



# MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

Martin O'Malley  
Governor

Shari T. Wilson  
Secretary

Anthony G. Brown  
Lieutenant Governor

November 6, 2009

Robert M. Summers, Ph.D.  
Deputy Secretary

Dear Marylander:

The intent of this letter is to solicit readily available data and/or information to support the establishment of Total Maximum Daily Loads (TMDLs) addressing a number of water quality impairments in the Potomac River Region. Specifically, the Maryland Department of the Environment (MDE) is looking for data and information that would be helpful in addressing nutrient, sediment, polychlorinated biphenyl (PCB), heptachlor epoxide, and debris/floatables/trash impairments in the Potomac River and its tributaries. The attached Table 1 lists 8-digit watersheds and their associated impairments for which MDE is currently seeking data. Figures 1-5 display maps of the Potomac River Basin and its 8-digit watersheds. **If you are aware of available data and/or information pertaining to the above-referenced impairments for the Potomac River Region, please view this correspondence with care.**

The federal Clean Water Act requires states to monitor the quality of their waters. For those waterbodies failing to meet the established water quality standards, states are required to develop TMDLs. A TMDL specifies the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and shows how pollutant loadings can be allocated among point and non-point sources. MDE is responsible for establishing TMDLs in Maryland. Federal guidance requires states to use the best readily available data for their TMDL studies. In addition, states are required to involve the public in establishing TMDLs and typically conduct a 30-day public comment period to meet this requirement. After public review, TMDLs are submitted to the United States Environmental Protection Agency (EPA) for approval. Once approved, the TMDL provides a basis for developing a watershed strategy to achieve water quality standards.

MDE is beginning to develop TMDLs for water quality impairments associated with nutrient, sediment, PCBs, heptachlor epoxide, and debris/floatables/trash in the Potomac River Region. **If you have or are aware of data or information that would support the development of TMDLs for the referenced impairments, please respond to the enclosed data solicitation notice.**

Thank you for your attention to this mailing. If you have any questions regarding this activity or MDE's TMDL Development Program, please contact me (410-537-3937; [mchatham@mde.state.md.us](mailto:mchatham@mde.state.md.us)), or visit our web site at <http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/index.asp>.

Sincerely,

Melissa Chatham  
TMDL Outreach Coordinator  
Science Services Administration

## MARYLAND DEPARTMENT OF THE ENVIRONMENT

### **Data Solicitation Notice in Support of Developing Total Maximum Daily Loads (TMDLs) for Nutrient, Sediment, Polychlorinated Biphenyl (PCB), Heptachlor Epoxide, and Debris/Floatables/Trash Impairments in the Maryland Potomac River Basin**

Section 303(d) of the federal Clean Water Act requires Maryland to: (1) identify waters, known as water quality limited segments (WQLSs), where technology-based effluent limitations and other required controls cannot achieve water quality standards; (2) for each listed water, establish Total Maximum Daily Loads (TMDLs) for pollutants preventing the attainment of water quality standards; and (3) offer an opportunity for public review and comment on the proposed TMDLs.

TMDLs to address a number of impairments throughout the Potomac River Basin are currently being planned (for details see Table 1). Locations of the Potomac River Basin 8-digit watershed are presented in Figures 1-5.

The Maryland Department of the Environment (MDE) would appreciate your assistance in obtaining all best readily available data and other information that would benefit the development of TMDLs for nutrient, sediment, polychlorinated biphenyl (PCB), heptachlor epoxide, and debris/floatables/trash impairments in the specified watersheds of the Maryland Potomac River Basin (see Table 1). Please consider these steps in responding to this solicitation:

- MDE would like to make sure that your information is considered, while minimizing your response effort. If you have already provided relevant information to another unit of the State government, other than MDE's TMDL Development Program, simply let us know when, with whom, and what type of information has been shared.
- MDE is interested in documents or datasets that provide information regarding water quality conditions associated with the aforementioned impairments. Please refer to Table 2 for key sampling parameters. MDE is looking for data in all media including surface water, groundwater, soil, fish tissue, and sediments. MDE is also interested in information regarding the causes and sources of the impairments in the waterbodies of interest, and any other information you believe might be relevant.
- Please do not limit your data to only the listed impairments – MDE seeks all available water quality data for the Potomac River Basin.
- Information regarding sampling methodologies, design, conditions (i.e., time of day, weather conditions during and preceding the sampling), sampling locations (i.e., geographical coordinates, maps), peer review, detection limits, and quality assurance procedures applied would also be very beneficial. Please include such information where available.

