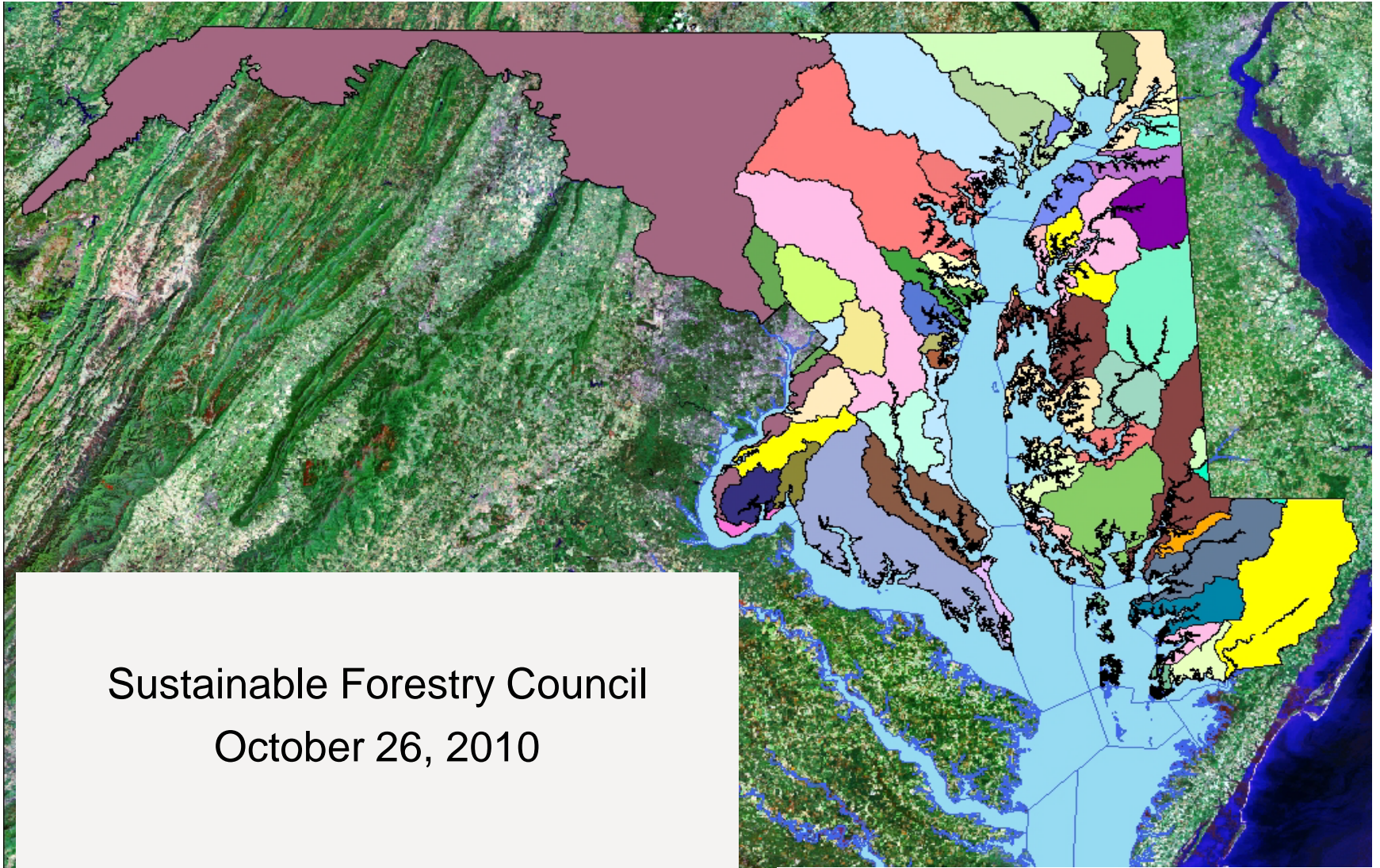


Maryland's Approach to the Bay TMDL



Sustainable Forestry Council
October 26, 2010

Basic Background

- Court Settlement: Ches. Bay TMDLs by December 2010
- EPA Leads the Regional TMDL Development Process
- Watershed Implementation Plans:
 - Allow States to Allocate Loads
 - Support “Reasonable Assurance” of Implementation
 - Part of new federal “Accountability Framework” to Ensure Results
- Federal “Accountability Framework”
 - Bay TMDLs
 - Watershed Implementation Plans (WIPs)
 - 2-Year Implementation Milestones
 - Tracking & Evaluating Progress
 - Federal “Consequences”

Draft Plan Orientation

Eight Elements

1. Interim and Final Nutrient and Sediment Target Loads
2. Current Baseline Loading and Program Capacity
3. Account for Growth
4. Gap Analysis
5. **Commitment & Strategy to Fill Gaps - “Options”**
6. Tracking and Reporting Protocols
7. **Contingencies** To Be Determined based on Public Review
8. Appendix with Detailed Targets and Schedule

