

## Technical Memorandum

### ***Significant Sediment Nonpoint Sources in the Potomac River Montgomery County Watershed***

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The U.S. Environmental Protection Agency (EPA) requires that Total Maximum Daily Load (TMDL) allocations account for all significant sources of each impairing pollutant (CFR 2010). This technical memorandum identifies the significant nonpoint sources of sediment generated within the MD 8-Digit Potomac River Montgomery County watershed. Detailed allocations are provided for those nonpoint sources included within the Load Allocation (LA) portion (not including upstream DC sources) of the MD 8-Digit Potomac River Montgomery County Watershed Sediment TMDL. These allocations are designed to meet the TMDL thresholds. The State reserves the right to allocate the TMDLs among different sources in any manner that protects aquatic life from sediment related impacts.

The MD 8-Digit Potomac River Montgomery County Watershed Sediment TMDL is presented in terms of an average annual load established to ensure the support of aquatic life. The computational framework chosen for the MD 8-Digit Potomac River Montgomery County watershed TMDL was the Chesapeake Bay Program Phase 5.2 (CBP P5.2) watershed model. The nonpoint source sediment loads generated within the MD 8-Digit Potomac River Montgomery County watershed are calculated as the sum of corresponding land use *edge-of-stream* (EOS) loads within the watershed and represent a long-term average loading rate. Individual land use EOS loads are calculated as a product of the land use area, land use target loading rate, and loss from the *edge-of-field* (EOF) to the main channel (US EPA 2010). Further details of the nonpoint source sediment load calculations can be found in Section 2.2.1 of the main report.

In order to attain the TMDL loading cap, reductions were applied equally to the predominant controllable sediment sources, which were identified as urban land, high till crops, low till crops, hay, and pasture. Within this TMDL, the urban load is used to represent the National Pollutant Discharge Elimination System (NPDES) regulated stormwater load, which is considered a point source that must be included in the Waste Load Allocation (WLA) portion of a TMDL (US EPA 2002). Therefore, the reductions applied to the urban load are defined in the point source technical memorandum.

Table 1 provides one possible scenario for the distribution of the annual nonpoint source loads between different land use categories in the MD 8-Digit Potomac River Montgomery County watershed. The source categories in Table 1 represent aggregates of multiple sources (e.g., crop source is an aggregate of high till, low till, hay, animal feeding operations, and nursery sources).

**Table 1: MD 8-Digit Potomac River Montgomery County TMDL Allocation by Nonpoint Source Category**

<b>Nonpoint Source Category</b>	<b>Baseline Load (ton/yr)</b>	<b>LA (ton/yr)</b>	<b>Reduction (%)</b>
Crop	13,167.0	8,416.1	36.1%
Extractive	70.1	70.1	0.0%
Forest	2,255.4	2,255.4	0.0%
Pasture	825.1	545.0	33.9%
<b>Total</b>	<b>16,317.6</b>	<b>11,286.6</b>	<b>30.8%</b>

**REFERENCES**

CFR (Code of Federal Regulations). 2010. *40 CFR 130.2(i)*.  
<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;sid=43ac087684bf922499af8ffed066cb09;rgn=div5;view=text;node=40%3A21.0.1.1.17;idno=40;cc=ecfr#40:21.0.1.1.17.0.16.3> (Accessed October, 2010).

US EPA (U.S. Environmental Protection Agency). 2002. *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*. Montgomery, DC: U.S. Environmental Protection Agency.

\_\_\_\_\_. 2010. In Preparation. *Chesapeake Bay Phase V Community Watershed Model*. Annapolis, MD: U.S. Environmental Protection Agency with Chesapeake Bay Program. Also Available at [http://www.chesapeakebay.net/model\\_phase5.aspx?menuitem=26169](http://www.chesapeakebay.net/model_phase5.aspx?menuitem=26169).