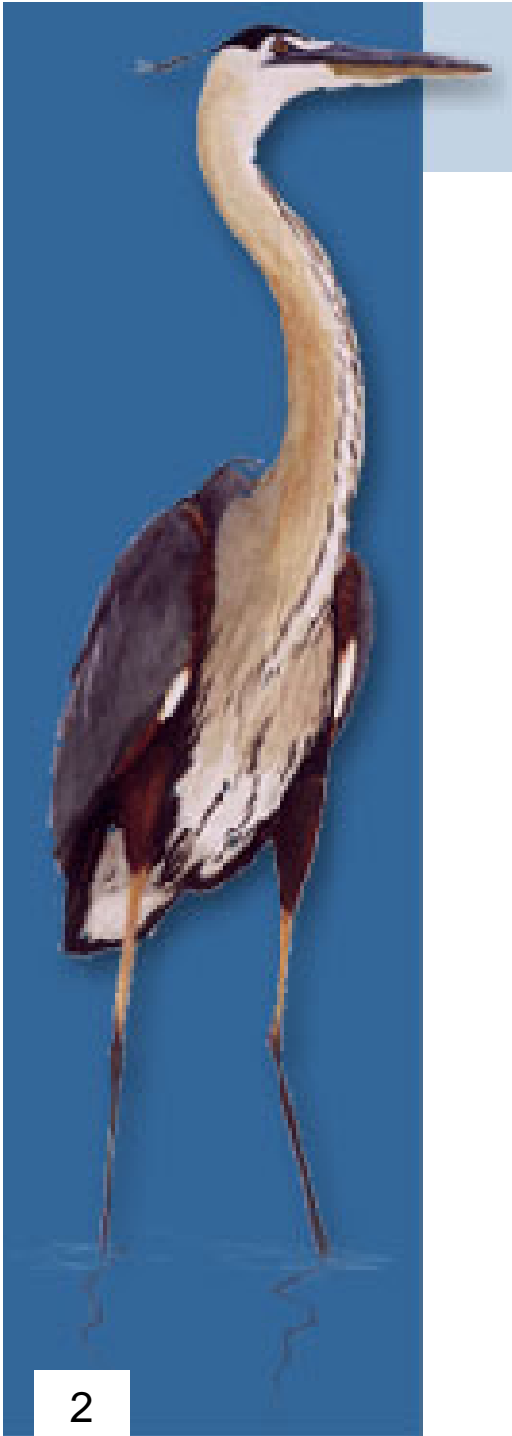


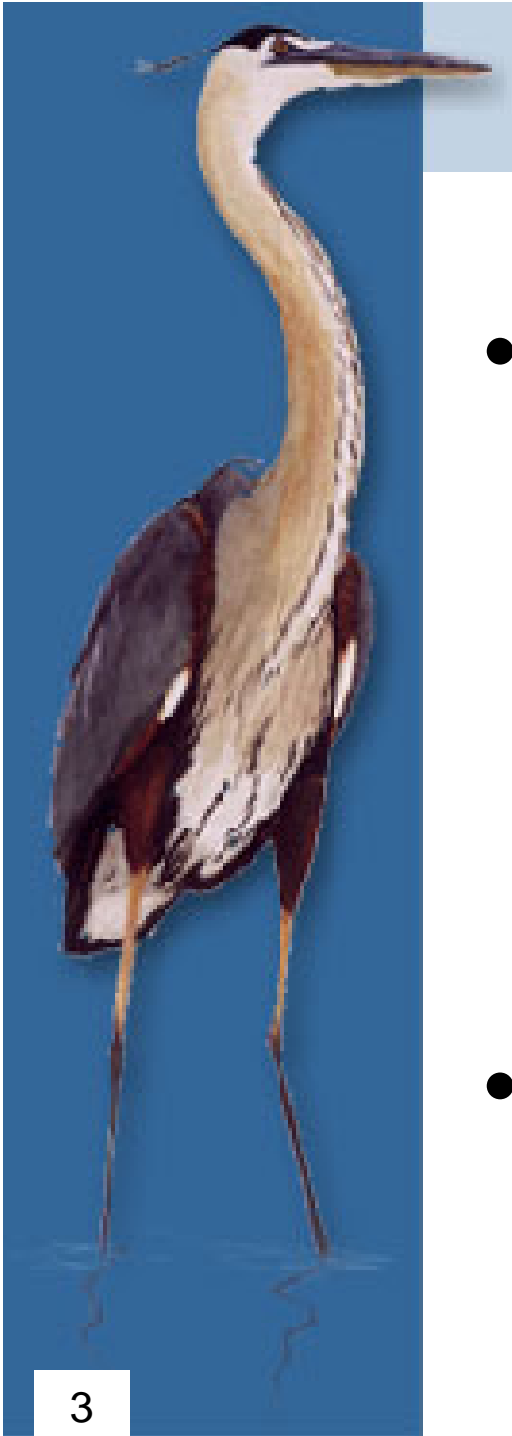
Maryland's Chesapeake Bay Phase II WIP Strategies In a Rural Setting