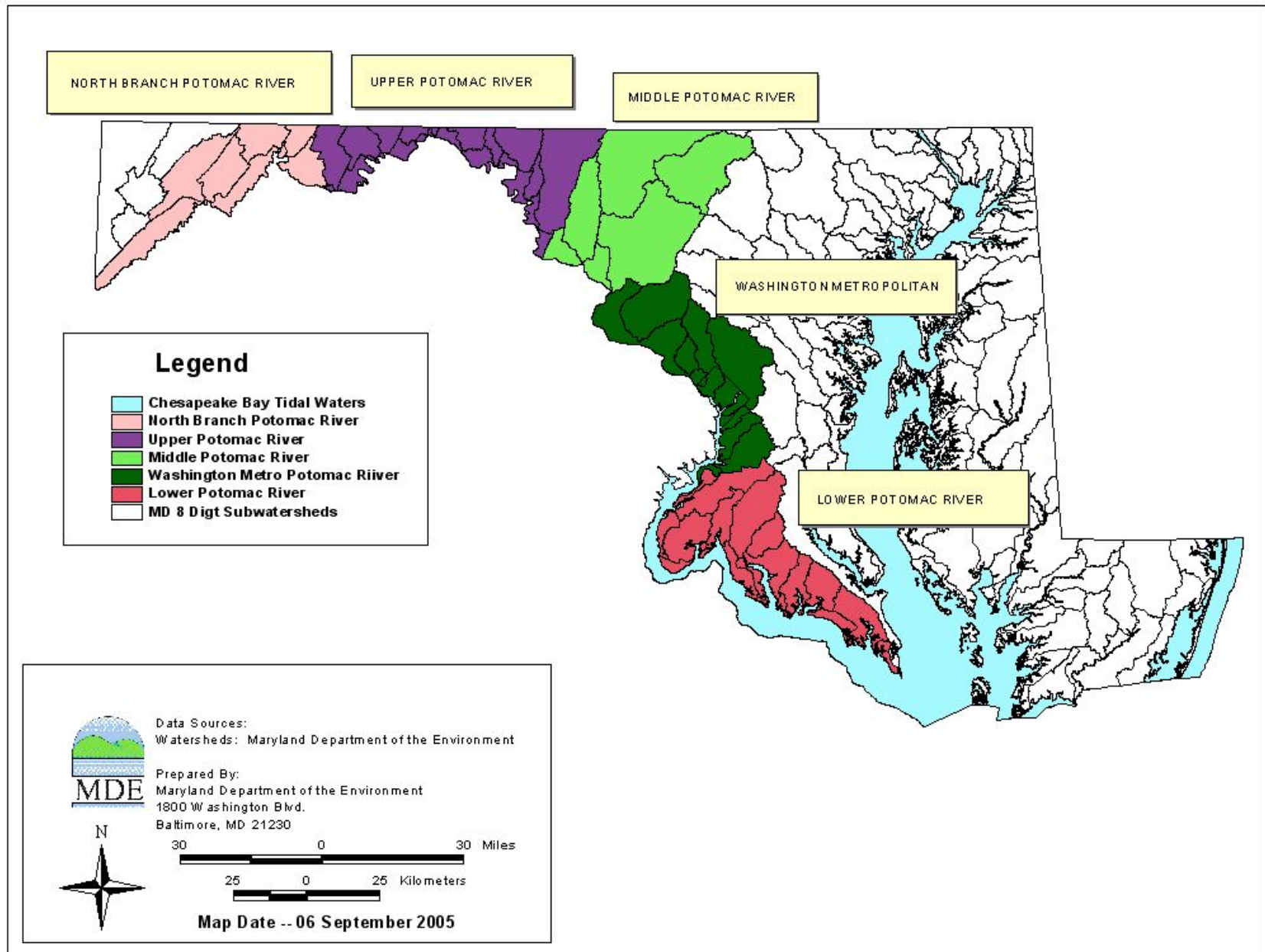
Thank you for your participation in this endeavor. Please mail your data and/or information (preferably final and in electronic format) by December 6, 2009 to the following address:

Melissa Chatham  
TMDL Technical Review Coordinator  
MDE - Science Services Administration  
1800 Washington Boulevard, Suite 540  
Baltimore, MD 21230-1718

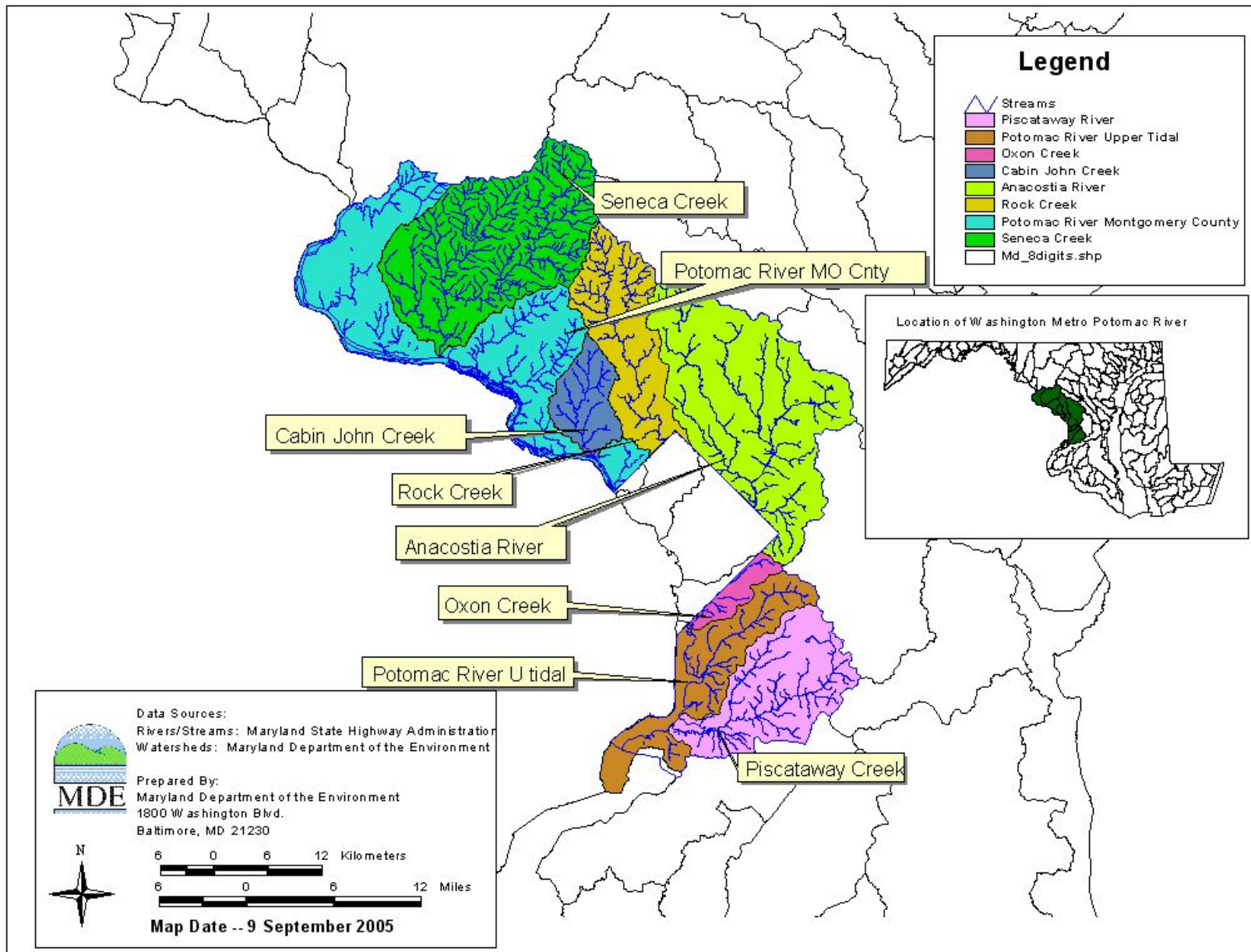
If you have questions regarding this matter, please contact Melissa Chatham (410-537-3937; [mchatham@mde.state.md.us](mailto:mchatham@mde.state.md.us)). You may also wish to visit MDE's Web site at <http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/index.asp>.