Setting Allocations

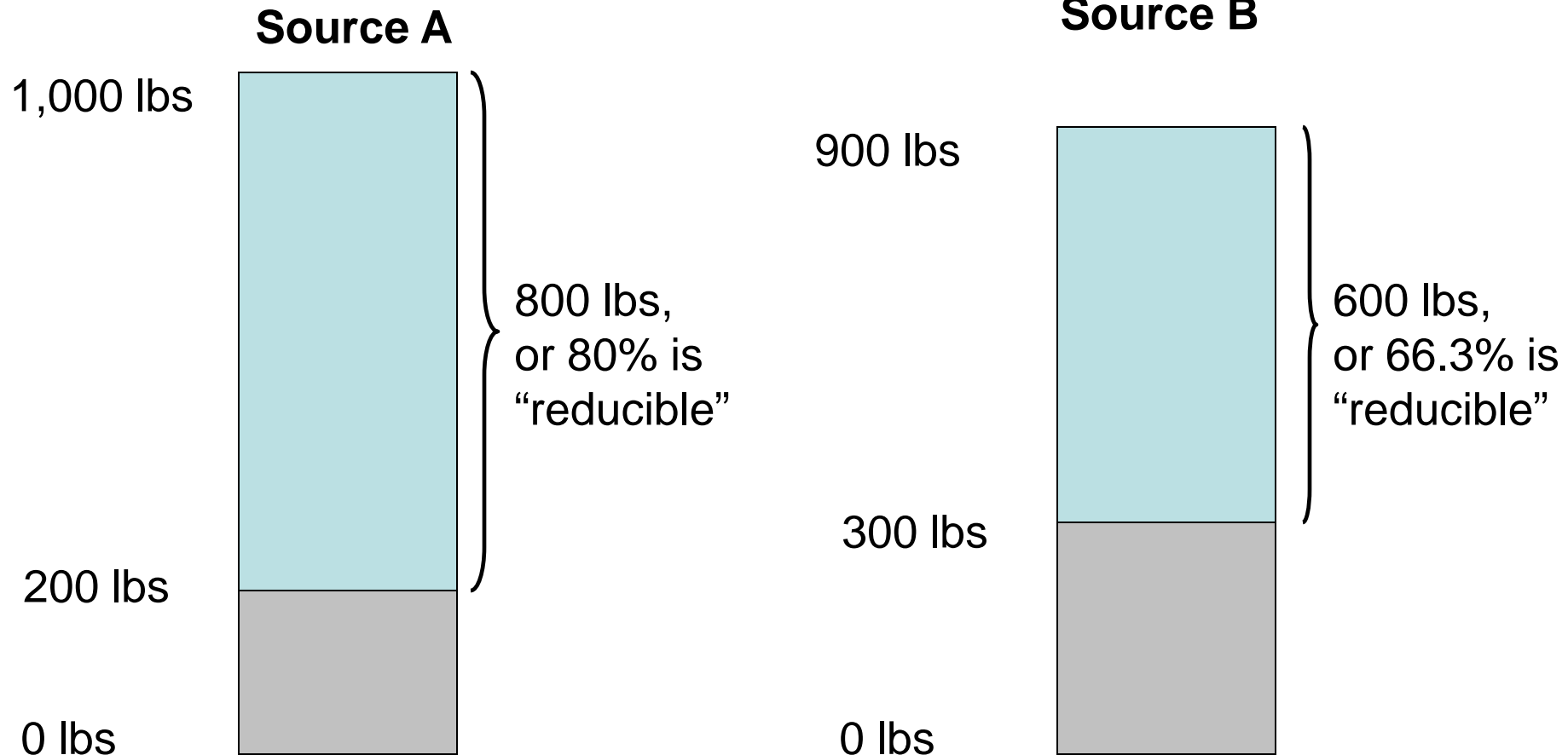
“Final Target Loads” – By 2020

- Based on Objective Allocation Method:
 - Unbiased for or against any sector
 - Set Point Source Loads to Tributary Strategy Caps*
 - Set Nonpoint Sources to:
 - “Equal percent reduction of *Reducible Load*”
 - Credit given for past reductions

