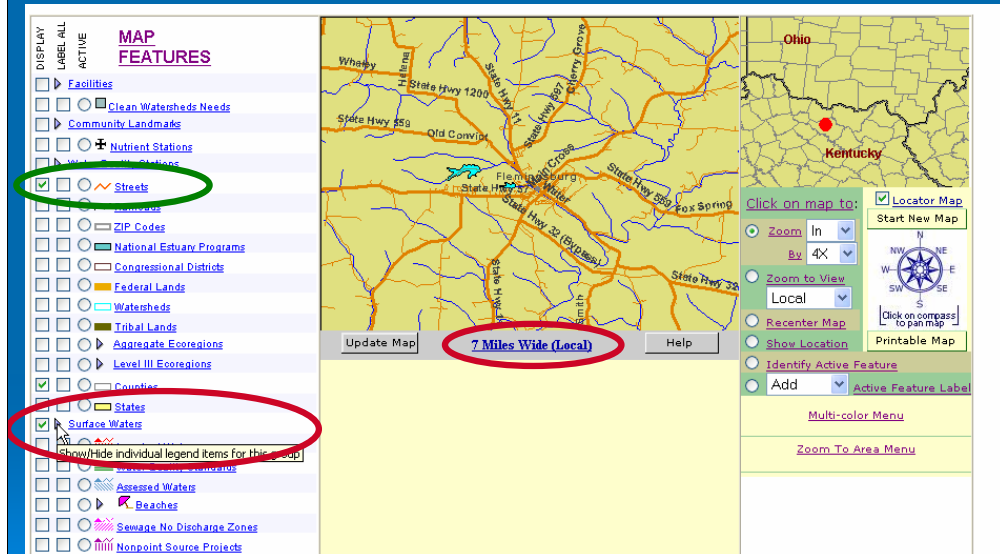
Zoom To Selected Area

County Scale



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

Zoom Scale < 25 miles wide

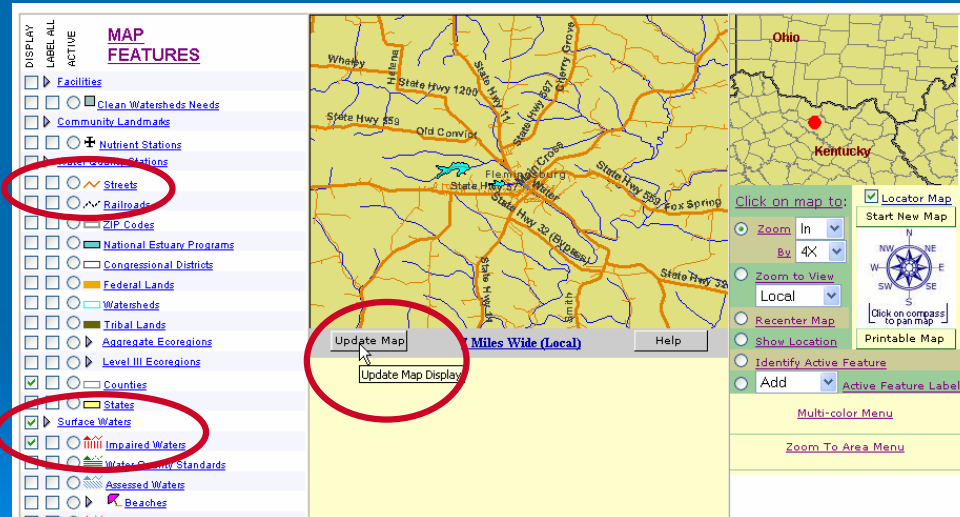


National Hydrography Dataset = "Surface Water" Map Feature
Visible at Map View Scales < 25 miles

