Appendix B-2

Maps of Maryland Chesapeake Bay Watershed

Major Allocation Basins
Bay Water Quality Segment-Sheds
Counties & Segment-Sheds
8-Digit Watersheds & Segment-Sheds

Table of Maryland Bay Water Quality Segment-Shed Labels and Names

ANATF_DC	Anacostia River Tidal Fresh DC	
ANATF_MD	Anacostia River Tidal Fresh Maryland	
ВАСОН	Back River Oligohaline	
BIGMH	Big Annemessex River Mesohaline	
ВОНОН	Bohemia River Oligohaline	
BSHOH	Bush River Oligohaline	
C&DOH_DE	C&D Canal Oligohaline Delaware	
C&DOH_MD	C&D Canal Oligohaline Maryland	
CB1TF	Northern Chesapeake Bay Tidal Fresh	
CB2OH	Northern Chesapeake Bay Oligohaline	
СВЗМН	Upper Chesapeake Bay Mesohaline	
CB4MH	Middle Chesapeake Bay Mesohaline	
CB5MH_MD	Lower Chesapeake Bay Mesohaline Maryland	
CHOMH1	Choptank River Mesohaline mouth 1	
CHOMH2	Choptank River Mesohaline 2	
СНООН	Choptank River Oligohaline	
CHOTF	Upper Choptank River Tidal Fresh	
CHSMH	Lower Chester River Mesohaline	
CHSOH	Middle Chester River Oligohaline	
CHSTF	Upper Chester River Tidal Fresh	
EASMH	Eastern Bay Mesohaline	
ELKOH	Elk River Oligohaline	
FSBMH	Fishing Bay Mesohaline	
GUNOH	Gunpowder River Oligohaline	
HNGMH	Honga River Mesohaline	
LCHMH	Little Choptank River Mesohaline	
MAGMH	Magothy River Mesohaline	
MANMH	Manokin River Mesohaline	
MATTF	Mattawoman Creek Tidal Fresh	
MIDOH	Middle River Oligohaline	
NANMH	Lower Nanticoke River Mesohaline	
NANOH	Upper Nanticoke River Oligohaline	
NANTF_MD	Upper Nanticoke River Tidal Fresh Maryland	
NANTF_DE	Upper Nanticoke River Tidal Fresh Delaware	

NORTF	North East River Tidal Fresh
PATMH	Patapsco River Mesohaline
PAXMH	Lower Patuxent River Mesohaline
PAXOH	Middle Patuxent River Oligohaline
PAXTF	Upper Patuxent River Tidal Fresh
PISTF	Piscataway Creek tidal Fresh
POCMH_MD	Lower Pocomoke River Mesohaline Maryland
POCOH_MD	Middle Pocomoke River Oligohaline Maryland
POCOH_VA	Middle Pocomoke River Oligohaline Virginia
POCTF	Upper Pocomoke River Tidal Fresh
POTMH_MD	Lower Potomac River Mesohaline Maryland
POTOH1_MD	Lower Potomac River Oligohaline Maryland
POTOH2_MD	Port Tobacco River Oligohaline Maryland
POTOH3_MD	Nanjemoy Creek Oligohaline Maryland
POTTF_DC	Upper Potomac River Tidal Fresh DC
POTTF_MD	Upper Potomac River Tidal Fresh Maryland
RHDMH	Rhode River Mesohaline
SASOH	Sassafras River Oligohaline
SEVMH	Severn River Mesohaline
SOUMH	South River Mesohaline
TANMH_MD	Tangier Sound Mesohaline Maryland
WBRTF	Western Branch Patuxent River Tidal Fresh
WICMH	Wicomico River Mesohaline
WSTMH	West River Mesohaline

Note: The segment-sheds are identified by the same label and name as the water quality segments to which they drain. While there are 53 Bay water quality segments in Maryland, there are 58 segment-sheds. This is explained by the fact that 5 segment-sheds within Maryland drain to waters of other jurisdictions (Virginia, Delaware, and DC). The tags MH, OH, and TF (Mesohaline, Oligohaline, and Tidal Fresh) refer to the various salinity levels of the water, one of the bases for the spatial segmentation of the Bay and its tidal tributaries into water quality units.

DESCRIPTION OF THE MARYLAND CHESAPEAKE BAY WATERSHED MAPS

Major Basins

This map depicts the five major basins in Maryland that were assigned nutrient and sediment load allocations by EPA, as part of their distribution of overall Bay-wide target loads determined by the Bay Model to be the maximum allowable annual loadings of nitrogen, phosphorus and sediment that would still meet water quality standards designed and adopted by Maryland, Virginia, Delaware, and the District of Columbia (DC) to protect the living resources of the Chesapeake Bay and its tidal tributaries.

It is important to note that only portions of certain basins lie within Maryland, as those basins extend beyond the State's boundaries to other jurisdictions. For instance, the Potomac basin also includes parts of Pennsylvania, Virginia, West Virginia, and DC. Those jurisdictions also received allocations for their share of the Potomac basin. The Major Basins Map, however, does not depict this, as the intent is to show the delineation of the basin areas within Maryland that received allocations. The map also provides a sense of the very large scale at which the allocations were assigned, and the scope of the task the State undertook to sub-divide those loads and distribute them to 58 Bay segment-sheds, the land areas draining to individual Bay water quality segments, for the Phase I WIP, and to the County and County-Segment-shed scale for the Phase II WIP.

County-Major Basins

This map provides an overlay of the Maryland County and Baltimore City boundaries on the Major Basin delineations and shows that while a number of counties lie within a single basin, others include portions of two or more basins within their geographical areas. This means that those counties have pollution reduction contributions to make to each basin, along with the other counties that also share portions of the same basins. This is analogous to an underlying concept of the Bay watershed partnership, wherein several states and DC all have pollution reductions to contribute toward meeting the allocations in the major basins that they share geographically.