**Table 1. Summary of Impairments Covered by this Data Solicitation**

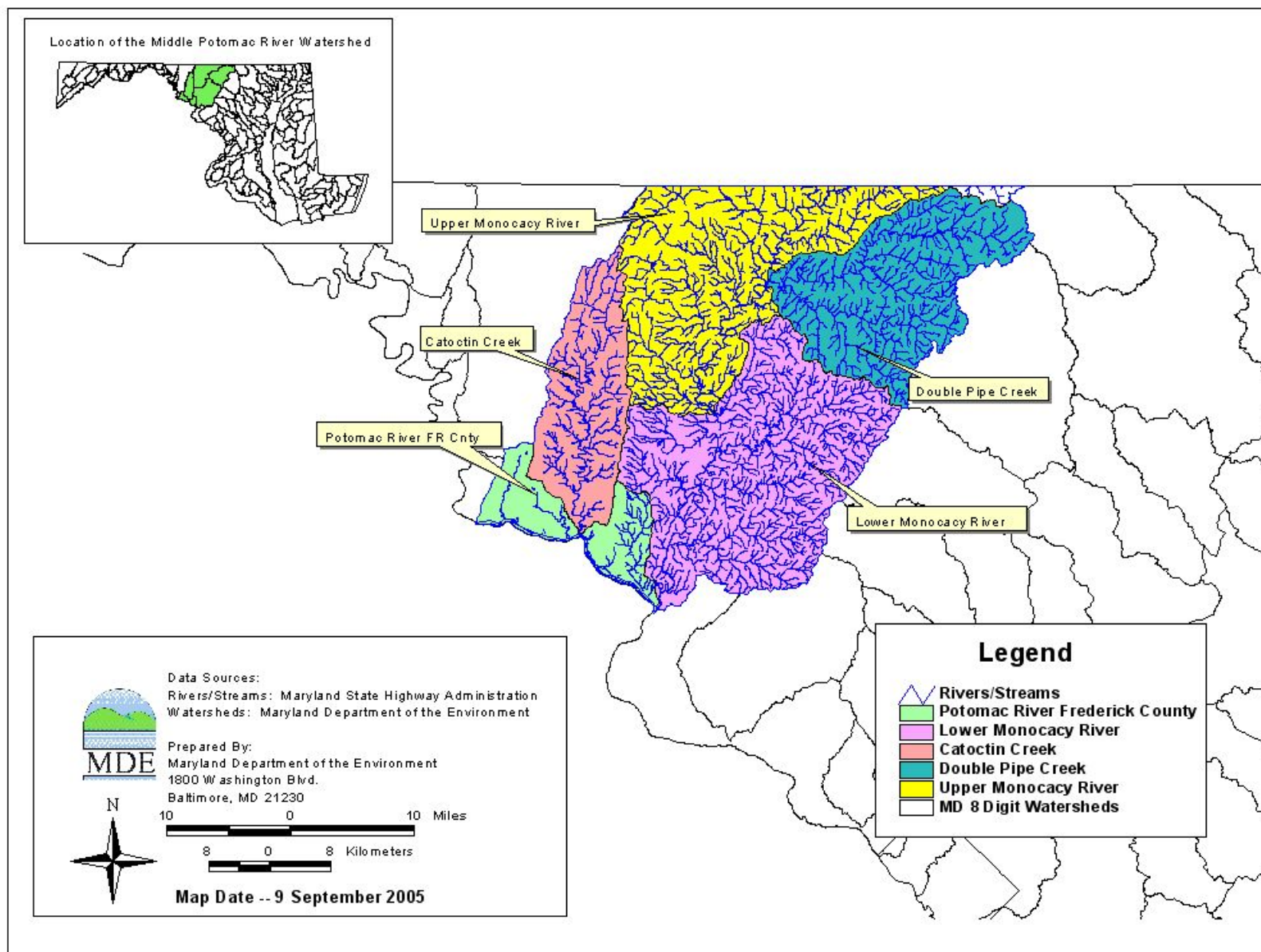
<b>Year Listed</b>	<b>Potomac River Basin</b>	<b>Watershed Name</b>	<b>8-digit Watershed Number</b>	<b>Impairment</b>
1996	Washington Metro	Potomac River (Monocacy River to Chain Bridge)	02140202	Nutrients
1996		Potomac River (Monocacy River to Chain Bridge)	02140202	Sediments
2002		Anacostia River (Non-tidal Northeast & Northwest Br.)	02140205	PCBs
2002		Anacostia River (Non-tidal)	02140205	Heptachlor Epoxide
2006		Anacostia River (Non-tidal)	02140205	Trash/Debris
2006		Anacostia River (Tidal Fresh)	02140205	Trash/Debris
1996		Rock Creek	02140206	Nutrients
1996		Rock Creek	02140206	Sediments
1996		Cabin John Creek	02140207	Sediments
1996		Seneca Creek	02140208	Sediments
1996		Middle	Lower Monocacy River	02140302
1996	Upper Monocacy River		02140303	Nutrients
1996	Double Pipe Creek		02140304	Nutrients
1996	Catoctin Creek		02140305	Nutrients
1996	Upper	Potomac River/Washington County	02140501	Nutrients
1996		Potomac River/Washington County	02140501	Sediments
1996		Antietam Creek	02140502	Nutrients
1996	Upper North Branch	Lower North Branch of Potomac River	02141001	Nutrients
1996		Lower North Branch of Potomac River	02141001	Sediments