53

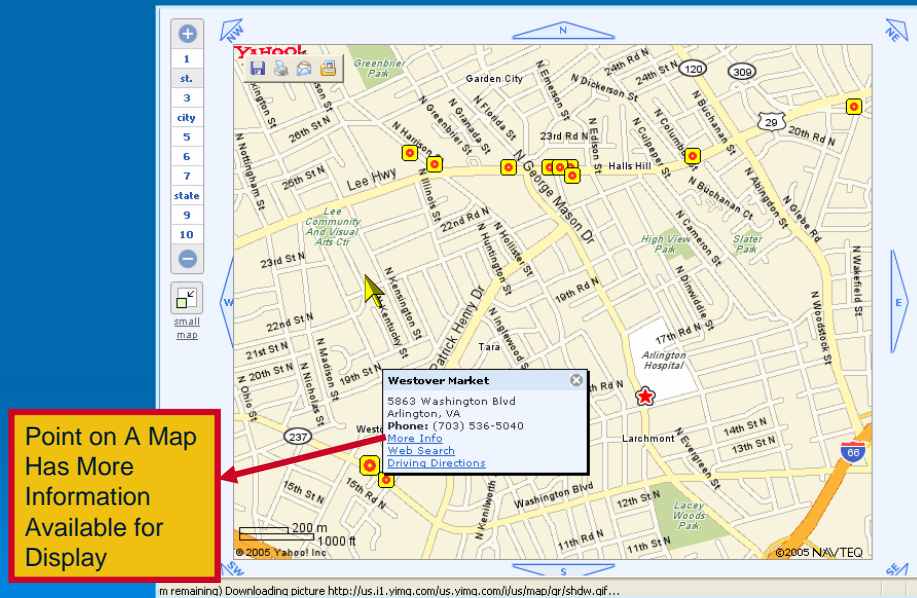
Please check with Tommy Dabolt: high-res NHD based on 1:24,000 scale USGS topos, View scale equivalent = 25 miles?

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



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Example Internet Map Application



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Identify a Map Feature (the Active Map Feature)

The screenshot displays a map application interface. On the left, a 'MAP FEATURES' panel lists various map elements under 'DISPLAY' and 'ACTIVE' columns. The 'Impaired Waters' feature is highlighted with a red circle and a red arrow pointing to a text box below. A red arrow points from the map area to a text box. On the right, a control panel includes a 'Click on map to:' section with 'Zoom In', 'Zoom to View', and 'Recenter Map' options. The 'Identify Active Feature' tool is highlighted with a red circle and a red arrow pointing to a text box below. The map area shows a river network with 'Flemingsburg' labeled. A red circle highlights the 'Impaired Waters' feature in the left panel. A red arrow points from the map area to a text box. On the right, a control panel includes a 'Click on map to:' section with 'Zoom In', 'Zoom to View', and 'Recenter Map' options. The 'Identify Active Feature' tool is highlighted with a red circle and a red arrow pointing to a text box below.

Click the Radio Button to Make Map Feature Active

Pointer Becomes Selector Hand

Identify Active Feature Tool

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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

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Hyperlink to Data Pull from Database

MAP FEATURES

- ☐ Facilities
- ☐ Clean Watersheds Needs
- ☐ Community Landmarks
- ☐ 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
 - ☐ Assessed Waters
 - ☐ Reaches
 - ☐ Sewage No Discharge Zones
 - ☐ Nonpoint Source Projects

Impaired Waters features:

KY492236_01	<input type="checkbox"/>
-------------	--------------------------

Other water program features located at click point:

Water Quality Standards	
KY05100101_2	<input type="checkbox"/>
KY05100101200070_G	<input type="checkbox"/>

Update Map 7 Miles Wide (Local) Help

Click on map to:
Zoom In By ZX Zoom to View Local
Recenter Map Show Location Identify Active Feature Add Active Feature Label

Locator Map Start New Map
Printable Map
Multi-color Menu
Zoom To Area Menu

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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 Map ID: KY492236_01

Waterbody Name: FLEMING CREEK

Listed Water Map Link: [WQS-2236](#)

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	OXYGEN DEPLETION	1			
PHOSPHORUS	NUTRIENTS	1			