TMDL Segment-Sheds

The TMDL Segment-Sheds Map shows the delineation of land areas that drain to specific Bay Water Quality segments; this is the scale for which the Bay TMDLs were developed, in order to set the maximum allowable loads of nutrients and sediment for each segment-shed that when met will achieve water quality standards in each tidal Bay segment and cumulatively meet standards throughout the entire Chesapeake Bay. A list of the Bay Water Quality segments and segment-shed names and abbreviated labels is provided at the beginning of this Appendix.

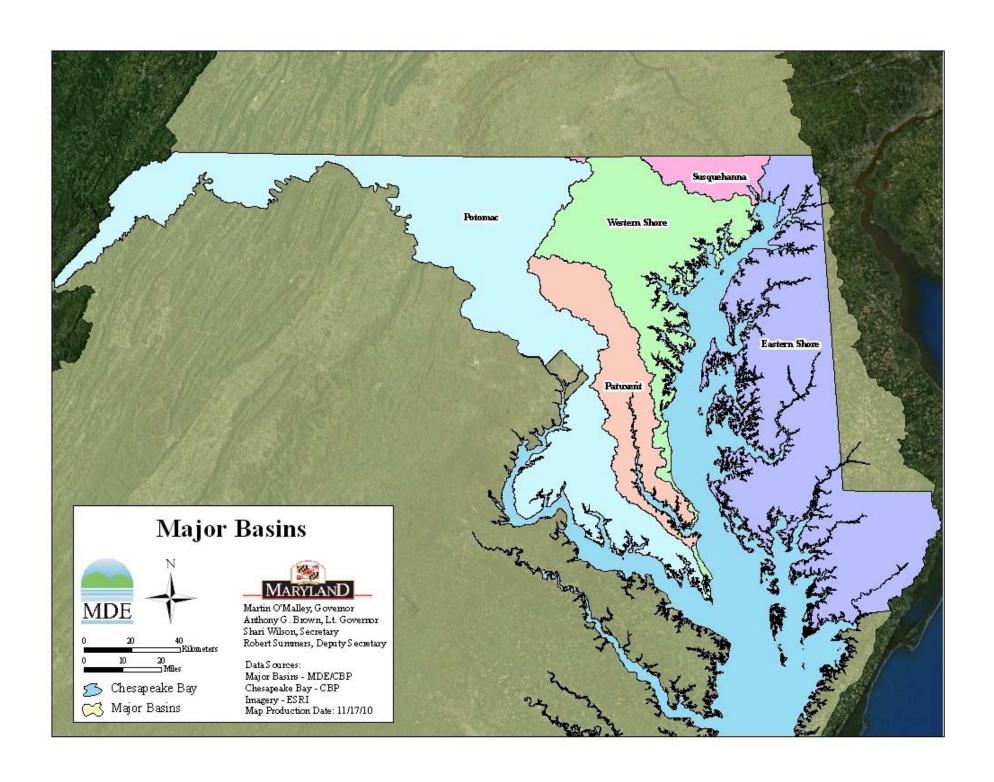
County-TMDL Segment-Sheds

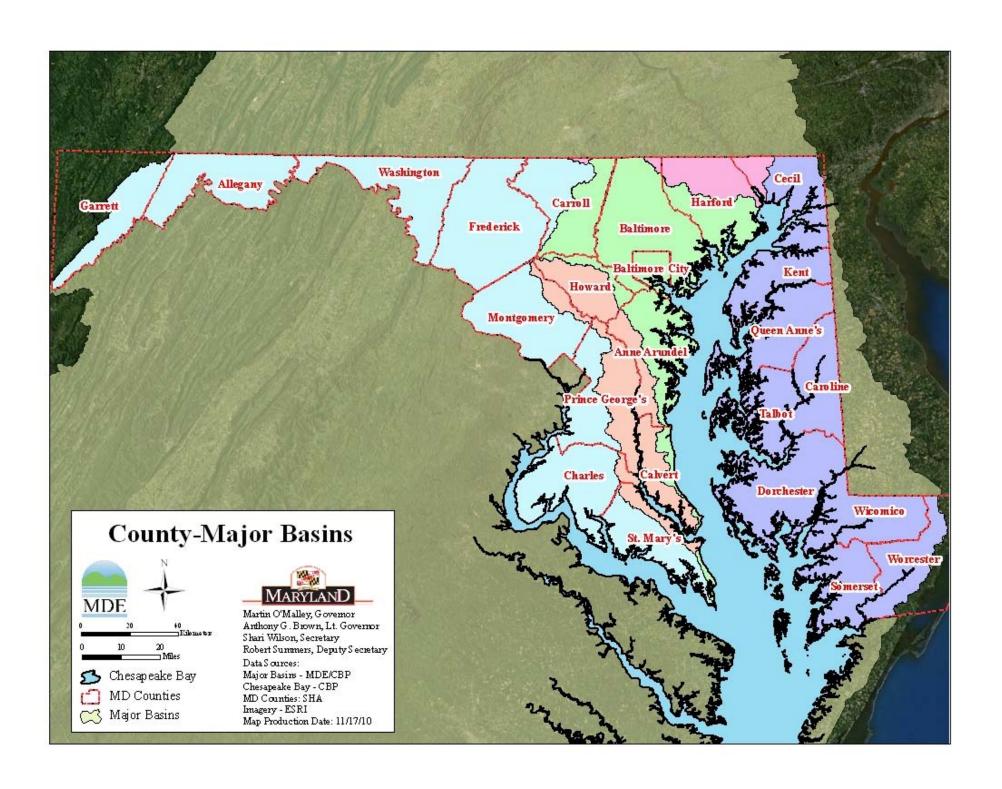
This map provides an overlay of the Maryland County and Baltimore City jurisdictional boundaries on the delineated TMDL segment-sheds, showing that many counties share portions of multiple segment-sheds and thus have pollutant reduction contributions to make toward the overall TMDL goals established for those segment-sheds.