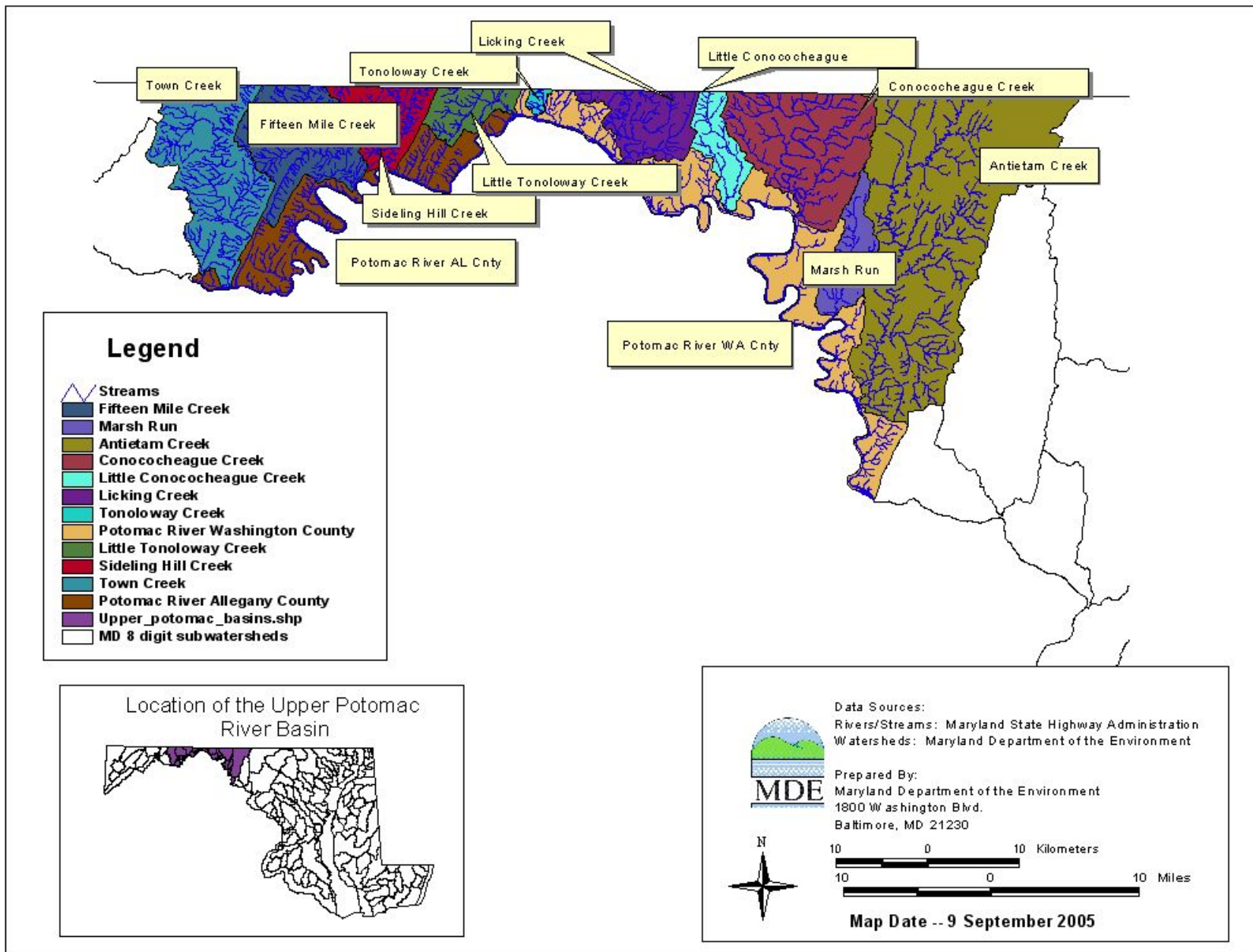
**Figure 1. Maryland Potomac River Basin**