* Approximately

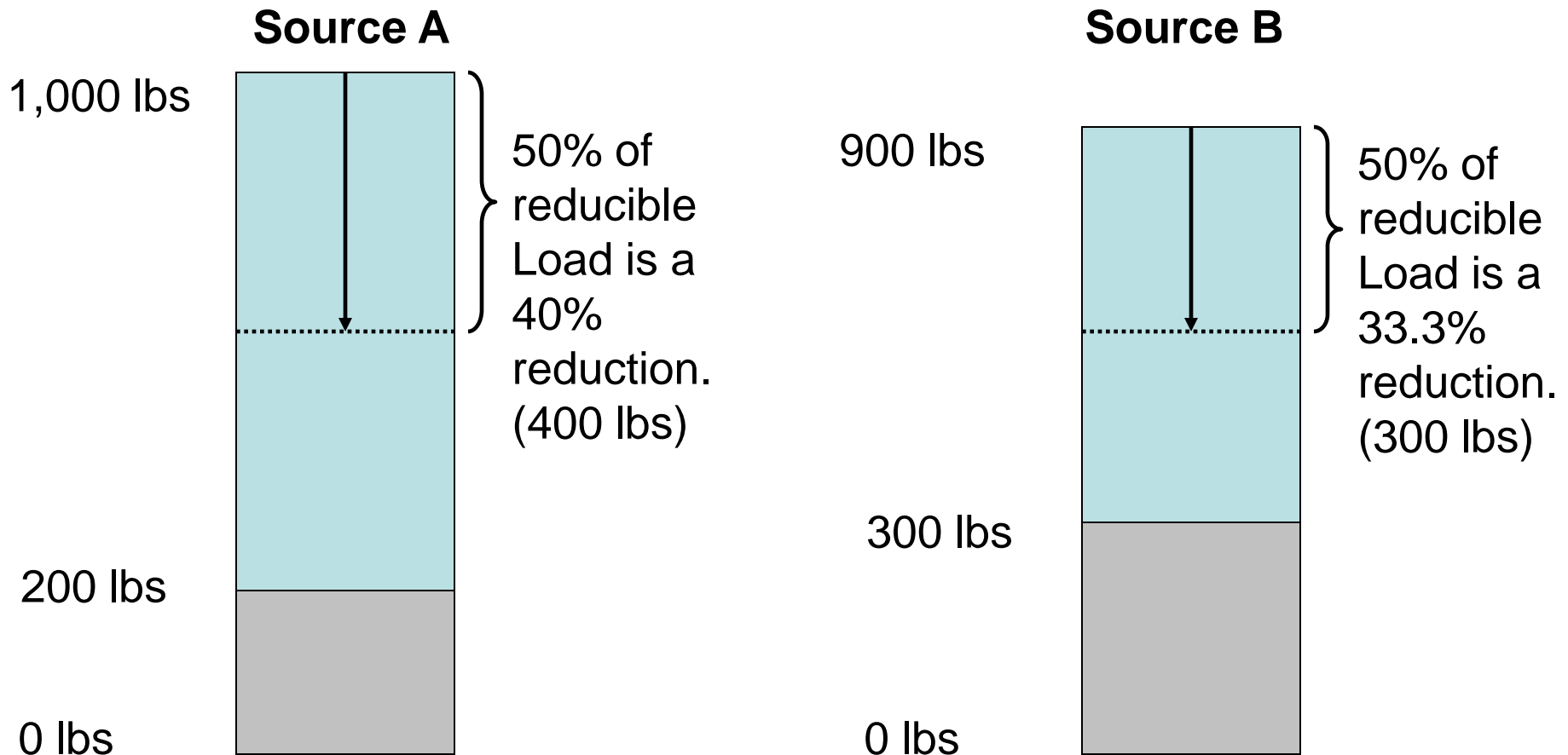
Equitable Allocation Method

Example:



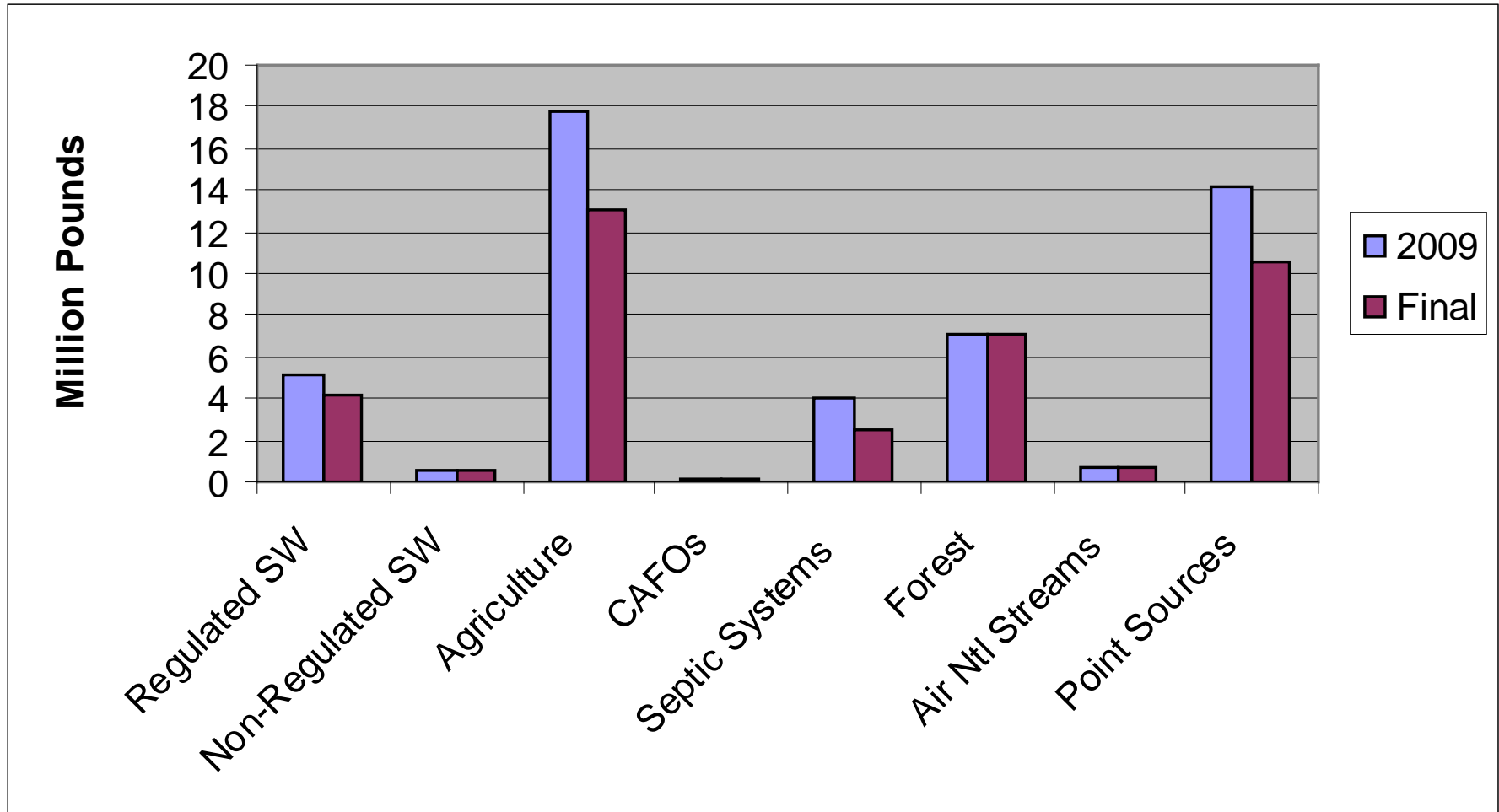
Equitable Allocation Method

Example: 50% of Reducible Load...