Reason for Impairment

Bonus: Information for Identified Segment from WQS Database

 **Water Quality Standards Database** U.S. Environmental Protection Agency

[Contact Us](#) | Search:

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

Designated Use Data

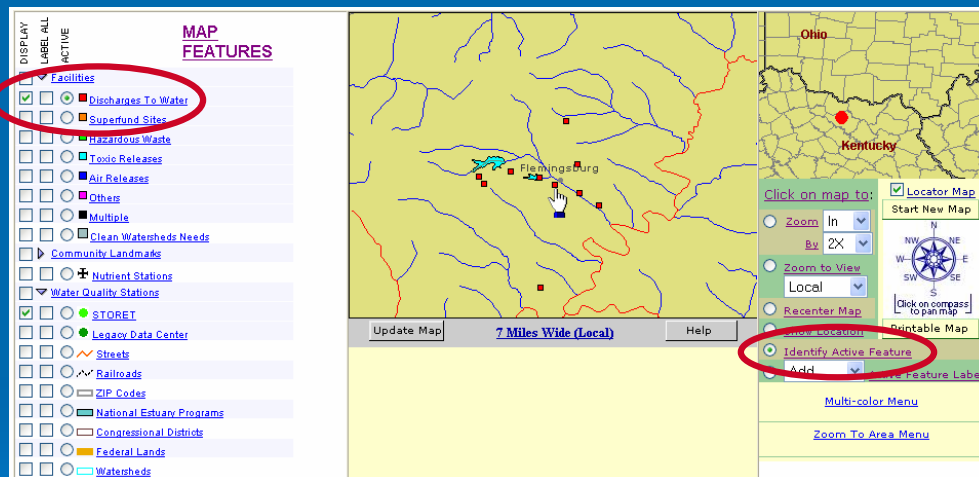
Entity ID: KY05100101_2
Reach Code:
State: KY
Waterbody Name: FLEMING CREEK
Waterbody type:

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



*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

FACILITY NAME: [FLEMINGSBURG WTP](#) **NPDES:** [KYG640009](#)

CITY: FLEMINGSBURG **PERMIT ISSUED DATE:** SEP-19-2004

STATE: KY **PERMIT EXPIRED DATE:** AUG-31-2009

ZIP CODE: 41041

COUNTY NAME: FLEMING **SIC CODE:** 4941 WATER SUPPLY

REGION: 4 **MAPPING INFO:** [MAP](#)

MAILING NAME: FLEMINGSBURG WTP

Click on Permit Number to Drill Down for Detailed Reports

Overview of Permit Issued To This Facility

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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)

Measurements / Violations Report: Data for Permit-Required Parameters


Detailed Reports

Results are based on data extracted on FEE

Find what: ph Find Next

☐ Match whole word only
 ☐ Match case

Direction
☐ Up ☒ Down

Cancel

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: 0400 = 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 VIOL

QUESTIONS?