Webinar Overview

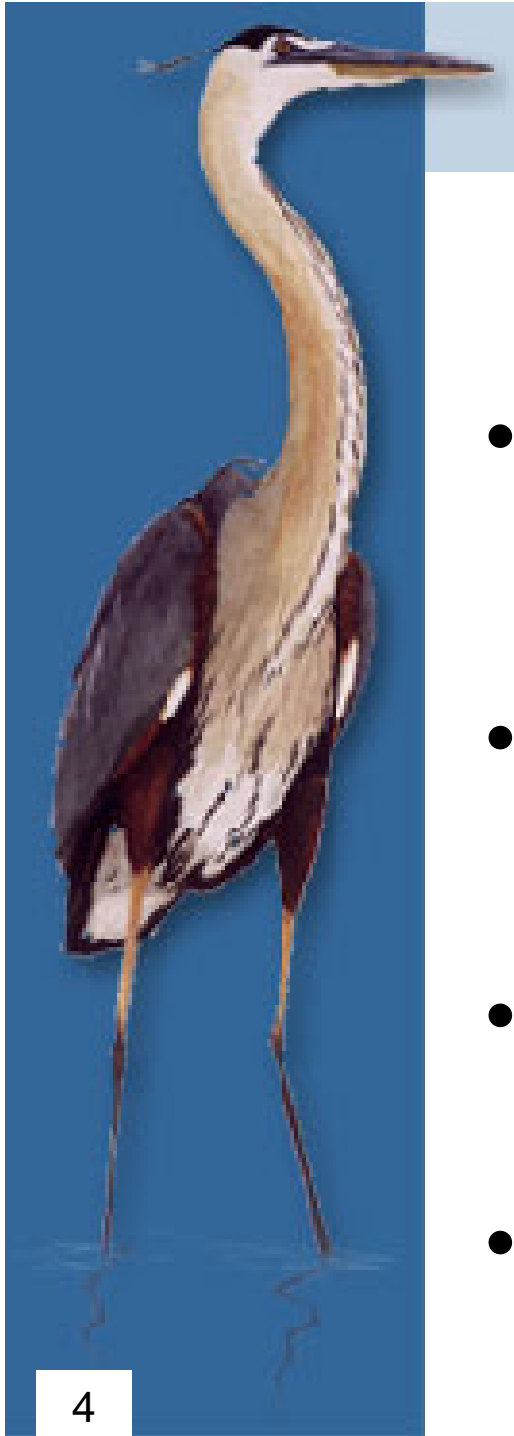
- Why Highlight the Rural Setting?
- Lessons from the Phase I WIP by Sector
- Discussion





Why Highlight the Rural Setting?

- WIP Liaisons have been reporting a similar **Question** from rural counties:
 - “It seems like we, at the county/municipal government level, don’t have much to do for the WIP. Are we missing something?”
- **Answer:** You’re Right. Lets explore this further.



Highlights of the Main Nutrient Source Sectors in the Phase I WIP

- **Agricultural Sector:**
 - Not a county/municipal government function
 - Ag Workgroup
- **Point Sources:**
 - Enhanced Nutrient Removal (ENR) at Major WWTPs
- **Urban Stormwater:**
 - NPDES-Regulated Stormwater
- **Septic Systems:**
 - Upgrades & Connections to WWTPs

Agricultural Sources

Agricultural sources are being addressed by a workgroup of subject area experts. For the most part, agricultural reductions are not the responsibility of county or municipal governments. However, we will explore some potential opportunities throughout the remaining discussion.