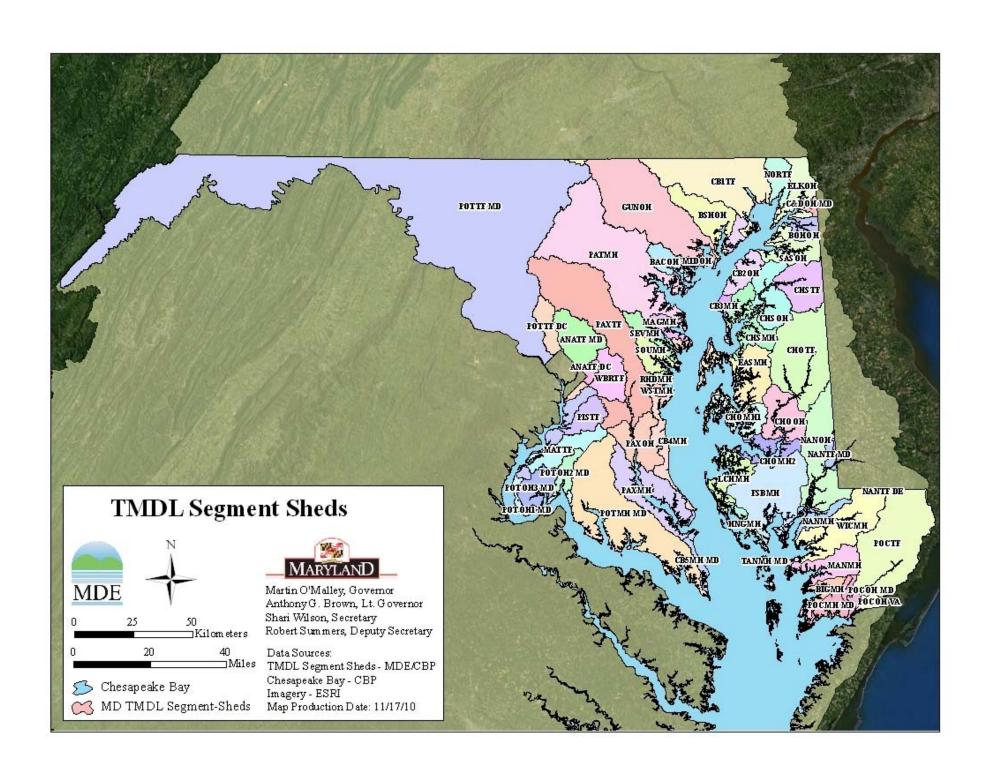
The next seven maps provide a series of enlargements of the County-TMDL Segment-Sheds across different sections of the State. Note that much of Maryland's non-tidal watersheds are included here, and in the Bay TMDL, because they drain to Tidal Fresh Segments of Bay tributaries. This is most obvious in the case of the Potomac Tidal Fresh segment, where numerous non-tidal waterbodies discharge to the non-tidal Potomac River, which then flows into the Tidal Fresh segment of the river as it makes its way downstream to the Bay, passing through the Potomac Oligohaline and Potomac Mesohaline segments delineated by the degree of salinity in those waters.

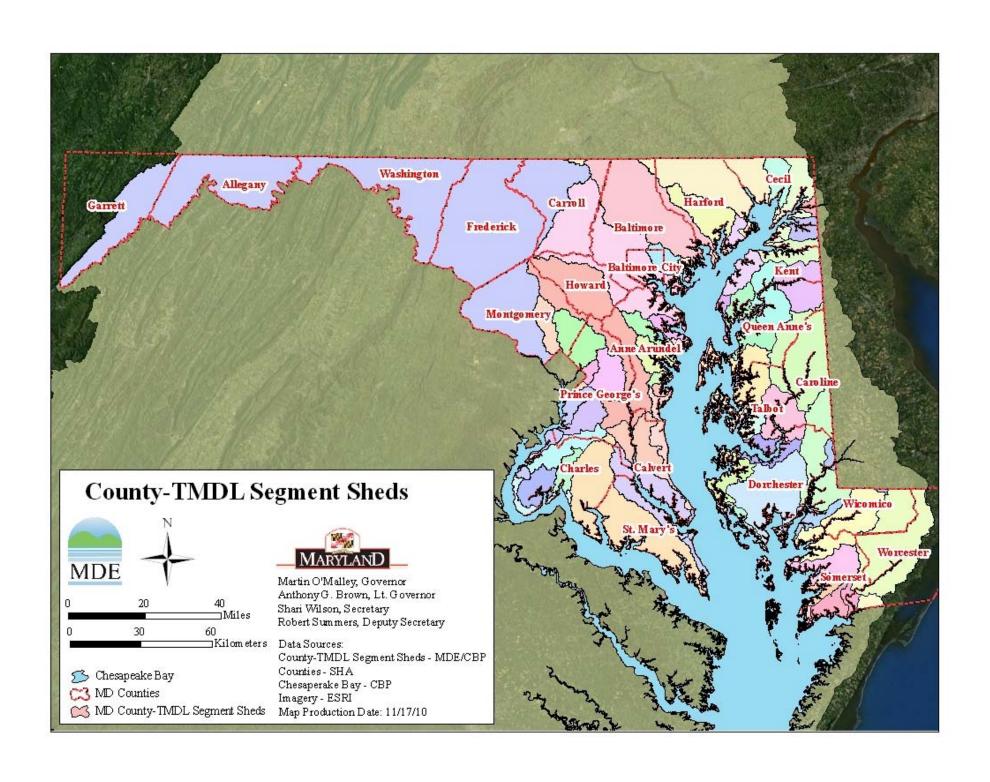
Maryland 8-Digit Watersheds and TMDL Segment-Sheds