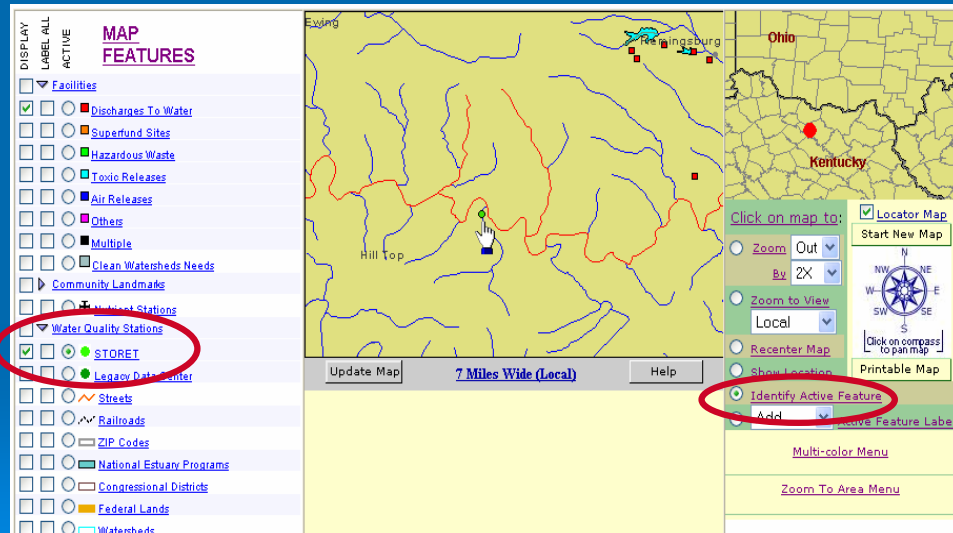


Online Participants: Submit questions online anytime.

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



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

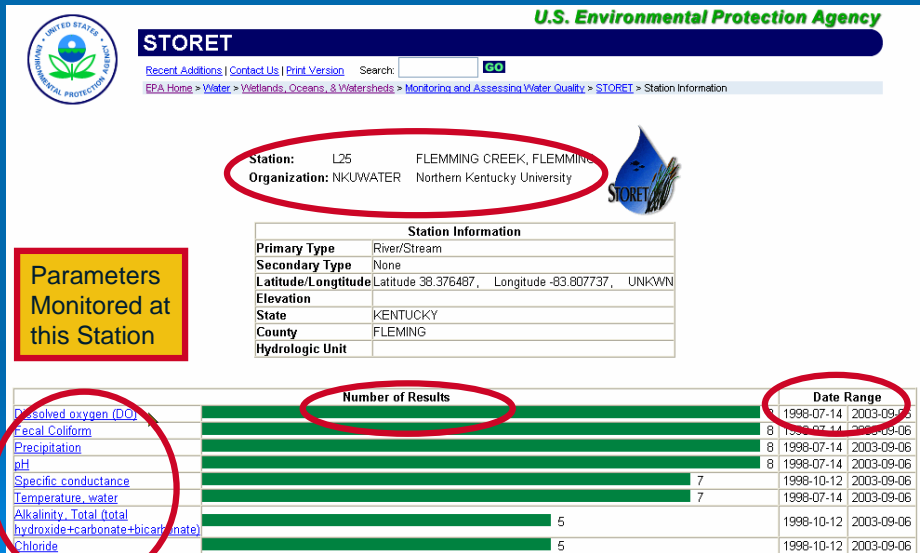
Map Information: FLEMING CREEK, FLEMING, 7 Miles Wide (Local)

Map Controls: Zoom In, Zoom to View, Recent Map, Show Location, Identify Active Feature, Add, Active Feature Label, Multi-color Menu, Zoom To Area Menu, Locator Map, Start New Map, Printable Map, Click on map to, Click on compass to pan map.

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

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STORET Database Query Results: Summary of Available Data



Parameters = Characteristics (STORET Terminology)

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Drill Down for Data

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Regular Results by Station (stormod_)

Station

Select an Organization and a Search Type, then enter a Search String and click "Search Stations".

ORG ID	ORGANIZATION NAME
INKOWATER	Northern Kentucky University

Search Type

☒ Search by Station ID
☐ Search by Station Name
☐ Search by Station Alias

Select Station Alias Type:

Search String:

Org ID	Station ID	Alias Type	Station Alias	Station Name
INKOWATER	125	N/A	N/A	FLEMING CREEK, FLEMING

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

70

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

U.S. Environmental Protection Agency

STORET

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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

[Training](#)

[SIM Software](#)

[Fact Sheets](#)

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

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Download Data for Selected Location

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[Data Owner's Corner](#)
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[Obtaining Water Quality Data](#)
[Useful Internet Links](#)
[Commonly Asked Questions](#)
[Recent Additions](#)



STORET Data Warehouse

Data refreshed as of February 27, 2007

Query Options

STORET Warehouse Watershed Summary
[Summary of Results by Watershed](#)
[Tell Us What You Think!](#)


STORET Station Descriptions
[Stations by Geographic Location](#)
[Stations by Organization and Station ID](#)
[Make a Map](#)
Create a map of monitoring locations from STORET using either [EnviroMapper for Water](#) or [Window to My Environment](#).

