



Department of the Environment

Why Do We Need an Evaluation/Testing Program for MTDs?

**Evaluating Proprietary BMPs:
Is it Time for a State, Regional or National Program?**

**Scientific and Technical Advisory Committee Workshop
March 24th, 2015
Stewart R. Comstock, P.E.**





State SWM Requirements

Mandates for:

- Using specific design strategies (e.g., ESD)
- Unified sizing criteria (e.g., WQ_v , Re_v)
- Performance Standards:
 - 80% TSS Removal
 - 40% TP Removal

A BMP complies with this standard if it is:

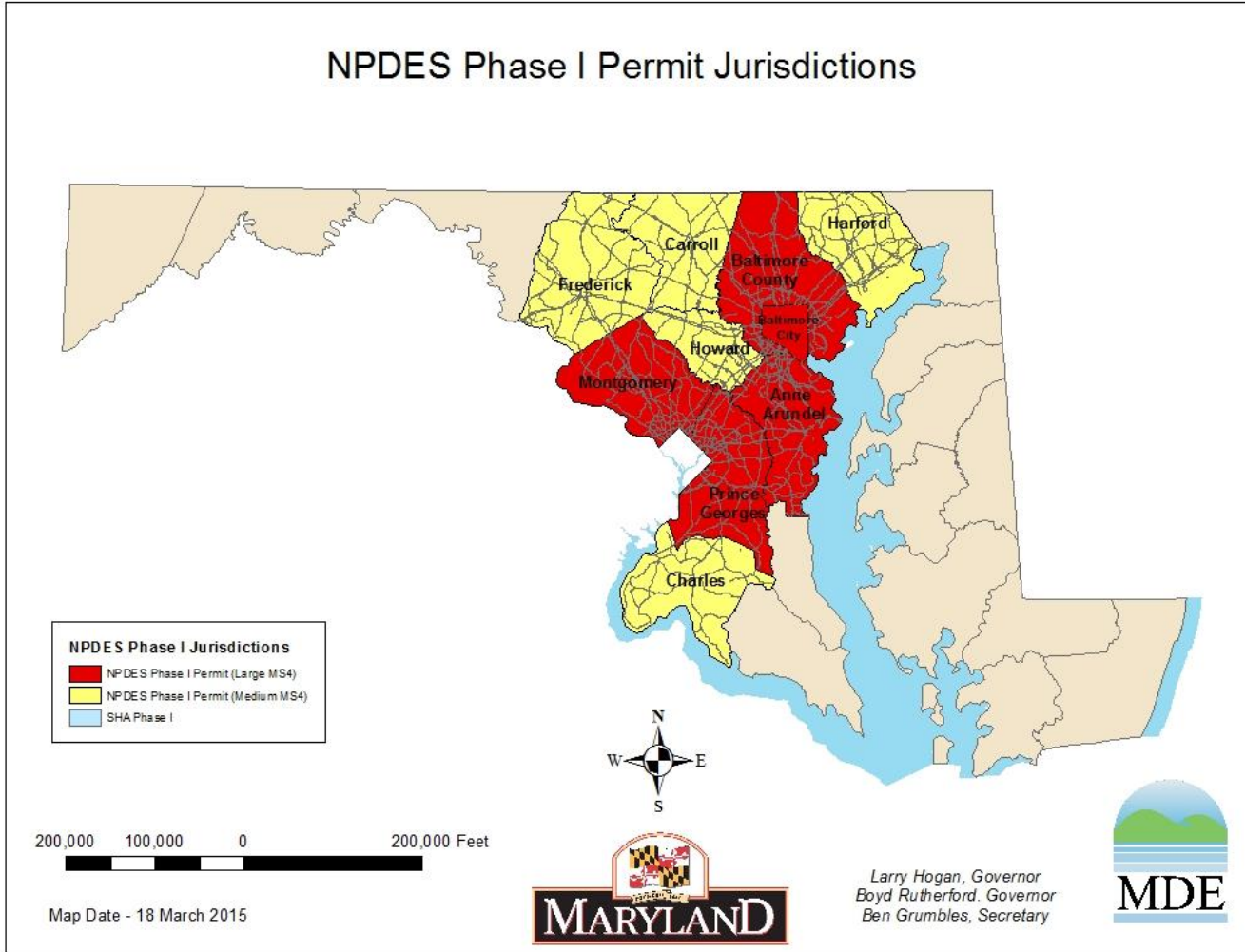
- Sized to capture a specific volume
- Designed according to specific performance criteria
- Constructed properly, and
- Maintained regularly.





Maryland's NPDES Phase I MS4 Permits

NPDES Phase I Permit Jurisdictions





TMDLs, WLAs, and MS4 Phase I Permits

- **Maryland has 11 Phase I MS4 Permits**
 - 10 are currently in some form of litigation
 - 11th is SHA's – recent tentative determination
- **Common comments:**

“...develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants...to the maximum extent practicable.”

“...permit must institute or impose all the controls and the highest levels of management and treatment that are capable of being put into practice – most decidedly not standard practices”

“Under the terms of this Draft Permit, the [permitee] must attain applicable WLAs for each TMDL for each receiving water body.”





TMDLs, WLAs, and MS4 Phase I Permits

Sample language from an EPA-approved TMDL:

“In order to achieve the estimated phosphorus load reductions applied to urban land, which are necessary to meet the TMDL, current ... County Phase I MS4 permit requires the jurisdiction to retrofit 10% of existing impervious area where there is failing, minimal, or no stormwater management ... every permit cycle (five years) (*i.e., the jurisdiction needs to install/institute stormwater management practices to treat runoff from these existing impervious areas*). Additionally, MDE estimates that future stormwater retrofits will have, on average, a 35% TP reduction efficiency.”