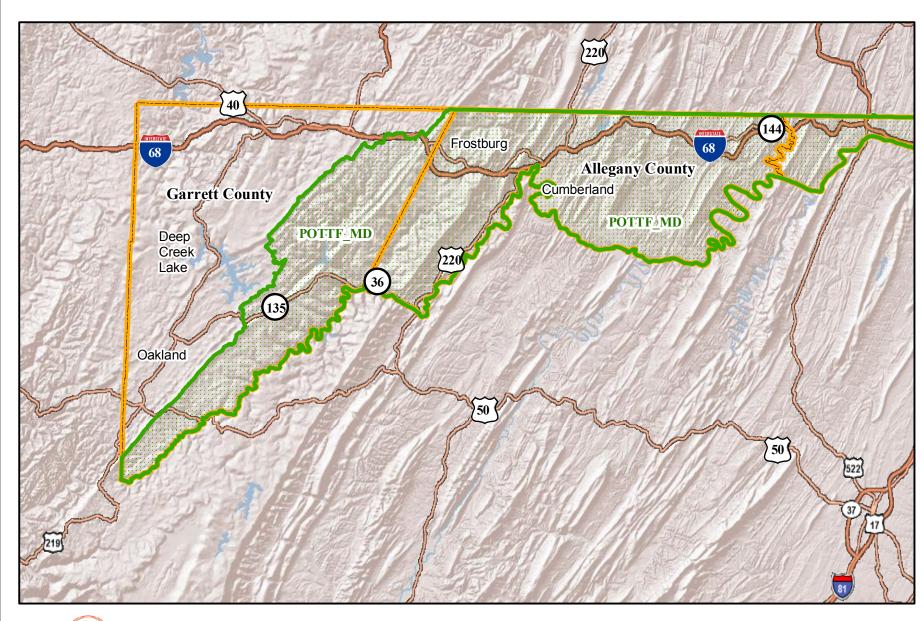
Following a table that correlates all of Maryland's 8-digit watersheds with the Bay segment-sheds within which they lie, the final map provides a graphic depiction of this alignment. For the most part, the 8-digit watersheds (usually several of them) fall entirely within one Bay segment-shed. In some cases there are 8-digit watersheds that are split among two or three Bay segment-sheds. These are indicated by the highlighted rows in the table that precedes the map.













Segment Sheds in Garrett and Allegany Counties

Map Legend

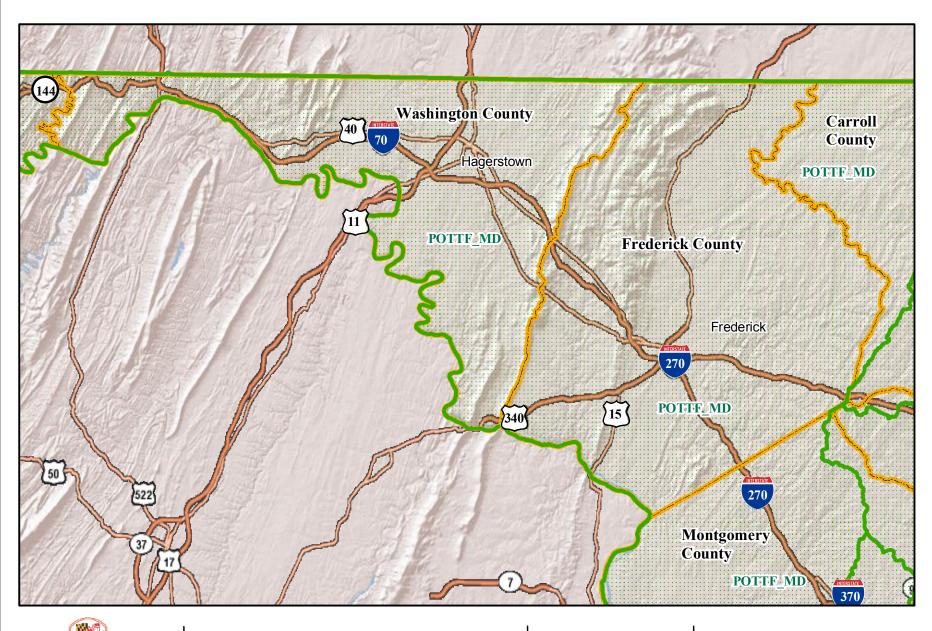
County/State Boundaries

Segment Sheds

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Segment Sheds in Washington and Frederick Counties

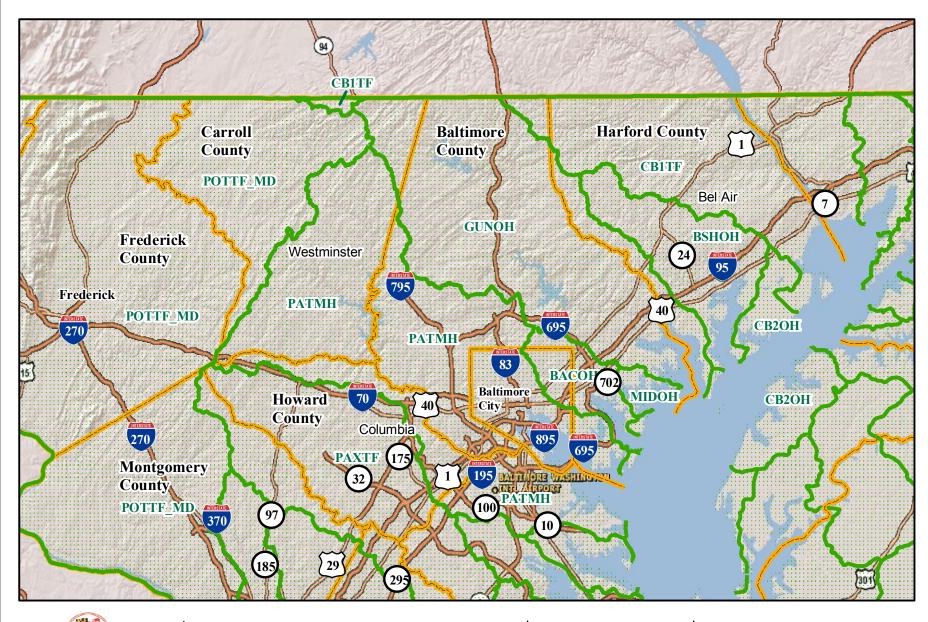
Map Legend County/State Boundaries

Segment Sheds

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Segment Sheds in Carroll, Baltimore, Howard, Harford Counties and Baltimore City

