Virginia Draft Phase I WIP:
"Reality or Fantasy by 2025"

Presentation to
Water Resources Technical Committee

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Virginia Draft Phase I WIP Overview

- Statewide approach:
  - Source sector allocations
  - Proposed allocations broken out by Major Basin segment
- Identified two target time frames:
  - 60% interim target by 2017
  - 100% target by 2025
- Focus on nutrients:
  - Achievement of sediment allocations assumed by nutrient reduction actions
- "*Adaptive Management*" is heart of document:
  - Development of Expanded Chesapeake Bay Nutrient Credit Exchange Program
  - Gap Analysis by major sector to close 2017 and 2025 gap

Virginia Draft Phase I WIP Overview

- Guiding Principles:
  - Adopted by Virginia Stakeholder Advisory Group
    - Equity
    - Cost-Effectiveness
    - Credit Past Progress
    - Reasonableness and Feasibility to Implement
    - Meet Reasonable Assurance Guidelines
    - Incorporating Future Actions
    - Course Correction in 2017
    - Determine Best Use of Trading, Credits, Exchanges
    - High Expectations for Federal Lands

Preliminary Source Sector Allocations

Nitrogen - 2025 (Million Pounds/Year)

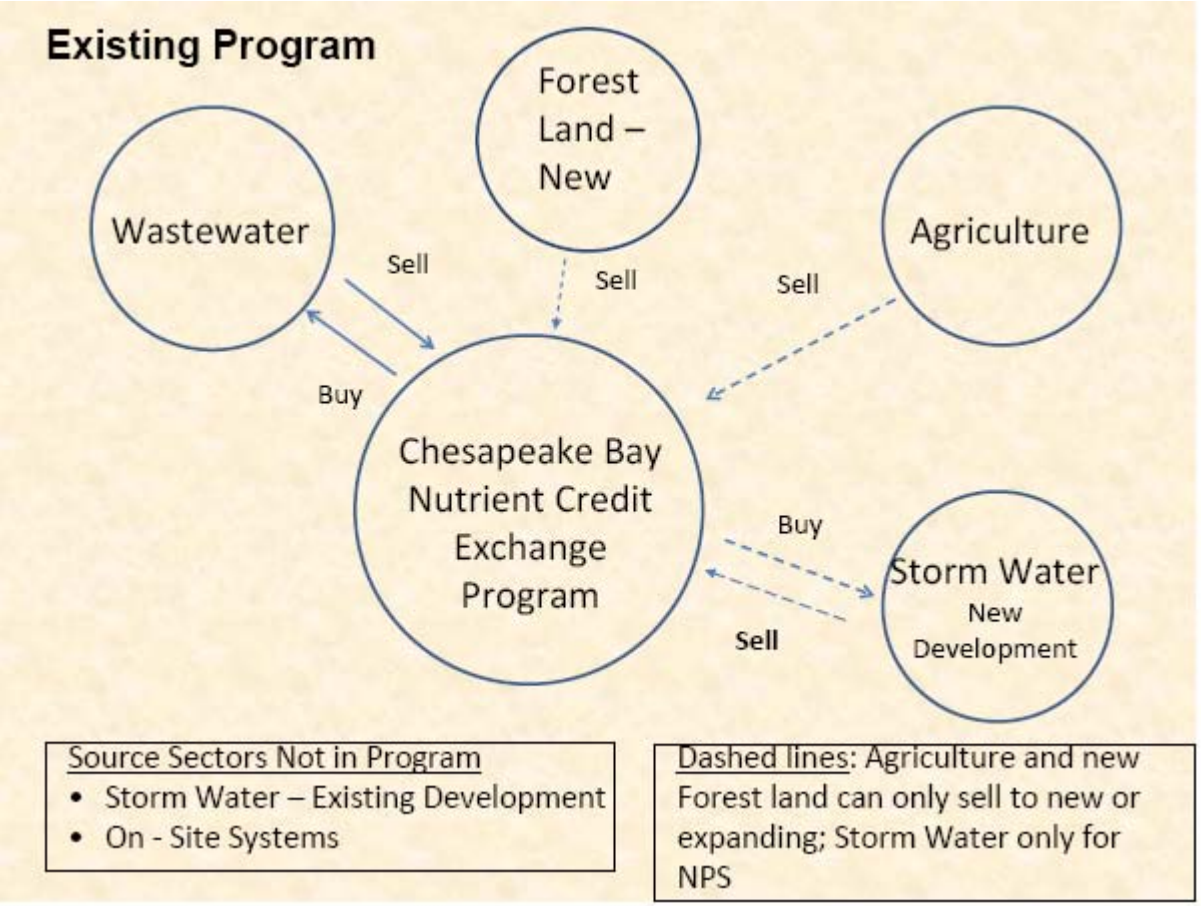
Source Sector	Potomac	Rapp	York	James	E Shore	VA TOTAL
Agriculture	6.979	2.787	1.548	4.171	0.906	16.391
Urban Runoff	2.269	0.167	0.329	1.100	0.050	3.915
Wastewater	3.756	0.593	1.193	14.770	0.082	20.394
On-Site	0.597	0.322	0.487	0.440	0.076	1.922
Forest	4.122	1.898	1.764	5.993	0.162	13.939
Non-Tidal Dep	0.102	0.073	0.089	0.316	0.032	0.612
Total	17.825	5.840	5.410	26.790	1.308	57.173
Allocation	**17.46**	**5.840**	**5.410**	**23.480**	**1.210**	**53.400**

