



Fact Sheet: Potomac and Anacostia Rivers (Tidal Portions) PCB TMDLs

Waterbody/ Watershed	<p>Tidal portions of the Potomac and Anacostia Rivers in District of Columbia, Maryland, and Virginia (about 434 mi²)</p> <p>Total # of TMDLs: 28</p>
Date TMDL Approved	Approved 10/31/2007; prepared by Interstate Commission on the Potomac River Basin (ICPRB)
Basis for 303(d) Listing	<p>District of Columbia: PCBs in fish tissue (this TMDL replaces 2003 Anacostia TMDL)</p> <p>Maryland: PCBs in fish tissue and other causes (Potomac listed in 2002 and Anacostia in 2006)</p> <p>Virginia: PCBs in fish tissue (2006 listing)</p>
Water Quality Standards Target & TMDL Target	<p>Water quality standards (fish impairment threshold; water quality criteria):</p> <p>District of Columbia: 20 ppb; 0.064 ng/L</p> <p>Maryland: 88 ppb; 0.064 ng/L</p> <p>Virginia: 54 ppb; 1.70 ng/L</p> <p>Bioaccumulation-based target PCB sediment concentration (dry weight) and target PCB water concentration:</p> <p>District of Columbia: 2.8 ng/g; 0.059 ng/L</p> <p>Maryland: 12.0 ng/g; 0.26 ng/L</p> <p>Virginia: 7.6 ng/g; 0.065 ng/L</p>
Existing Source Loadings	<p>For modeling purposes, external loads of PCBs to the Potomac River estuary system are grouped into 6 categories:</p> <p>Non-tidal Potomac River at Chain Bridge, Lower basin tributaries, Direct drainage, Wastewater treatment plants (WWTPs), Combined sewer overflows (CSOs), Atmospheric deposition to the water surface, and Contaminated sites.</p>
Method for Characterizing Existing Loadings	<p>The Chesapeake Bay Watershed Model (WM5) was used to estimate daily flows and the associated loads from 17 lower basin tributaries and from direct drainage areas.</p> <p>A Loadest Program regression model was used with US Geologic Survey (USGS) flows at Little Falls on the Potomac River to estimate daily carbon and PCB loads from the non-tidal Potomac River (referred to as "Chain Bridge").</p>

Method for Determining Allowable Load (Loading Capacity)	The POTPCB model was used to find a set of PCB loads from the entire watershed that meets water and sediment targets for all 28 impairments. Thus, it is most appropriate to view the TMDL allocations for all of the tidal Potomac and its 28 impairments as one package of allocations.
Reductions Needed to Reach Target	The PCB TMDL for all of the tidal Potomac and its watershed, including the 28 impaired water quality segment PCB [sic], which constitutes a 96% overall reduction of PCBs from the 2005 baseline year load of 37,140 grams/year.
Allocations	<p>The waste load allocation (WLA) portion of the TMDL is comprised of the permitted point sources. It includes WWTPs, regulated stormwater, and CSOs.</p> <p>The load allocation (LA) portion of the TMDL is divided into tributary, nonpoint source runoff, atmospheric deposition to tidal water surface, and identified contaminated sites.</p>
Margin of Safety	In addition to an implicit margin of safety (MOS) derived from the conservative assumptions, an explicit MOS of 5% was applied to each source category with the exception of WWTPs. The explicit MOS was applied to account for the uncertainty inherent in load estimation methods for these sources.
Reasonable Assurance	<p>District of Columbia has several programs in place to control the effects of stormwater runoff and promote nonpoint source pollution prevention and control, including the Anacostia Watershed Restoration Committee, Water and Sewer Authority Long Term Control plan for CSOs and the pollutant loads associated with them, and The District will continue to monitor sources of PCBs and water quality conditions to evaluate effectiveness of implementation measures.</p> <p>Maryland's efforts will include addressing the WLA component of the TMDL through the permitting process, which will initially focus on monitoring efforts to better estimate the point source contribution and confirm which facility loadings exceed the assigned WLA. Maryland will address nonpoint sources initially through the implementation of existing TMDLs for sediments and nutrients throughout the Potomac watershed. Since PCBs concentrations in the water column are linked to total suspended solids (TSS) concentrations, a reduction in the sediment loads entering the tidal Anacostia and Potomac watersheds are expected to result in lower PCBs concentrations.</p> <p>In general, for Virginia, implementation measures for point sources and regulated stormwater are established through the NPDES permit program. Measures for nonpoint source reductions, which can include source identification and remediation are implemented in an iterative process that is described in the TMDL implementation plan.</p>

Implementation	<p>The jurisdictions involved have agreed on adaptive implementation is appropriate due to the uncertainty associated with the TMDL loading capacity and specific allocation scheme.</p> <p>Implementation of WLAs: The jurisdictions intend to use non-numeric water quality based effluent limits to comply with the WLA provisions of the TMDL “because BMPs [best management practices] are appropriate and reasonably necessary to achieve water quality standards and to carry out the goals of the CWA for the tidal Potomac PCB TMDL.” Where warranted, non-numeric BMPs will be implemented. These BMPs are intended to focus on PCB source tracking and elimination at the source.</p> <p>Also, according to the implementation plan, the presentation of daily loads satisfies the federal requirements to present loadings on this time scale. However, as this TMDL addresses PCB accumulation in fish and human consumption thereof over long periods of time, annual loads are more appropriate for expressing PCB loading goals.</p> <p>Implementation of LAs: The Steering Committee recommends states, ICPRB, and EPA Region III:</p> <ul style="list-style-type: none"> • develop and implement a monitoring strategy to fill key data gaps; • craft and implement PCB load reduction strategies; and • develop and implement programs to monitor and report progress toward achieving both PCB load reduction and water quality goals.
Monitoring	<p>Priorities for data collection to better refine PCB loading estimates to the estuary from PCB sources not governed under the NPDES permitting program, and those sources that are outside of the study area (i.e., LA) include: monitoring facilities which burn waste oils and/or mineral oil di-electric fluids and other potential incineration facilities be monitored to determine if they are potential sources; establishing monitoring programs to allow for better characterization of PCB loading trends over time; characterizing sources further in areas where tributary loadings and direct drainage contributions of PCBs to the estuary are significant and data are limited.</p>
<p>Source: <i>Total Maximum Daily Loads of Polychlorinated Biphenyls (PCBs) for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland, and Virginia</i>, October 31, 2007, available at http://www.potomacriver.org/cms/riverhealthdocs/tidal_potomac_pcb_tmdl/TidalPotomac_PCB_TMDL_10-31-07.pdf</p>	

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