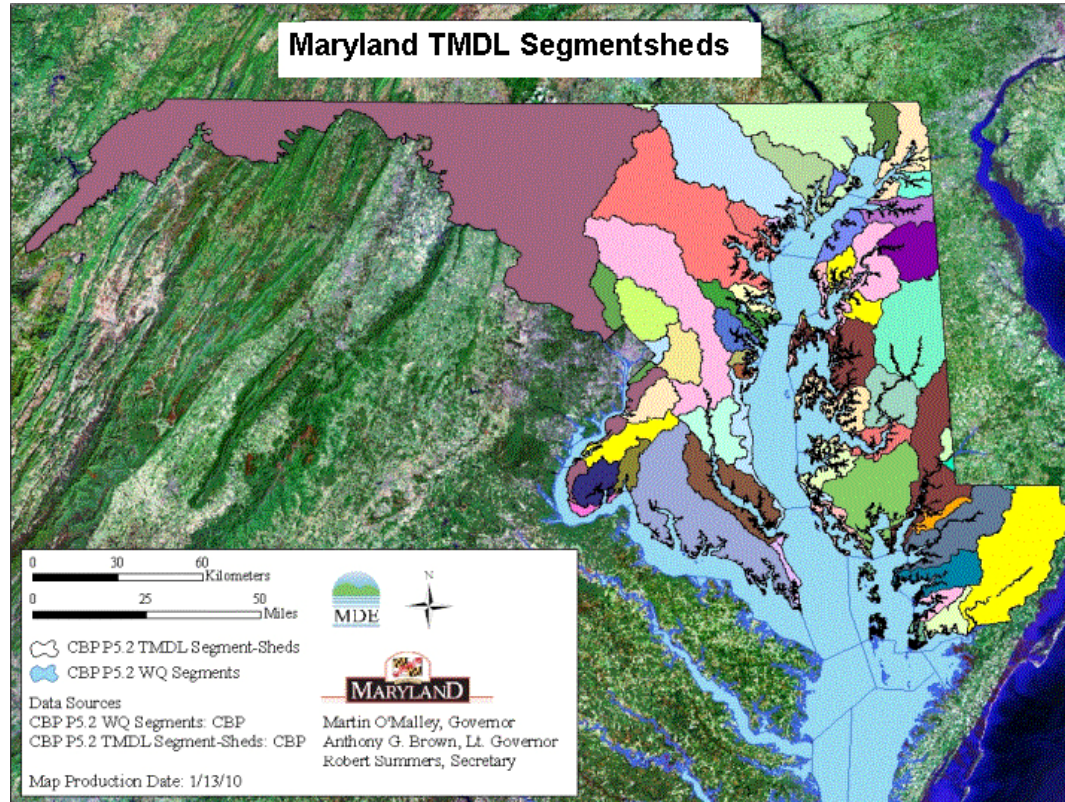


Accounting For Growth



July 16, 2012

Quick Review

- EPA requires that States account for growth as part of the WIP process because population growth and new development add load.
- Maryland committed to having a growth offset process in place by 2013.
- SB 236 requires that offset provisions for Tier III areas be proposed by the end of 2012; Tier III and the WIP can proceed separately or concurrently, but the plan is for concurrent development.

Objectives of Policy

- Permanently offset loads from growth to prevent backsliding
- Further support Bay restoration and preservation and protect local water quality
 - Minimize pollutant load from new growth so fewer offsets are needed
 - Allow public resources to focus on reducing existing loads to meet allocations
 - Encourage counties to optimize the use of their growth capacity and available offsets

Concepts in Phase II WIP

- **New development** must meet all applicable regulations and offset of the post-development nonpoint source loads
- **Redevelopment** will not be required to offset post-development nonpoint loads
- **New on-site disposal systems** must meet all applicable regulations and offset the post-development wastewater load
- **Point sources** (new loads and increased load from existing point sources above the WLA) must be offset

How the Policy Differs

- Nitrogen loads must be offset; no separate offset required for phosphorus
- 100% of the post-development load must be offset, not the difference between post-development load and forest load