Preliminary Source Sector Allocations

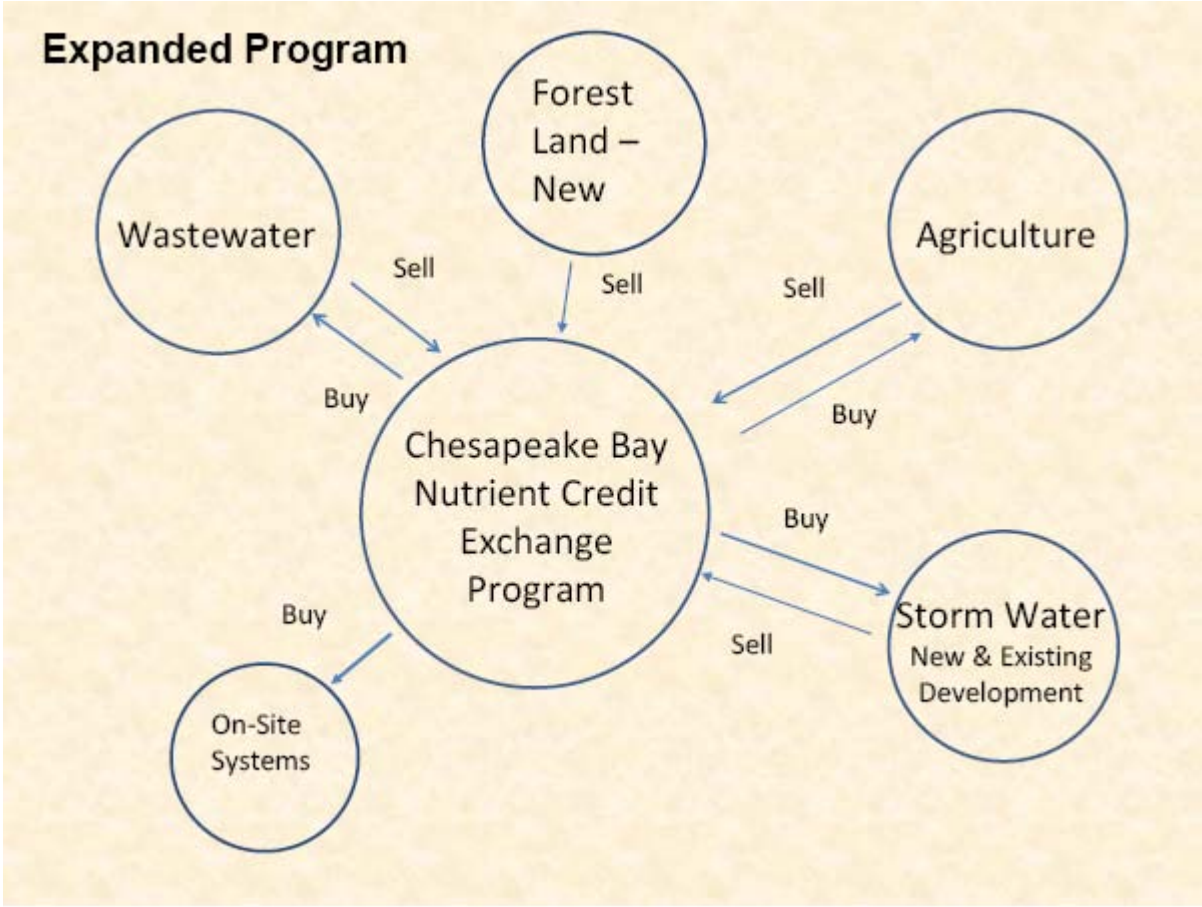
Phosphorus - 2025 (Million Pounds/Year)

Source Sector	Potomac	Rapp	York	James	E Shore	VA TOTAL
Agriculture	0.638	0.555	0.175	0.678	0.100	2.146
Urban Runoff	0.267	0.079	0.025	0.150	0.009	0.380
Wastewater	0.280	0.069	0.199	1.276	0.008	1.832
On-Site	0.000	0.000	0.000	0.000	0.000	0.000
Forest	0.204	0.185	0.131	0.555	0.015	1.090
Non-Tidal Dep	0.008	0.007	0.010	0.031	0.002	0.058
Total	1.397	0.895	0.540	2.690	0.134	5.656
Allocation	**1.470**	**0.900**	**0.540**	**2.340**	**0.140**	**5.410**

Existing Nutrient Credit Exchange Program



Expanded Nutrient Credit Exchange Program



Virginia Draft Phase I WIP – Urban Stormwater Accounting for Growth: New Development

- Tier 1:
  - Develop generic pre-development per-acre load: [avg. of allocation loads for forest, cropland and hay]
  - New Development Load = Pre-development load through combination of site planning, BMPs and nutrient exchanges.
- Tier 2:
  - Identifying, promoting and requiring through regulatory mechanisms practices minimizing developments impacts.

