

**Guidance  
for Developing Stormwater Wasteload Allocation Implementation  
Plans for Trash/Debris  
Total Maximum Daily Loads**



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**FINAL**

## **Introduction**

This document provides Maryland's local jurisdictions with recommendations on specific management strategies and actions to include in Stormwater Wasteload Allocation (SW-WLA) implementation plans for Trash and Debris Total Maximum Daily Loads (TMDLs). For permitted Phase I municipal separate storm sewer system (MS4) jurisdictions, SW-WLA implementation must be addressed as part of their permit required restoration plans. Although the intent of this document focuses on providing guidance for developing SW-WLA implementation plans to Phase I MS4s, most of the recommendations and strategies outlined here could also be applied in creating implementation plans for SW-WLAs and urban LAs assigned to other regulated stormwater dischargers and non-MS4 jurisdictions.

It is important to emphasize that the methods and strategies described in this document are merely recommendations. Local jurisdictions may apply different actions and strategies in their plans, as long as 1) their plan provides for physical action to achieve the required SW-WLA reductions, and 2) these actions and strategies are scientifically defensible and technically sound. The guidance does not include the full suite of actions and strategies available, but rather, it is intended to provide a general starting point when developing a SW-WLA implementation plan for trash and debris TMDLs.

## **Source Identification**

Identify sources and estimate loads using one or more of the following:

- Local TMDL Analysis – Maryland Department of the Environment (MDE) Land-Use loading rates
  - Documentation for Maryland's trash and debris TMDLs include estimates of land-use based loading rates, which are derived from State and county monitoring data (MDE 2010 and 2012)
- Other Scientifically Defensible Modeling Tools
  - MDE is not currently aware of any other trash and debris modeling that has been conducted, but local jurisdictions are free to apply other analyses, as long as they are reasonable, scientifically defensible, and technically sound
- Local Monitoring Data
- Priority Source Identification
  - GIS or field analysis of areas where sources are concentrated
    - Illegal Dumping Sites
    - Problem Properties (e.g., salvage yards)
    - High Trash Areas (e.g., side streets and commercial parking lots)

Once sources have been determined and quantified locally, a comparison to the TMDL Data may help toward setting goals, but is not necessary.

## **Load Reduction**

MDE recognizes that end-of-pipe and in-stream controls might be necessary to meet trash and debris SW-WLAs, but MDE encourages local jurisdictions to implement in-land/upstream source reduction measures first, as these get at the root of the trash problem and, in the long-term, will cost less to implement.

- Source Elimination
  - Recycling Programs – Creating new programs, expanding existing programs and/or the continuation of the programs that are in place
  - Regulations and Ordinance
    - Creation of new regulations and ordinances if not currently in place, such as plastic bag bans, litter fines, fines for illegal dumping, etc
    - Increased enforcement of current regulations
  - Trash Disposal Access
    - Installation of new trash receptacles
      - Focus efforts at trash/litter hotspots such as transit stops
    - Maintenance of existing trash receptacles
  - Outreach – Anti-Litter campaigns, recycling education, stormdrain marking, etc.
- Cleanup/Removal
  - Increased/Expanded Street Sweeping
  - Organized Trash Cleanups
    - Adopt-A-Road Programs, stream cleanups, etc.
  - Stormwater BMPs that trap trash before entering streams
    - Environmental Site Design (ESD) practices
      - Bioretention
      - Filtering Practices
    - Structural Practices
      - Wet Ponds, Wetlands, Sand Filters, etc.
    - Improved stormdrain inlet devices
  - In-stream Interception controls to trap and remove trash

Use estimated reductions for source elimination and cleanup/removal activities to calculate load reductions and to measure progress towards meeting allocations

### **Evaluation**

Carefully documented inventories of BMPs/management strategies and well developed monitoring plans of performance will be needed to demonstrate progress toward meeting SW-WLA loads established by MDE.

### **General Plan Guidance**

Please refer to the general SW-WLA implementation plan guidance, which can be found on the MDE website at:

<http://www.mde.state.md.us/programs/Water/TMDL/DataCenter/Pages/TMDLStormwaterImplementation.aspx>.

**References**

Maryland Department of the Environment. 2010. *Total Maximum Daily Loads of Trash for the Anacostia River Watershed, Montgomery and Prince George's Counties, Maryland and the District of Columbia*. Baltimore, MD: Maryland Department of the Environment.

Maryland Department of the Environment. 2012. *Total Maximum Daily Loads of Trash and Debris for the Middle Branch and Northwest Branch Portions of the Patapsco River Mesohaline Tidal Chesapeake Bay Segment, Baltimore City and County, Maryland*. Baltimore, MD: Maryland Department of the Environment.