STORET Regular Results
(Non-Biological Physical and Chemical Result Data)
[Regular Results by Geographic Location](#)
[Regular Results by Station](#)
[Regular Results by Project](#)
Data Logger Results
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.

STORET Biological Results
[Biological Results by Geographic Location](#)
[Biological Results by Station](#)
[Biological Results by Project](#)
Data Quality Documentation
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.

STORET Habitat Results
[Habitat Results by Geographic Location](#)
Training Exercise
A step-by-step guide for first-time users of the STORET Data

State and County Selection Through List-boxes

 **STORET** U.S. Environmental Protection Agency

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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	State Name <input type="text" value="KENTUCKY"/>	County Name <input type="text" value="ALL"/> <input type="button" value="Look Up"/>
<input type="radio"/> Latitude/Longitude (in decimal degrees)	West Limit <input type="text" value="180"/> <input type="button" value="W"/>	North Limit <input type="text" value="90"/> <input type="button" value="N"/> East Limit <input type="text" value="0"/> <input type="button" value="E"/> South Limit <input type="text" value="0"/> <input type="button" value="S"/>
<input type="radio"/> Drainage Basin/HUC	Cataloging Unit <input type="text" value="ALL"/> <input type="button" value="Look Up"/>	

Opens a popup window for county selection

Wildcard (%) Search for Characteristics

Characteristic

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

Characteristic Search

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 ☒ 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"/> Up'r 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 Reps
<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

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Download Results (stormodb)

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...](#)

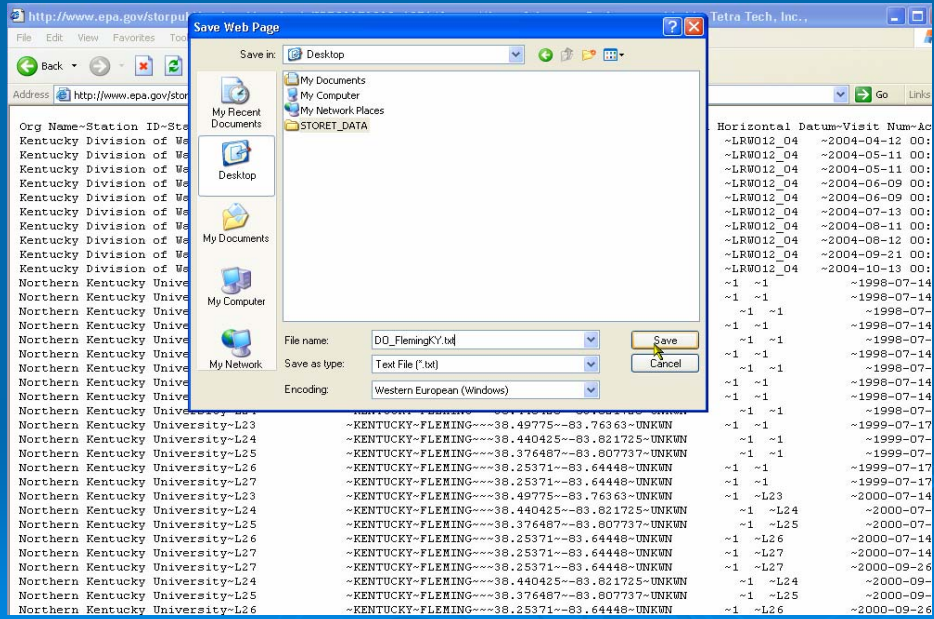
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Left-click: Download to Specified Location on Your Computer
Right-click: Open Comma-delimited Text File in Browser