Virginia Draft Phase I WIP
Urban Stormwater Retrofits

- Issues:
  - Draft final nonpoint source BMP input deck submitted to EPA from DCR set the Urban and Septic Sector BMP implementation at E3.
  - There is no BMP implementation input deck from which the Commonwealth evaluated its meeting the EPA Major Basin sector allocations for Nitrogen and Phosphorus.
  - Because there is no input deck matching the Sector Tables submitted in the WIP, can only guess at this point what stormwater BMP implementation levels will be necessary to meet the sector allocations in the VA Potomac. Based on the trends for the L2 and L3 model runs, significantly higher percentages will be involved.

Virginia Draft Phase I WIP
Urban Stormwater Retrofits

Land Use Category	High Efficiency BMP Retrofits by 2025 % of Available Existing Land	
	Level 2	Level 3
High Intensity Impervious	25%	50%
Low Intensity Impervious	20%	40%
High Intensity Pervious	10%	20%
Low Intensity Pervious	10%	20%

Resulting Nitrogen Load VA Potomac (million lbs/year)		
Level 2	Level 3	WIP
2.569	2.467	2.269
Resulting Phosphorus Load VA Potomac (million lbs/year)		
Level 2	Level 3	WIP
0.276	0.257	0.267

For Both Levels 2 and 3:

- New Urban Development – no increase in load due to growth
- Urban Nutrient Management 522,000 acres

Virginia Draft Phase I WIP
Urban Stormwater – Strategy to Fill Gaps

- Strengthen the agricultural and forestry exceptions in the existing E&S Law and Chesapeake Bay Preservation Act.
- Creation of a state administered stormwater management BMP cost share program in coordination with local funding mechanisms to implement water quality and quantity BMPs.
- Stricter local ordinances should be considered to prohibit improper disposal of yard waste, grass clippings, and leaf litter to prevent these sources of nutrients from entering storm drains.
- Consider requiring all municipal / county owned nonagricultural lands receiving nutrients to develop, implement and maintain nutrient management plans.

Virginia Draft Phase I WIP
Urban Stormwater – Strategy to Fill Gaps

- Investigate sales restrictions on do-it-yourself non-agricultural lawn and turf fertilizers.
- Consider prohibiting the use of nitrogen containing deicers on paved surfaces
- Consider requiring proper storage and disposal of non-agricultural fertilizers by retailers to prevent nutrient losses to ground and surface waters.
- On developed land actions to achieve reductions through future permits and other means including the Nutrient Credit Exchange Program.
- New and redeveloped federal facilities will be required to manage post construction stormwater to preserve and restore site hydrology and implement BMPs necessary to control the discharge of pollutants in stormwater to the maximum extent practicable.

Virginia Draft Phase I WIP
Urban Stormwater – Contingencies

- Reducing post development loads on new development through stormwater management to the maximum extent practicable and any more stringent requirements necessary to meet water quality standards.
- New post development loads to be lower than the transferred load allocation prior to development.
- Modifying redevelopment criteria to require a level of nutrient reduction greater than the 20% P reduction.
- Consider establishing impervious cover limits or open space requirements that preserve and restore site hydrology or implement BMPs necessary to control the discharge of pollutants in stormwater to achieve an equivalent level.
- Establish requirements for enhanced vegetation and plantings within required open space and pervious areas to boost function of pervious areas.

Virginia Draft Phase I WIP
Urban Stormwater – MS4 Issues

- MS4 area calculation assumes 100% area under jurisdictional control.
- MS4 area calculation appears to include that land associated with VDOT; load share may be estimated in future phase.
- There are no reductions from estimated present day loads for industrial stormwater. The significance of this, besides the issue of equity, is that DCR must deduct the industrial waste load allocation (WLAs) for facilities within MS4s from the MS4 WLA so the resulting MS4 load will be even higher since the Industrial stormwater loads are at much higher levels than E3.
- The combined sewer system (CSS) numbers submitted in the DEQ input deck do not reflect any reduction associated with taking the stormwater component of CSS down to E3. Again, this impacts the MS4 WLA allocation negatively.
- No discussion of WLA stormwater vs. LA stormwater