**Figure 2. Maryland Washington Metro Potomac River Basin**

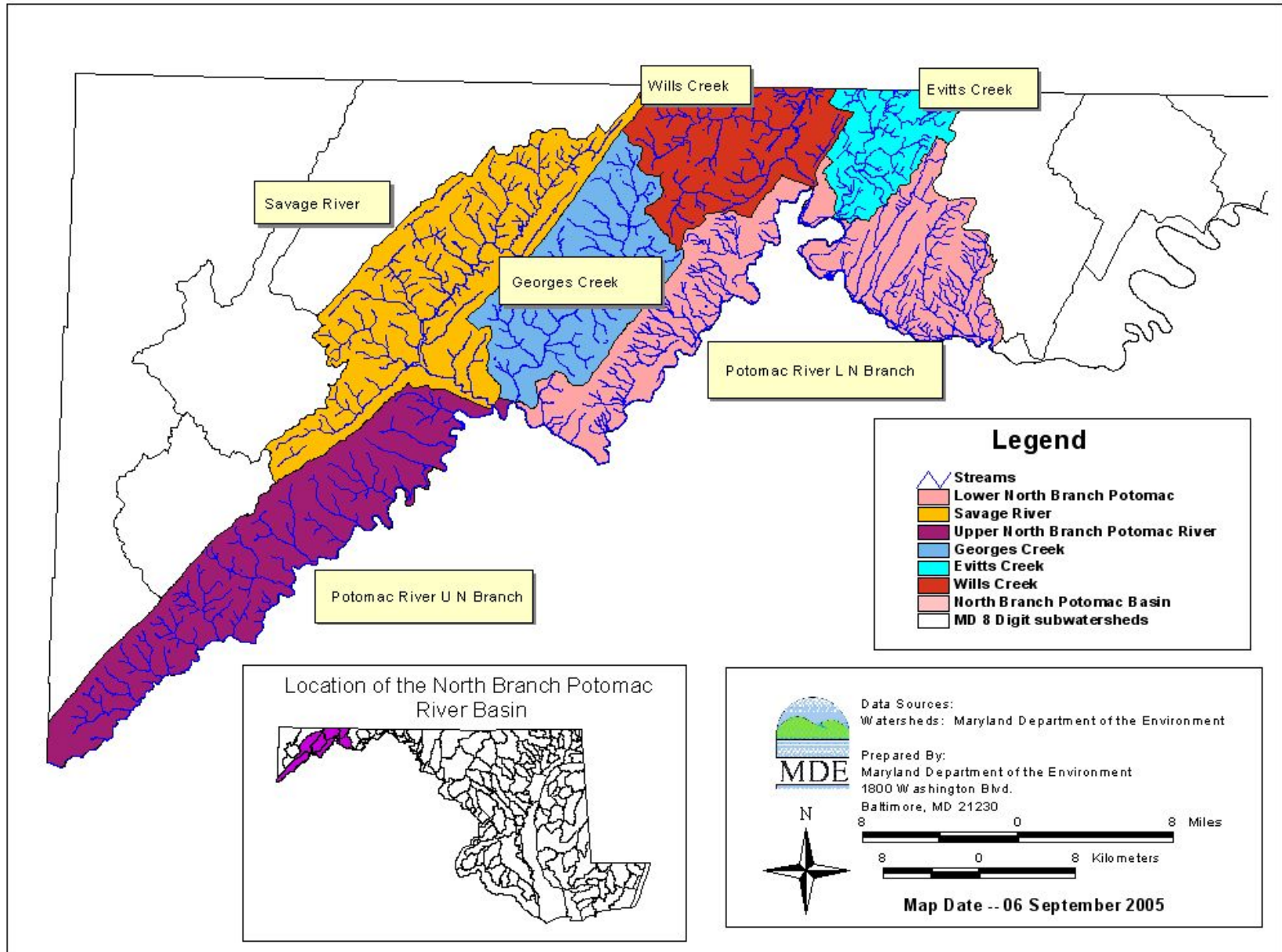


**Figure 3. Maryland Middle Potomac River Basin**



**Figure 4. Maryland Upper Potomac River Basin**





**Figure 5. Maryland Upper North Branch Potomac River Basin**

**Table 2. Key Parameters of Interest**

Impairment Type	Parameter
Nutrient/ Sediment	Total Persulfate Nitrogen Particulate Organic Nitrogen Dissolved Organic Nitrogen Ammonia Nitrate and Nitrite Total Phosphorus Dissolved Organic Phosphorus Orthophosphate Particulate Organic Phosphorus BOD, 5-day COD Dissolved Oxygen Total Alkalinity Chlorophyll <i>a</i> and other epiphyton Algal Community Data Sediment Load Total Suspended Solids/Sediment Suspended Sediment Concentration Turbidity Geomorphic Studies Secchi Disk pH Specific Conductance Temperature Stream Flow Salinity Conductivity Geometry (channel geometry, bathymetry) Meteorological Information Fish Community Data Benthic Community Data Physical Habitat Information
PCBs	Water quality PCB concentrations (water column, sediment, etc.) Fish tissue PCB concentrations Soil PCB concentrations Total Organic Carbon (particulate and dissolved) PCB atmospheric deposition information PCB containing equipment storage sites Information about PCB spills Any other relevant information about potential PCB sources Toxicity Test Information
Heptachlor epoxide	Water quality heptachlor epoxide concentrations (water column, sediment, etc.) Fish tissue heptachlor epoxide concentrations Soil heptachlor epoxide concentrations Any other relevant information about potential heptachlor epoxide sources Toxicity Test Information