Map Legend

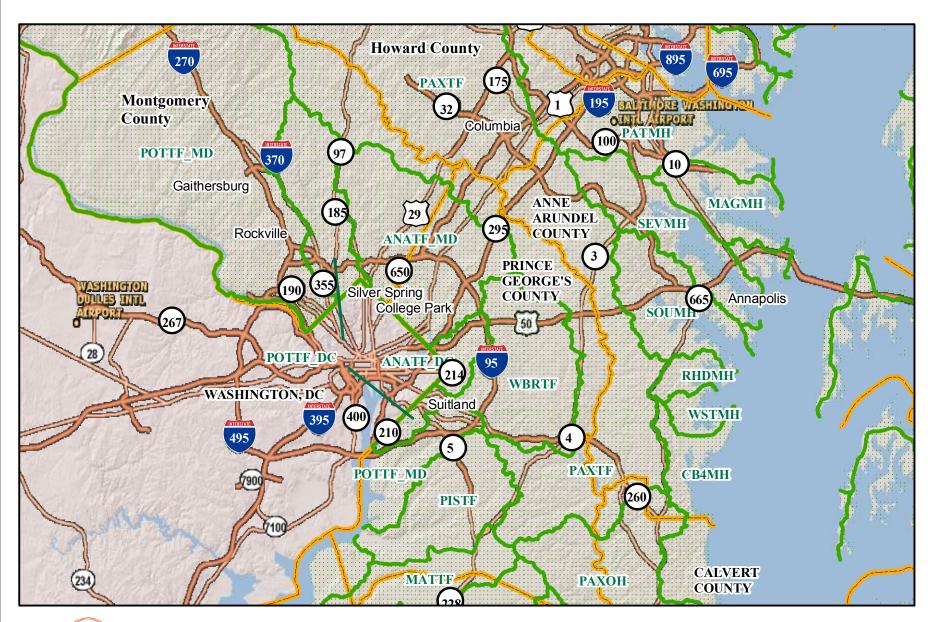
County/State Boundaries

Segment Sheds

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Segment Sheds in Montgomery, Prince George's and Anne Arundel Counties Map Legend

County/State Boundaries

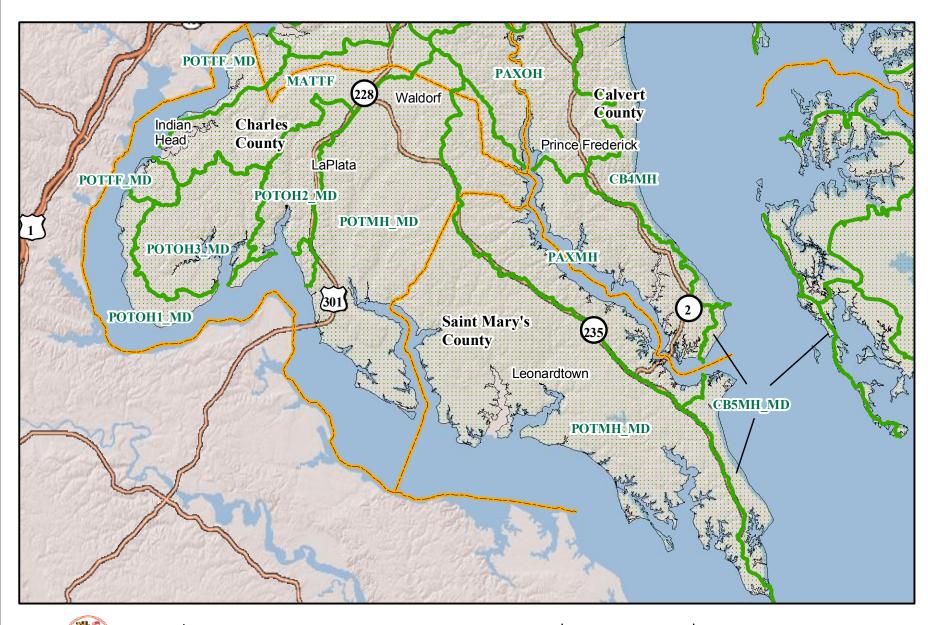
Segment Sheds

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Date Map Prepared: November 2010



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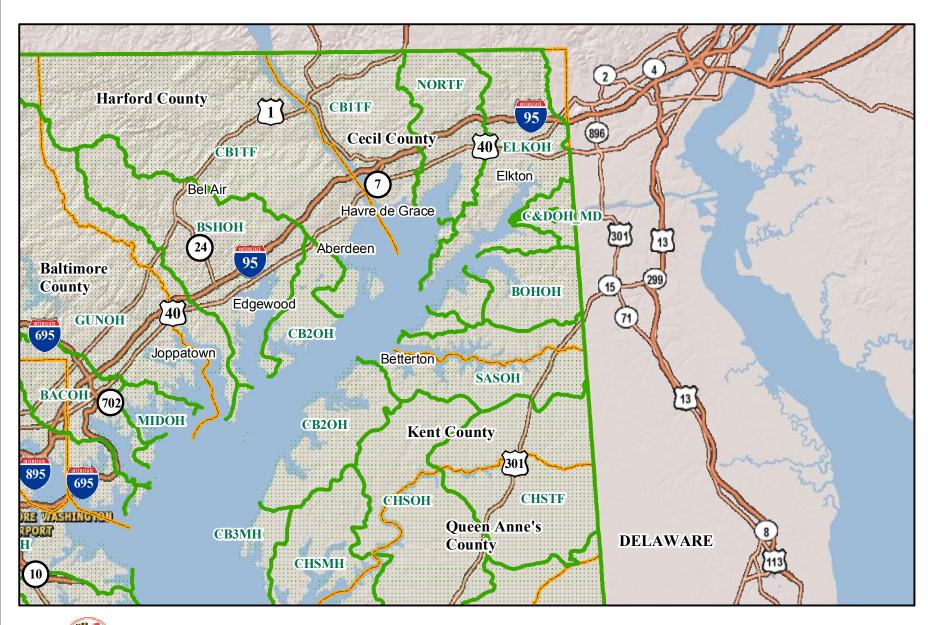