TMDLs, WLAs, and MS4 Phase I Permits

- **[W]here a State or EPA has established a TMDL, NPDES permits must contain effluent limits and conditions consistent with the assumptions and requirements of the WLAs in the TMDL. Where the TMDL includes WLAs for stormwater sources that provide numeric pollutant loads, the WLA should, where feasible, be translated into effective, measurable WQBELs that will achieve this objective.**
- **Example: Restore within the 5-year permit term 20 percent of the previously developed impervious land (2014 Prince George's County, MD MS4 permit)**

Revisions to the November 22, 2002 Memorandum “Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs” EPA, Nov. 2014





SWM, MS4 Permits, & Accountability

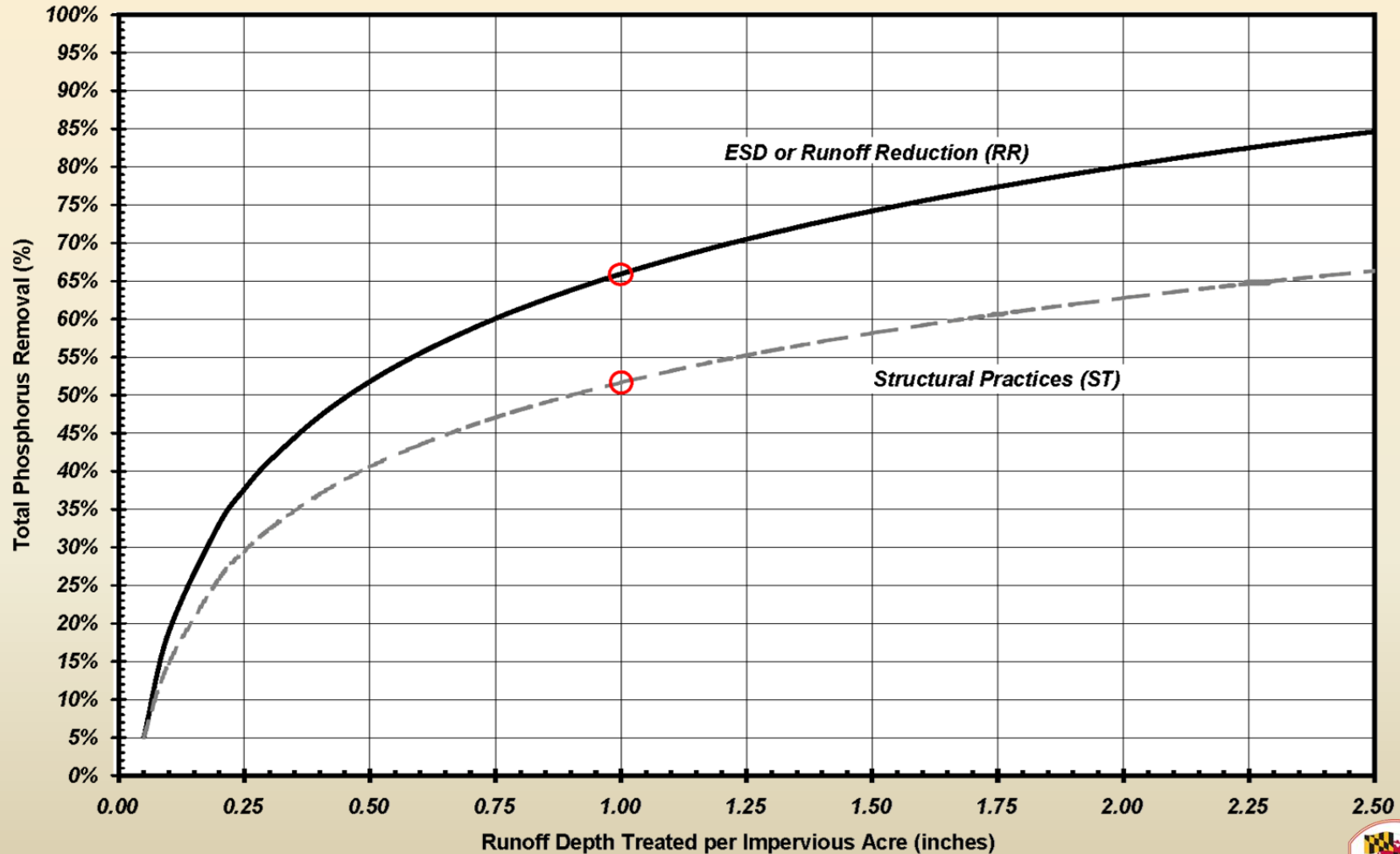
- **CBP Urban Stormwater Workgroup:**
 - Removal rates for individual developments are based on amount of runoff treated and reduced
 - Charts developed for removal rates are based on extensive review of BMP research
 - No need to report individual BMP removal rates for each development
 - BMPs (incl. MTDs) classified as either RR or ST
 - Accountability: How are pollutant reductions for MTDs verified now?





SWM, MS4 Permits, & Accountability

Total Phosphorus Removal
for ESD (RR) and Structural (ST) Stormwater Practices





MDE's BMP Evaluation Policy

- **If comparable to a generic practice found in the Manual, then an MTD may be used provided that it complies with performance standards, specifications, and design criteria found in the Manual.**
- **If not, then it must comply with the general performance criteria found in the Manual. Field monitoring data must conform to recognized standards (e.g., TARP, TAPE) and testing methods (e.g., ASTM)**
- **MDE reserves the right to establish interim pollutant removal efficiencies based on the manufacturer's information. Interim rate is valid for two years unless practice is verified or CBP approved (Restoration Only)**





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