Debris/Floatables/ Trash	Trash monitoring data Trash cleanup data Trash remediation project data



# ***Facts About...***

## **TMDLs**

---

### **What is a TMDL?**

A TMDL (Total Maximum Daily Load) is an estimate of the maximum amount of an impairing substance or stressor (pollutant) that a waterbody can assimilate without violating water quality standards. This total load includes pollutants that come from the end of a pipe (point sources), stormwater runoff and groundwater flow (nonpoint sources), and a "margin of safety" that provides a cushion needed because of uncertainties associated with estimates. A TMDL also may include an allowance for future increases in pollutant loads due to changes in land use, population growth, and the expansion of business activity.

### **What are the benefits of TMDLs?**

Maryland's cultural heritage is closely tied to its rivers, coastal waters and the Chesapeake Bay. The seafood industry, recreational activities and the quality of life for Maryland's citizens depend on the quality of our waters. Maryland's waters are currently managed through the use of "water-quality-based permits," which place limits on the discharge of wastewater to ensure receiving waters will remain "fishable and swimmable." As part of the Chesapeake Bay Agreement, Maryland also has defined upper limits on the amount of nitrogen and phosphorus that may go into the Bay. TMDLs formalize these procedures for setting upper limits on pollutants and will create a lasting framework to ensure clean waters for generations to come.