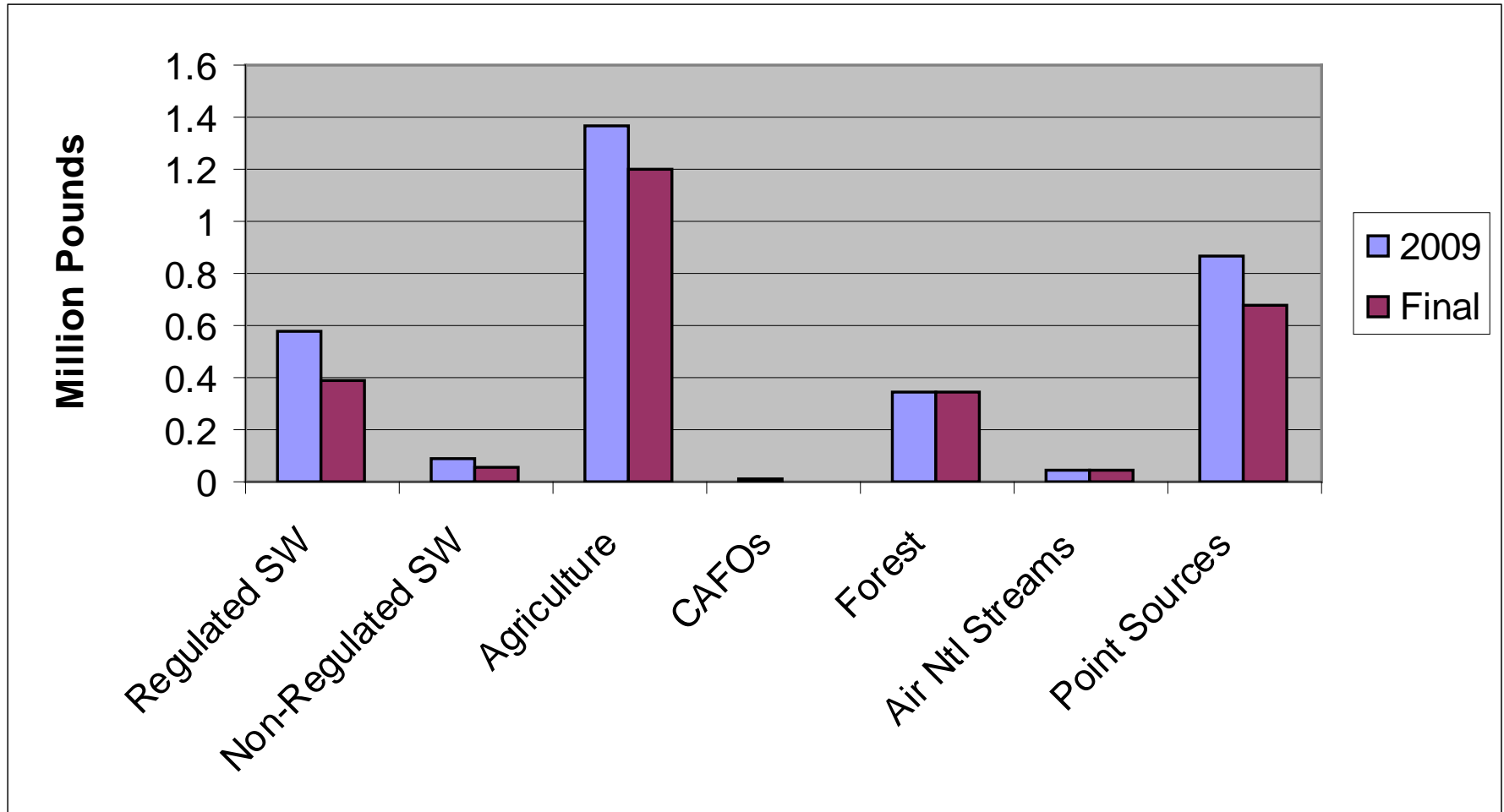
Final Target Loads

2009 vs Final Target for **Nitrogen** by Sector:



Final Target Loads

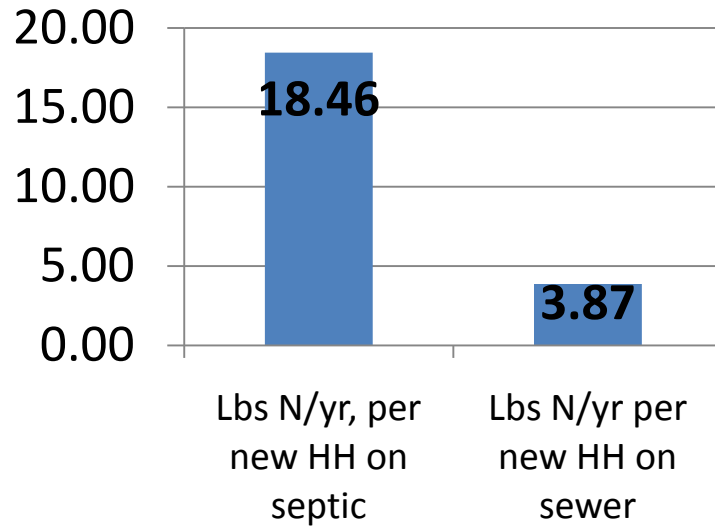
2009 vs Final Target for **Phosphorus** by Sector:



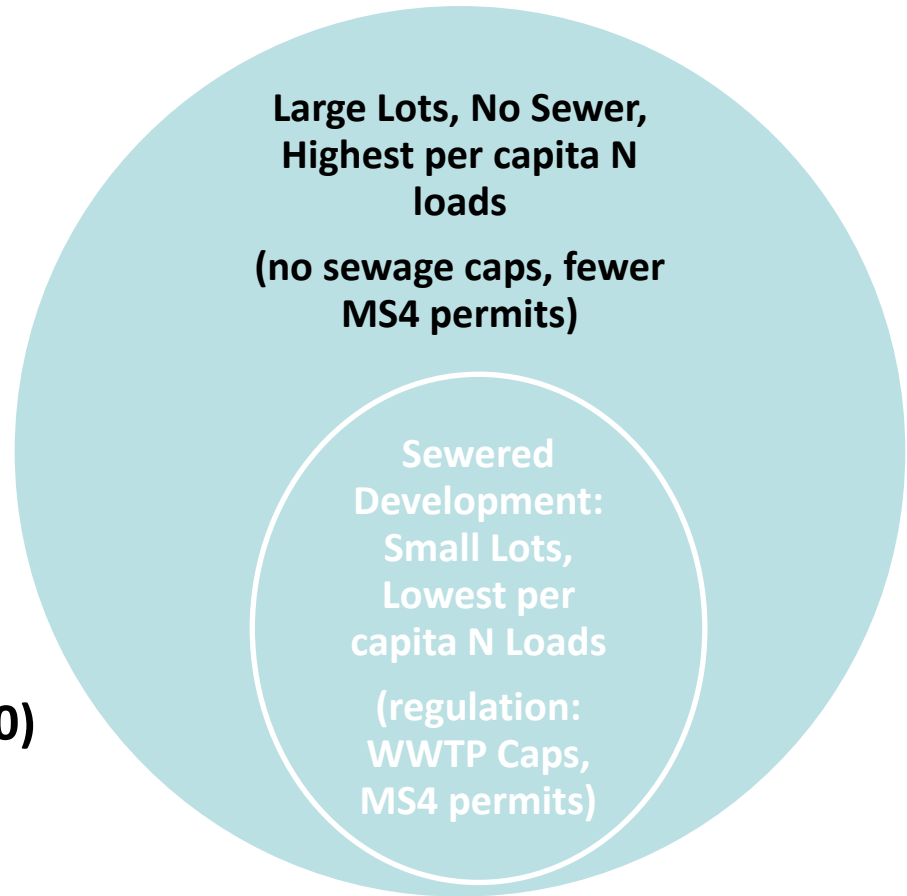
Accounting for Growth in Loads

1. Power Plant Atmos. Cap Strategy (In Place)
2. Wastewater Cap Strategy (In Place)
3. EPA requirement to Offset NPS Loads:
 - a. Loads from New Land Development
 - b. Loads from New Septic Systems

Accounting for Growth in Loads



**263,225 Additional Households
Forecasted in Maryland (2010 -2020)**
29% served by septic tanks
71% served by ENR WWTP



Offsetting New Loads

- Has Incentives to Promote Smart Growth
 - Proposes Three Types of Geographic Areas:
 - Low load/capita (dense development areas)
 - Intermediate load/capita
 - High load/capita (low density areas)
 - Offsets tighter in lower density areas
- Option for Local Alternative Approach
- Envisions 2013 Implementation
- Trading System is Essential Element
 - Similar to system for Wetlands Mitigation

Strategy Option Highlights

- WWTPs
 - Complete ENR Upgrades for Major Municipal Plants
 - Upgrade Several of the Largest Minor Municipal Plants to ENR
 - Reductions for minor industrial plants
- Septic Systems
 - Offset Future Septic System Loads
 - Connect Failing Systems to WWTPs
 - Range of options for upgrading septic systems

- Stormwater
 - Offset Loads from New Development
 - Range of options for retrofitting old developed lands including Phase II permits and non-MS4 jurisdictions.
 - Increase urban nutrient management
- Agriculture
 - Manure Incorporation to Reduce Ammonia Emissions
 - Precision Agriculture to Optimize Fertilizer Use
 - Numerous other options

- Natural Filters
 - Range of Options on Private and Public Lands
- Atmospheric Sources
 - Implement State Healthy Air Act
 - Implement federal Clean Air Act
 - Various vehicle emissions options

Forest Conservation Act

- "Strengthen Maryland's Forest Conservation Act by requiring State and local programs be amended to require a "no net loss of forest" approach. The recommended approach would use forest mitigation banks and **eliminate fee in lieu of payments to meet no annual loss of forest through development.** Use forest mitigation banks to encourage the creation and retention of forests in areas providing the greatest benefit to local ecosystems and the Bay."