Segment Sheds in Calvert, **Charles and Saint Mary's Counties**



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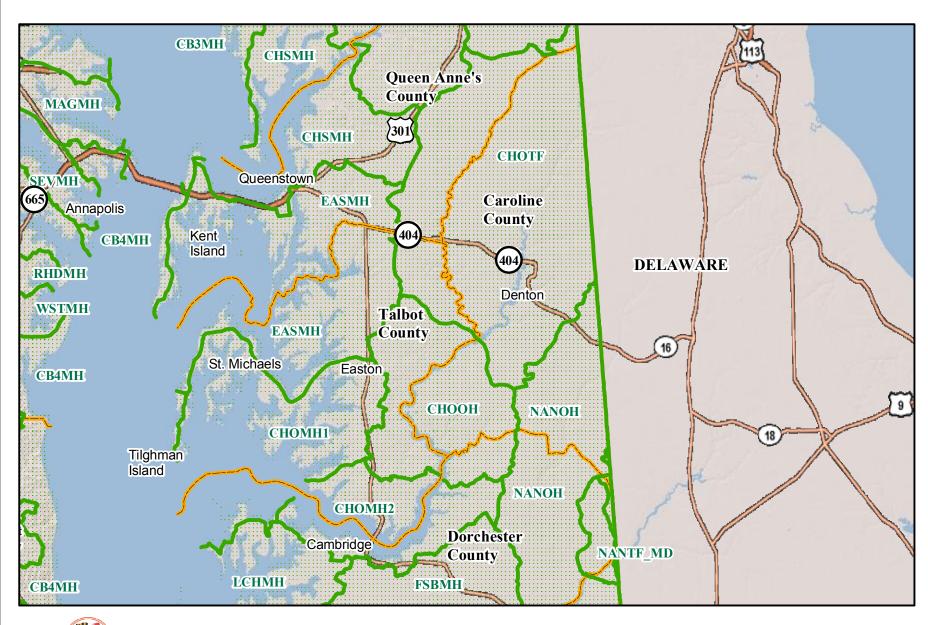
Segment Sheds in Harford, **Cecil and Kent Counties**

Map Legend County/State Boundaries

Segment Sheds

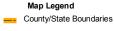
Maryland Department of the Environment Science Services Administration Montgomery Park Business Center 1800 Washington Boulevard, Suite 540 Baltimore, Maryland 21230-1718







Segment Sheds in Caroline, Talbot, Queen Anne's and **Dorchester Counties**

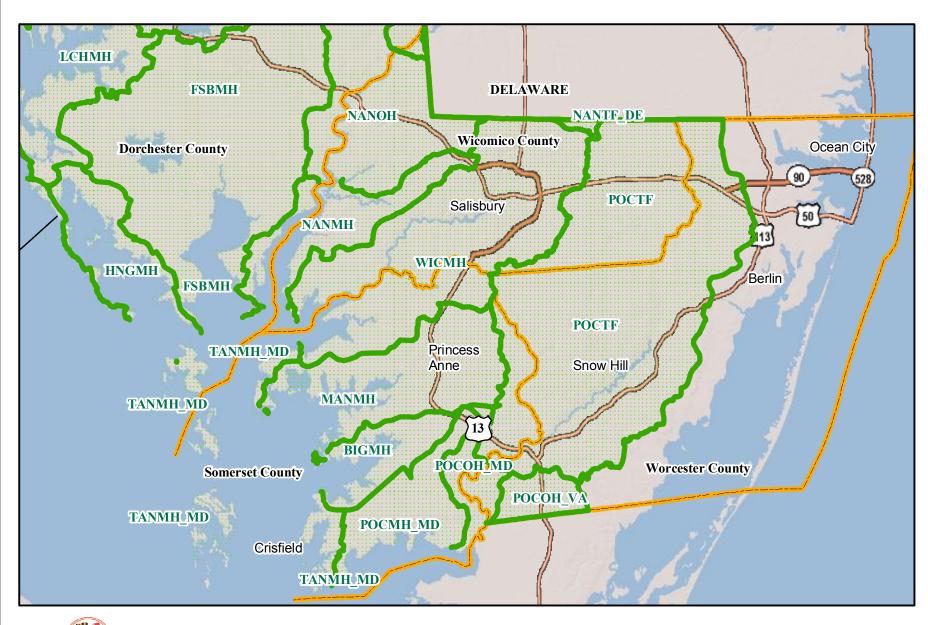


Segment Sheds

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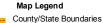








Segment Sheds in Dorchester, Somerset, Wicomico and **Worcester Counties**



Segment Sheds

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Table of Maryland 8-Digit Watersheds Aligned with Chesapeake Bay Water Quality Segment-Sheds