Calculating Post-Dev. Load

- Direct load
 - *Wastewater*
 - Discharging to groundwater from conventional septic or BAT systems
 - Discharging to wastewater treatment plants
 - *Stormwater*
 - Edge of Stream
 - Using Bay Model loading rates
- Indirect load
 - Mobile emissions/VMTs (atmospheric deposition)

On-site Wastewater Systems

Type	lbs N per HH
Conventional septic system	9.86
BAT system	4.93

WWTPs

Type	Concentration N (mg/l)
Secondary Treatment	18
BNR	8
ENR	4

Stormwater Loading Factors

Land use	lbs N per acre
Impervious	15.34
Pervious	10.78
Forested	3

Air Deposition

Density of Census Tract (persons/mi ²)	NOx (pounds/HH)
$\leq 10,000$	1.0
$> 10,000$	0.5

Development: Examples

Development Type	Pounds N to offset/HH (WW+SW+Air=Total)
Low Density Residential (2 acre lots with BAT; 10% impervious, 90% pervious)	$4.93 + 11.24 + 1.0 = 17.17$
Medium Density Residential (0.5 acre lots on BNR WWTP with no capacity below cap; 30% impervious, 70% pervious)	$4.8 + 3.0 + 1.0 = 8.8$
High Density Residential (0.1 acre lots on ENR WWTP with capacity below cap; 70% impervious, 30% pervious)	$0 + 0.7 + 0.5 = 1.2$

Economic Implications of Offsets

- If offsets become scarce, their cost will rise, possibly constraining economic growth
- Redevelopment and concentrating growth in dense areas served by ENR WWTPs will
 - Consume the fewest available offsets
 - Maximize development if offset supplies are limited
- Maximizing development potential leads to longer term economic health while maintaining a restored Bay

Jobs, Population and Load

Dominant Type of Development	Pounds N ^(1,2) per Job/Resident	Jobs/Residents ⁽²⁾ per 100 Pounds Nitrogen ⁽¹⁾
High Density on ENR	<2.5 to 3.0	38 to 44
Mix Non-ENR & Septics	8.5 to 9.1	12 to 13
Large Lots no Sewer	22 to 25	4 to 5

⁽¹⁾ N from existing development only ⁽²⁾ 95% Confidence Interval for Mean

Trading Geographies

- Follow all rules of Nutrient Trading Policies, plus
 - New development in a Targeted Growth and Revitalization Area⁽¹⁾ served by an ENR WWTP can obtain offsets anywhere in the TMDL watershed allowed by the Nutrient Trading Policies
 - All other new development must obtain offsets in same County as development

⁽¹⁾ A PlanMaryland Planning Area

Implementation of Proposal

- MDE would
 - Use existing statutory authority
 - Promulgate regulations
 - Issue General Permit for Offsets
- Developer would
 - Calculate load
 - Obtain permanent offsets
 - Submit information and certify offsets when filing for General Permit

Seeking Stakeholder Input

- The proposed conceptual framework
- Alternative approaches
- Using nitrogen alone
- Effective date
- Roles for
 - Local Government
 - Aggregators
 - Brokers
- Trading geographies
- Verification of offsets and trades
- Ensuring offsets are permanent
- EOS vs. Use of delivery factors
- Fees in lieu

Schedule

- July to Sept. – Outreach
 - Regional meetings and possibly a webinar
 - Make documents available online
 - Discussion Draft
 - Spreadsheet for calculating load
 - Draft regulations as they are prepared and revised
- Oct. – Attorney General review and approval by Secretary
- Nov. – Brief ENV and EHEA (required by SB236)
- Early Dec. – Submit to AELR and DLS
- Mid-December – Submit to Maryland Register

Discussion and Comments

- Submit written comments
 - ASAP, but no later than October 1, 2012
 - Submit by email (preferred) to: afg@mde.state.md.us
- or by post to:
 - Paul Emmart
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore MD 21230-1718
- The comments received will be considered but no formal Response to Comments will be prepared
- The draft regulations will be subject to a public process before promulgation