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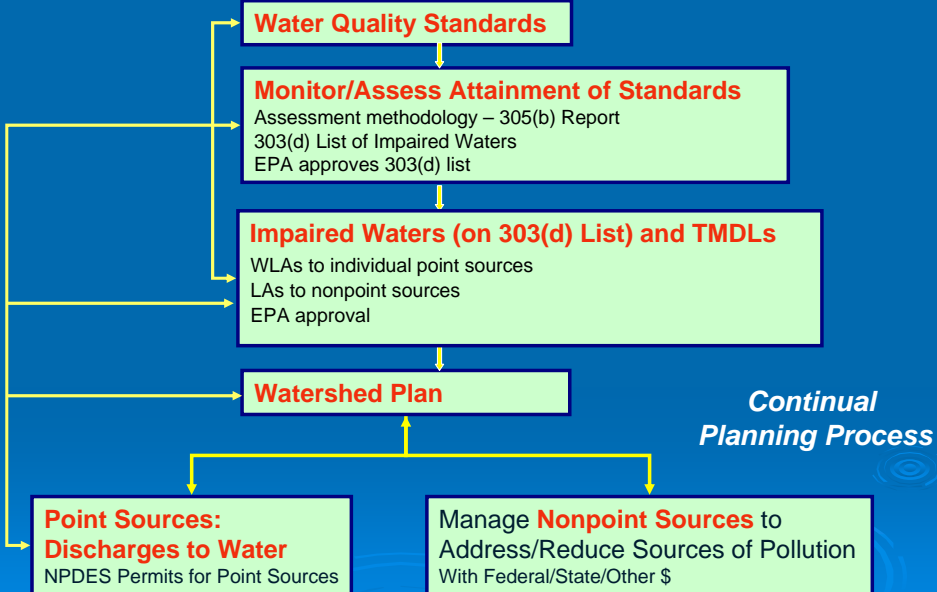
Save as .txt file



Browser Menu Bar: File > Save As

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Clean Water Framework Context



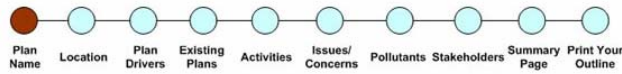
Training on CWA: www.epa.gov/watertrain/cwa

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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





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

Watershed Funding

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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](#)

 [EPA Watershed Funding Programs](#)

 [Additional Federal Funding Opportunities](#)

 [Databases of Funding Opportunities](#)

 [Sustainable Funding](#)

 [Sustainable Funding Planning Tools and Training](#)

 [Resources for Nonprofit Organizations](#)

 [Resources for State and Local Governments](#)

 [Resources for Funders](#)

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 Go

page 2 of 13

Program Name <small>(Click for further program information)</small>	Overview	FY 2007 Funding Levels
Coastal Program	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.	\$12.9 million estimated (Total program funding, half may be available for assistance.)
Coastal Services Center Cooperative Agreements	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.	\$27 million estimated
Coastal Zone Management Administration Awards	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.	\$73.5 million estimated

Click to Drill Down for
Additional Details
On Funding Program

Details of Funding Program

Funding Program Name: Coastal Program

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

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



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

U.S. Environmental Protection Agency

Watersheds

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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](#).





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Web-Based Training
Webcast Seminars
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Watershed Training Links
Site Map
Academy Archives

U.S. Environmental Protection Agency

Watershed Academy

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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](#)



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



Watershed Academy Web

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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](#).



U.S. Environmental Protection Agency

Polluted Runoff (Nonpoint Source Pollution)


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

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

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



What is NPS Pollution?

NPS Categories

Publications & Information Resources

Outreach

State-EPA NPS Partnership

Training/Meetings

Clean Water Act Section 319

Coastal Zone Act Reauthorization Amendments Section 6217

NPS Categories

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

U.S. Environmental Protection Agency

Polluted Runoff (Nonpoint Source Pollution)

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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](#)

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


U.S. Environmental Protection Agency

Model Ordinances to Protect Local Resources

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Model Ordinances to Protect Local Resources



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Example Ordinance



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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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