MD 8-DIGIT			
WATERSHED CODE	8-DIGIT WATERSHED NAME	BAY SEGMENT-SHED	BAY SEGMENT-SHED NAME
02050301	Conewago Creek	CB1TF	Northern Chesapeake Bay Tidal Fresh
02120201	Lower Susquehanna River	CB1TF	Northern Chesapeake Bay Tidal Fresh
02120202	Deer Creek	CB1TF	Northern Chesapeake Bay Tidal Fresh
02120203	Octoraro Creek	CB1TF	Northern Chesapeake Bay Tidal Fresh
02120204	Conowingo Dam Susquehanna River	CB1TF	Northern Chesapeake Bay Tidal Fresh
02120205	Broad Creek	CB1TF	Northern Chesapeake Bay Tidal Fresh
02130201	Pocomoke Sound	POCMH_MD	Lower Pocomoke River Mesohaline Maryland
02130202	Lower Pocomoke River	POCTF	Upper Pocomoke River Tidal Fresh
02130203	Upper Pocomoke River	POCTF	Upper Pocomoke River Tidal Fresh
02130204	Dividing Creek	POCTF	Upper Pocomoke River Tidal Fresh
02130205	Nassawango Creek	POCTF	Upper Pocomoke River Tidal Fresh
02130206	Tangier Sound	MANMH	Manokin River Mesohaline
02130206	Tangier Sound	TANMH_MD	Tangier Sound Mesohaline Maryland
02130207	Big Annemessex River	BIGMH	Big Annemessex River Mesohaline
02130208	Manokin River	MANMH	Manokin River Mesohaline
02130301	Lower Wicomico River	WICMH	Wicomico River Mesohaline
02130302	Monie Bay	WICMH	Wicomico River Mesohaline
02130303	Wicomico Creek	WICMH	Wicomico River Mesohaline
02130304	Wicomico River Headwaters	NANTF_DE	Upper Nanticoke River Tidal Fresh Delaware
02130304	Wicomico River Headwaters	WICMH	Wicomico River Mesohaline
02130305	Nanticoke River	NANMH	Lower Nanticoke River Mesohaline
02130305	Nanticoke River	NANOH	Upper Nanticoke River Oligohaline
02130305	Nanticoke River	NANTF_DE	Upper Nanticoke River Tidal Fresh Delaware
02130305	Nanticoke River	NANTF_MD	Upper Nanticoke River Tidal Fresh Maryland
02130306	Marshyhope Creek	NANOH	Upper Nanticoke River Oligohaline
02130306	Marshyhope Creek	NANTF_DE	Upper Nanticoke River Tidal Fresh Delaware
02130307	Fishing Bay	FSBMH	Fishing Bay Mesohaline
02130308	Transquaking River	FSBMH	Fishing Bay Mesohaline
02130401	Honga River	HNGMH	Honga River Mesohaline
02130402	Little Choptank	CB4MH	Middle Chesapeake Bay Mesohaline
02130402	Little Choptank	LCHMH	Little Choptank River Mesohaline
02130403	Lower Choptank	CHOMH1	Choptank River Mesohaline mouth 1
02130403	Lower Choptank	CHOMH2	Choptank River Mesohaline 2
02130403	Lower Choptank	СНООН	Choptank River Oligohaline
02130404	Upper Choptank	СНООН	Choptank River Oligohaline
02130404	Upper Choptank	CHOTF	Upper Choptank River Tidal Fresh
02130405	Tuckahoe Creek	CHOTF	Upper Choptank River Tidal Fresh

MD 8-DIGIT			
WATERSHED CODE	8-DIGIT WATERSHED NAME	BAY SEGMENT-SHED	BAY SEGMENT-SHED NAME
02130501	Eastern Bay	EASMH	Eastern Bay Mesohaline
02130502	Miles River	EASMH	Eastern Bay Mesohaline
02130503	Wye River	EASMH	Eastern Bay Mesohaline
02130504	Kent Narrows	EASMH	Eastern Bay Mesohaline
02130505	Lower Chester River	СВЗМН	Upper Chesapeake Bay Mesohaline
02130505	Lower Chester River	CHSMH	Lower Chester River Mesohaline
02130505	Lower Chester River	CHSOH	Middle Chester River Oligohaline
02130506	Langford Creek	CHSMH	Lower Chester River Mesohaline
02130507	Corsica River	CHSMH	Lower Chester River Mesohaline
02130508	Southeast Creek	CHSOH	Middle Chester River Oligohaline
02130509	Middle Chester River	CHSOH	Middle Chester River Oligohaline
02130510	Upper Chester River	CHSOH	Middle Chester River Oligohaline
02130510	Upper Chester River	CHSTF	Upper Chester River Tidal Fresh
02130511	Kent Island Bay	СВЗМН	Upper Chesapeake Bay Mesohaline
02130601	Lower Elk River	ELKOH	Elk River Oligohaline
02130602	Bohemia River	вонон	Bohemia River Oligohaline
02130603	Upper Elk River	ELKOH	Elk River Oligohaline
02130604	Back Creek	C&DOH_MD	C&D Canal Oligohaline Maryland
02130605	Little Elk Creek	ELKOH	Elk River Oligohaline
02130606	Big Elk Creek	ELKOH	Elk River Oligohaline
02130608	Northeast River	NORTF	North East River Tidal Fresh
02130609	Furnace Bay	CB1TF	Northern Chesapeake Bay Tidal Fresh
02130610	Sassafras River	SASOH	Sassafras River Oligohaline
02130611	Stillpond-Fairlee	CB2OH	Northern Chesapeake Bay Oligohaline
02130701	Bush River	BSHOH	Bush River Oligohaline
02130702	Lower Winters Run	BSHOH	Bush River Oligohaline
02130703	Atkisson Reservoir	BSHOH	Bush River Oligohaline
02130704	Bynum Run	BSHOH	Bush River Oligohaline
02130705	Aberdeen Proving Ground	CB1TF	Northern Chesapeake Bay Tidal Fresh
02130705	Aberdeen Proving Ground	CB2OH	Northern Chesapeake Bay Oligohaline
02130706	Swan Creek	CB1TF	Northern Chesapeake Bay Tidal Fresh
02130801	Gunpowder River	GUNOH	Gunpowder River Oligohaline
02130802	Lower Gunpowder Falls	GUNOH	Gunpowder River Oligohaline
02130803	Bird River	GUNOH	Gunpowder River Oligohaline
02130804	Little Gunpowder Falls	GUNOH	Gunpowder River Oligohaline
02130805	Loch Raven Reservoir	GUNOH	Gunpowder River Oligohaline
02130806	Prettyboy Reservoir	GUNOH	Gunpowder River Oligohaline
02130807	Middle River - Browns Creek	MIDOH	Middle River Oligohaline