Finalizing Phase I Plan

Public Stakeholder Process:

- Sept. 1: Preliminary Draft Released to Public
- Sept. 24: Final Draft Released for Public Review
 - Comments Due November 8
- Sept. 27 – Oct. 6: Four Public Meetings
- Oct. 12, 13, & 14: Three EPA Public Meetings
- Oct. 18: Stakeholder Advisory Committee (SAC) Meeting
- Late October: SAC Presents comments to Maryland Bay Cabinet
- Incorporate Public Comments by Nov. 29

Anticipated Plan Revisions:

- Finalize Interim and Final Targets:
 - Supported by EPA Model validation
 - Subject to revision in Phase II
- Select Strategies for 2017 Interim Target (Chapter 5):
 - Starting point for Phase II Dialogue
- Provide Cost Estimates (Chapter 5)
- Provide Timelines for Implementation (Chapter 5):
 - Planning Steps
 - Legislative & Regulatory milestones
 - Implementation Target Date
- Identify Contingencies (Chapter 7)
- More Detail on Verification of Implementation

Comments on Phase I

- Submit Comments on WIP in Writing electronically to:

TMDLCoordinator@mde.state.md.us

... or by mail to:

Tom Thornton

Maryland Department of the Environment

1800 Washington Boulevard – Suite 540

Baltimore MD 21230-1718

- Suggestions for Comments:
 - **Strategy Options:** Focus on most and least desirable options.
 - **Allocations:** Are they “reasonable?” If not, suggest changes.
 - **Funding Recommendations**

Overview

- Intent of Plan:
 - Set Planning-Level Target Loads for Implementation
 - More Geographic Detail of Target Loads
 - Opportunity to Revise Phase I TMDL Allocations
 - More Implementation Detail
 - Opportunity to Revise the Strategies
 - Provide consistent context for local watershed planning

Phase II Process (Con't)

- General Approach
 - State “Liaisons”
 - State Steering Committee
 - Identify & Invite Stakeholders – Local Leads
 - Step-by-Step Schedule
 - Support Materials, e.g., WIP Document Template
 - Request Essential Local Information
 - **Discuss & Refine Strategies and Target Loads**
 - Reach Consensus, Use State Default or Hybrid
 - Identify 2-yr Milestones by end of 2011

How we think it will work

- Local Committee of Responsible Parties
- Determine Current Capacity
- Local Allocations in Early March
- Estimate Growth Impacts
- Determine Gap
- Allocate Gap by Sector/ Major Land Holder
- Strategies to Reduce Gap Using Phase I as Foundation

“Capacity” to Reduce Pollution

What do we mean by “Capacity”?:

- Assets that Support Pollution Reduction:
 - Legal and Regulatory
 - Financial
 - Staffing
 - Technical
 - Administrative and Programmatic
- Public and Private
 - Federal, State and Local Governments
 - Businesses, Non-profits, Citizens, Volunteers

Phase II Process (Con't)

- 2011 Schedule
 - **December:** Regional Orientation Meetings
 - **January:** Initial Working Meetings
 - **Feb/March:** Initiate Allocation Discussions
 - **April/May:** Finalize Allocation & Strategy Discussions
Wrap-up Draft Phase II Plans
 - **June 1:** Submit Draft Plan to EPA
 - **June:** Confirmation Model Runs (if necessary)
 - **July:** Revise/Adjust Draft Plans
 - **August:** Public Review
 - **September:** Finalize Documentation
 - **November 1:** Submit Final Plan to EPA

Pilots – Lessons Learned

- Start Early
 - Gathering Data
 - Outreach
 - Potential Strategies
- Be Inclusive
 - Implementers
 - Funders
 - Large Land Holders/ Managers

More Lessons

- Requires Staff Time Commitment
- Requires Creative Thinking and Financing
- Requires Collaboration Between Sectors
- Everyone is in the Game
- Some Data is Proprietary

Contacts

MDE: Tom Thornton – 410 537-3656
TThornton@mde.state.md.us

DNR: Catherine Shanks – 410 260-8717
CShanks@dnr.state.md.us

MDA: Beth Horsey – 410 841-5896
horseyea@mda.state.md.us

MDP: Jason Dubow – 410 767-3370
JDubow@mdp.state.md.us