Point Sources

Category	WIP Strategy Considerations
Major WWTPs (0.5 mgd or more)	<ul style="list-style-type: none">• ENR Upgrades• Increased BRF Fee• Local Costs in Some Cases
Minor WWTPs (less than 0.5 mgd)	<ul style="list-style-type: none">• Upgrade five of the largest plants in cooperation with local interests.
Major & Minor Industrial discharges	<ul style="list-style-type: none">• Majors have already upgraded or are on a track to upgrade• MDE has a conceptual strategy for Minor discharges that will become better defined in the coming years
Federal Facilities	<ul style="list-style-type: none">• Federal facilities follow the same patterns as above.

Urban/Suburban Stormwater

Rural counties are defined, in part, by not having MS4 stormwater permits. However some cities and towns within rural counties have MS4 permits, e.g., Salisbury in Wicomico County.

The only stormwater control requirements for local governments in the Phase I WIP were for MS4 permitted jurisdictions.

Category	WIP Strategy Considerations
Non-MS4	<ul style="list-style-type: none">• Urban Nutrient Management• Rural Residential Tree Planting
Phase I MS4	<ul style="list-style-type: none">• Urban Nutrient Management• 30% Impervious Retrofit
Phase II MS4	<ul style="list-style-type: none">• Urban Nutrient Management• 20% Impervious Retrofit

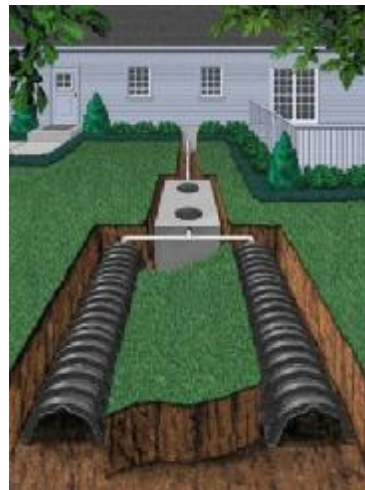
Urban/Suburban Stormwater (Con't)

In addition to local governments are other sources outlined below:

Source Category	WIP Strategy Considerations
State Agencies with Phase II MS4 permits, e.g., State Highway Administration (SHA)	<ul style="list-style-type: none">• 30 / 20% Impervious Retrofit in Phase I / II MS4 counties respectively
Industrial Stormwater	<ul style="list-style-type: none">• New Standards & Specs for Construction Erosion & Sediment Control• Commitment to a schedule for refining the treatment of other industrial sources
Federal	<ul style="list-style-type: none">• 30 / 20% Impervious Retrofit in Phase I / II MS4 counties respectively• Other federal industrial facilities follow the same patterns as above

Septic System Load Reduction Options

- Upgrade to Nutrient Removal Technology, also called “best available technology” (BAT)
- Connect to Advanced Wastewater Plant
- Small treatment plant or other shared system with more cost-effective treatment.



Septic Systems

Phase I WIP 2017 Interim Strategy

Key Reduction Strategies

- Upgrade 33,252 systems in the Critical Area (60%) to BAT
 - 27,522 Existing Systems
 - 5,700 New or Failing Systems
- Connect 930 Systems to an advanced WWTP