MD 8-DIGIT			
WATERSHED CODE	8-DIGIT WATERSHED NAME	BAY SEGMENT-SHED	BAY SEGMENT-SHED NAME
02130901	Back River	ВАСОН	Back River Oligohaline
02130902	Bodkin Creek	PATMH	Patapsco River Mesohaline
02130903	Baltimore Harbor	PATMH	Patapsco River Mesohaline
02130904	Jones Falls	PATMH	Patapsco River Mesohaline
02130905	Gwynns Falls	PATMH	Patapsco River Mesohaline
02130906	Patapsco River Lower North Branch	PATMH	Patapsco River Mesohaline
02130907	Liberty Reservoir	PATMH	Patapsco River Mesohaline
02130908	South Branch Patapsco	PATMH	Patapsco River Mesohaline
02131001	Magothy River	MAGMH	Magothy River Mesohaline
02131002	Severn River	SEVMH	Severn River Mesohaline
02131003	South River	SOUMH	South River Mesohaline
02131004	West River	RHDMH	Rhode River Mesohaline
02131004	West River	WSTMH	West River Mesohaline
02131005	West Chesapeake Bay	CB4MH	Middle Chesapeake Bay Mesohaline
02131101	Patuxent River lower	CB5MH_MD	Lower Chesapeake Bay Mesohaline Maryland
02131101	Patuxent River lower	PAXMH	Lower Patuxent River Mesohaline
02131101	Patuxent River lower	PAXOH	Middle Patuxent River Oligohaline
02131102	Patuxent River middle	PAXTF	Upper Patuxent River Tidal Fresh
02131103	Western Branch	PAXTF	Upper Patuxent River Tidal Fresh
02131103	Western Branch	WBRTF	Western Branch Patuxent River Tidal Fresh
02131104	Patuxent River upper	PAXTF	Upper Patuxent River Tidal Fresh
02131105	Little Patuxent River	PAXTF	Upper Patuxent River Tidal Fresh
02131106	Middle Patuxent River	PAXTF	Upper Patuxent River Tidal Fresh
02131107	Rocky Gorge Dam	PAXTF	Upper Patuxent River Tidal Fresh
02131108	Brighton Dam	PAXTF	Upper Patuxent River Tidal Fresh
02139998	Lower Chesapeake Bay	TANMH_MD	Tangier Sound Mesohaline Maryland
02140101	Potomac River Lower tidal	POTMH_MD	Lower Potomac River Mesohaline Maryland
02140101	Potomac River Lower tidal	POTOH1_MD	Lower Potomac River Oligohaline Maryland
02140102	Potomac River Middle tidal	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140103	St. Mary's River	POTMH_MD	Lower Potomac River Mesohaline Maryland
02140104	Breton Bay	POTMH_MD	Lower Potomac River Mesohaline Maryland
02140105	St. Clements Bay	POTMH_MD	Lower Potomac River Mesohaline Maryland
02140106	Wicomico River	POTMH_MD	Lower Potomac River Mesohaline Maryland
02140107	Gilbert Swamp	POTMH_MD	Lower Potomac River Mesohaline Maryland
02140108	Zekiah Swamp	POTMH_MD	Lower Potomac River Mesohaline Maryland
02140109	Port Tobacco River	POTOH2_MD	Port Tobacco River Oligonaline Maryland
02140110	Nanjemoy Creek	POTOH3_MD	Nanjemoy Creek Oligohaline Maryland
02140111	Mattawoman Creek	MATTF	Mattawoman Creek Tidal Fresh

MD 8-DIGIT WATERSHED CODE	8-DIGIT WATERSHED NAME	BAY SEGMENT-SHED	BAY SEGMENT-SHED NAME
02140201	Potomac River Upper tidal	POTTF MD	Upper Potomac River Tidal Fresh Maryland
02140202	Potomac River Montgomery County	POTTF MD	Upper Potomac River Tidal Fresh Maryland
02140203	Piscataway Creek	PISTF	Piscataway Creek tidal Fresh
02140204	Oxon Creek	POTTF_DC	Upper Potomac River Tidal Fresh DC
02140205	Anacostia River	ANATF_DC	Anacostia River Tidal Fresh DC
02140205	Anacostia River	ANATF_MD	Anacostia River Tidal Fresh Maryland
02140206	Rock Creek	POTTF_DC	Upper Potomac River Tidal Fresh DC
02140207	Cabin John Creek	POTTF MD	Upper Potomac River Tidal Fresh Maryland
02140208	Seneca Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140301	Potomac River Frederick County	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140302	Lower Monocacy River	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140303	Upper Monocacy River	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140304	Double Pipe Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140305	Catoctin Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140501	Potomac River Washington County	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140502	Antietam Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140503	Marsh Run	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140504	Conococheague Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140505	Little Conococheague	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140506	Licking Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140507	Tonoloway Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140508	Potomac River Allegany County	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140509	Little Tonoloway Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140510	Sideling Hill Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140511	Fifteen Mile Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02140512	Town Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02141001	Potomac River Lower North Branch	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02141002	Evitts Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02141003	Wills Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02141004	Georges Creek	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02141005	Potomac River Upper North Branch	POTTF_MD	Upper Potomac River Tidal Fresh Maryland
02141006	Savage River	POTTF_MD	Upper Potomac River Tidal Fresh Maryland

8-Digit watershed drains to multiple water quality segments / is contained within multiple segment-sheds.