### **Why is Maryland developing TMDLs?**

All states are required by the federal Clean Water Act to consider the development of TMDLs. Every two years, states must submit a prioritized list of waterbodies that do not meet water quality standards or will not meet the standards after all technology-based pollution controls are in place. Technology-based controls, defined under the Code of Federal Regulations, 40 CFR 130.7(b)(1)(i-iii), are the basic pollution controls for point sources and nonpoint sources that are uniformly required by federal, state or local law.

### **What waterbodies are currently on the TMDL list?**

In accordance with Section 303(d) of the federal Clean Water Act, the State develops a list of impaired waterbodies, commonly referred to as the "303(d) List," which is part of its "Integrated Report (IR) of Surface Water Quality." The 303(d) List identifies the impaired waterbodies and the impairing substances (e.g., nutrients, sediments, fecal coliform bacteria) for which TMDLs should be developed. Across the State, there are approximately 134 watersheds that are impaired by one or more substances. Maryland's most recent IR was approved by the U.S. Environmental Protection Agency (EPA) on September 8, 2008.

### **What are the steps in developing a TMDL?**

The first step in the TMDL process is to identify waterbodies that are impaired and should have TMDLs. This involves assessing existing water quality information collected by a variety of monitoring techniques. If the existing water quality information demonstrates that water quality standards are being met, a Water Quality Analysis (WQA) may be conducted. The WQA is used to support moving the waterbody from the "impaired"

section to the “meets standards” section of the IR for the specified pollutant. If the data demonstrate that an impairment exists then TMDL development continues, using computer modeling. Computer modeling is used to estimate pollutant loadings to the waterbodies and water quality impacts of the pollutant loadings under varying conditions, such as low stream flows. The modeling is used to estimate the amount of pollutants waterbodies can assimilate without violating water quality standards. Once this maximum pollutant load (TMDL) is defined, it must be allocated between point and nonpoint sources, accounting for a margin of safety and future allocation. The allocation will balance equity and cost considerations, and may involve innovative approaches such as trading between different pollutant sources. The public, affected dischargers, regional agencies, and local governments will be involved in the TMDL development process.

### **How do TMDLs fit into Maryland's existing water quality efforts?**

Many of Maryland’s existing efforts to protect and restore water quality will help the State meet its TMDL goals. Some examples include Maryland’s Tributary Strategies for Nutrient Reduction, the Gunpowder Watershed Project, the Coastal Bays of the National Estuaries Program, the Baltimore Harbor Toxics Regional Action Plan, and a variety of pollution prevention efforts. The waters identified for TMDLs are also at the core of Maryland’s Clean Water Action Plan.

In many ways, Maryland’s ongoing effort to reduce nutrients entering the Chesapeake Bay has been very similar to a TMDL process. Stakeholders and researchers recognized water quality problems, set an achievable goal, and then identified specific controls for point and nonpoint pollution sources intended to achieve the goal. This is the essence of a TMDL.

### **How can TMDL goals be achieved?**

A TMDL improves water quality when the pollutant allocations are implemented, not when a TMDL is established. When the State or EPA identifies a water quality impairment on a Section 303(d) List and then establishes the TMDL, we begin a water quality-based process to ensure that the TMDL is not exceeded.

Section 303(d) does not establish any new implementation requirements beyond those mechanisms that exist elsewhere in State, local, Tribal, or Federal law. These mechanisms include state and local permitting and regulatory authority, and voluntary efforts under the Chesapeake Bay Agreement that are supported by technical and financial assistance. Maryland has one of the most comprehensive, multi-level, community-based estuary restoration programs in the country. We are committed to building on our existing efforts and believe that a combination of voluntary commitments and regulatory procedures is the best course to take in Maryland. Additionally, programs exist that provide technical and financial assistance to control and allocate pollutant loads. Examples include cost share programs for nutrient removal at municipal wastewater treatment plants, low-cost loans from the State’s revolving loan program, grants for stormwater retrofits, cost share grant funds for stream restoration, agricultural cost share programs, agricultural technical assistance programs, and acid mine drainage remediation assistance.

For more information on Maryland’s TMDL Program, contact the Maryland Department of the Environment, Science Services Administration at (410) 537-3902, or access MDE’s web page at [www.mde.state.md.us/tmdl](http://www.mde.state.md.us/tmdl).

Last updated: October 29, 2008