Narrative Strategy

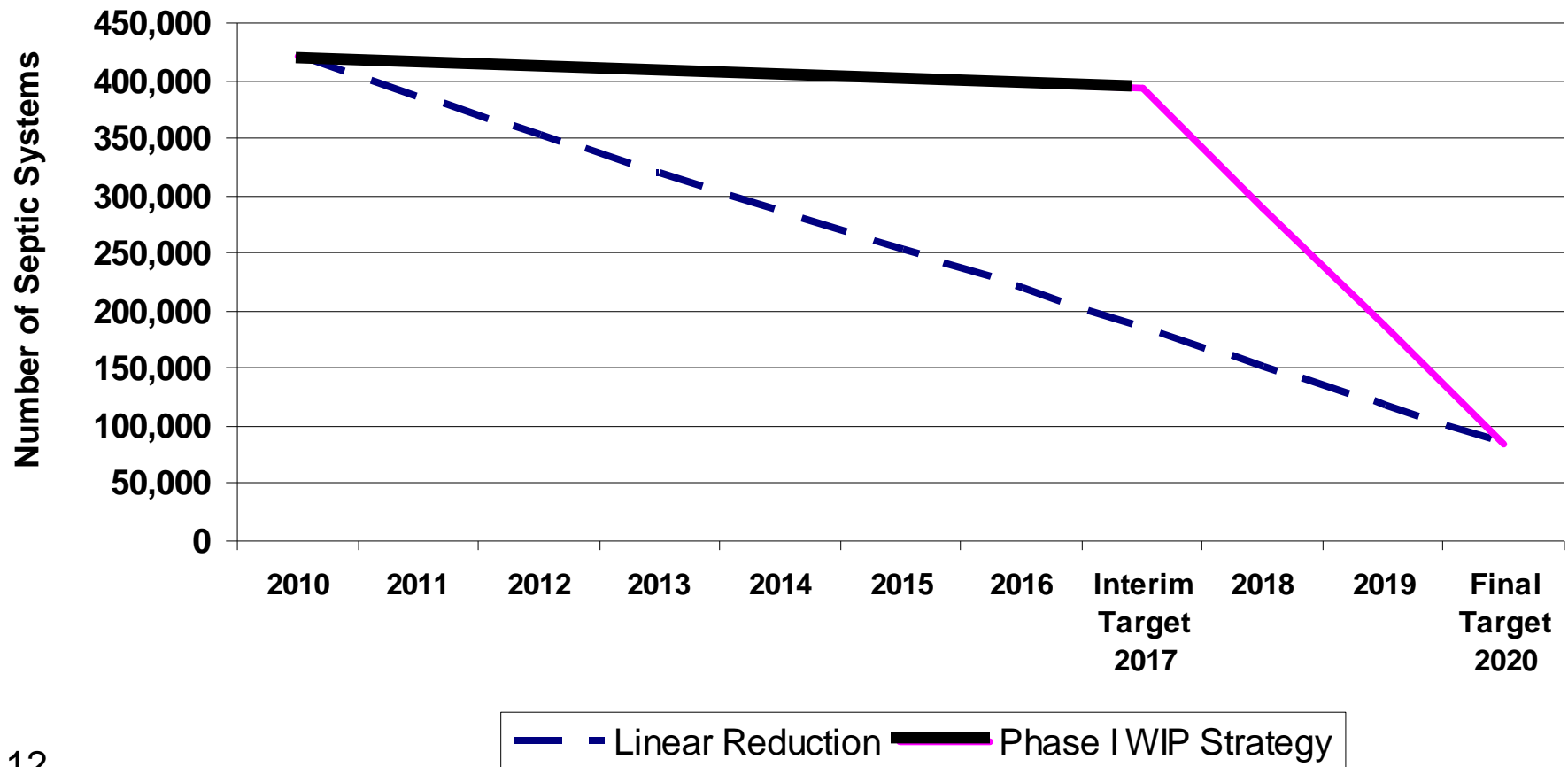
- In 2011, assess options to phase in a requirement to retrofit all septic systems in the Critical Area using best available technology.
- Assess the viability of tax credits, income-based criteria for grant eligibility and other means to facilitate upgrades.
- Initiate Phase-in in 2012

Numbers of Maryland Septic Systems in the Bay Watershed

Zone	Number of Septic Systems
Critical Area	46,300
1000 feet of Stream	134,800
Other	237,500
Total	418,600

Phase I WIP Slow Pace

- Final Allocation calls for 39% Reduction:
 - This is equivalent to upgrading about 78% of systems.
- Critical Area septic systems represent only about 10% of the systems statewide.



Issues to Consider for Septic Systems

- Implications of Slow Pace in Phase I:
 - Phase II WIP needs a greater pace of upgrades
 - Phase II WIP 2017 strategy needs upgrades outside of Critical Area.
- If only 78% of systems upgrade, which ones do and which ones don't upgrade? What are the funding implications?
- Phase II WIP needs to commit to a *process* for resolving these issues.
- Addressed by statewide strategy, by separate local solutions or hybrid?

Sample Alternatives to Explicit Septic Reductions

- Fee-in-Lieu of Upgrades:
 - Fees are used to purchase reduction credits
 - Fees would be less than \$13k upgrade cost
- On-Farm Offsets:
 - Farmers generate their own credits
- Rural Reforestation as an Offset:
 - The reduction from converting one acre of lawn to forest is close to the reduction from a septic system upgrade.

Discussion

