In-depth TMDL and Virginia WIP Implementation: *Agriculture & Stormwater*

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April 6, 2011

Costs: **Agriculture**

Reduce Nitrogen 21.6 M to 15.4 M **(6.2 M lbs)**

Reduce Phosphorus 3.08 M to 2.10 M **(980,000 lbs)**

$618 M State & Federal Cost-Shared Practices

$260 M Agricultural Producers Share of Cost

$54 M Technical Assistance Support

Total Projected BMP Cost: $932,000,000 by 2025

NOTE: if more voluntary BMPs, then state cost lower & producer cost higher

Ongoing annual costs after 2025 total $68.5 M ($63 M BMPs and $5.5 M TA)

Goals: **Agriculture/Forestry**

- Extensive resource management plan (RMP) acres:
  - Nutrient management plans, livestock exclusion from streams, 35' stream buffers, soil conservation, cover crops (BMPs 90-95% of crop, pasture and hay land)
- Increasing cost-share dollars (state & federal)
- Vastly improved accounting of voluntary practices
- Evaluate unpermitted AFOs (animal feeding operations)
- Improved implementation and reporting of forestry water quality BMPs
- Successful voluntary – avoid regulatory backstops

Actions: **Agriculture/Forestry**

- Passed law resource management plans; eff. July 1, 2011 : VA Soil & Water Conservation Board regulation
  - Presumption of full compliance; Who can develop RMPs; approval process; implementation schedule; plan life; renewal & compliance audit
- Create voluntary practices accounting system
- NM program for individual education & vol. plans
- Increase Agriculture Stewardship Program staff
- DEQ review all AFOs under federal CAFO rule
- ⬆ $20 M VA Ag BMP Cost-Share FY12 & FY13

Costs: **Stormwater**

Reduce Nitrogen 6.8 M to 6.1 M **(700,000 lbs)**

Reduce Phosphorus 1.20 M to 0.99 M **(210,000 lbs)**

$2.97 B to $5.03 B for existing development retrofit capitol costs

$300 M to $500 M per year O & M costs by 2025 and then ongoing beyond 2025

Development bears cost: new development achieve **no net increase** over existing land use (ag & forest); & 20% redevelopment reduction

Goals: **Stormwater**

- The plan proposes urban nutrient management plans on golf courses, municipally owned lands.
- The plan proposes restrictions on do-it-yourself non-agricultural lawn and turf fertilizers including “P ban”
- The plan proposes a 20% phosphorus reduction standard for areas being redeveloped.
- The plan proposes stormwater retrofits on existing developed lands to reduce nitrogen, phosphorus and sediment.
- For new development, post development loads achieve no net increase over loads of previous land uses
- Federal facilities reduce twice as much

Actions: **Stormwater**

- "Zero" P lawn maintenance fertilizer 2013
- New stormwater regulations: no load increase from new development & 20% less from redevelopment
- MS4 & unregulated urban lands: impervious ↓N 9% & P 16%; pervious ↓N 6% & P 7% (~25% area)
- Nutrient mgmt plans on golf courses & municipal lands
- No N or P in deicing agents
- Lawn maintenance contractors certify & report acres
- Increased citizen fertilizer use education & labeling
- Study of slowly available N in lawn fertilizer 2011

Future Dates and Expected Actions

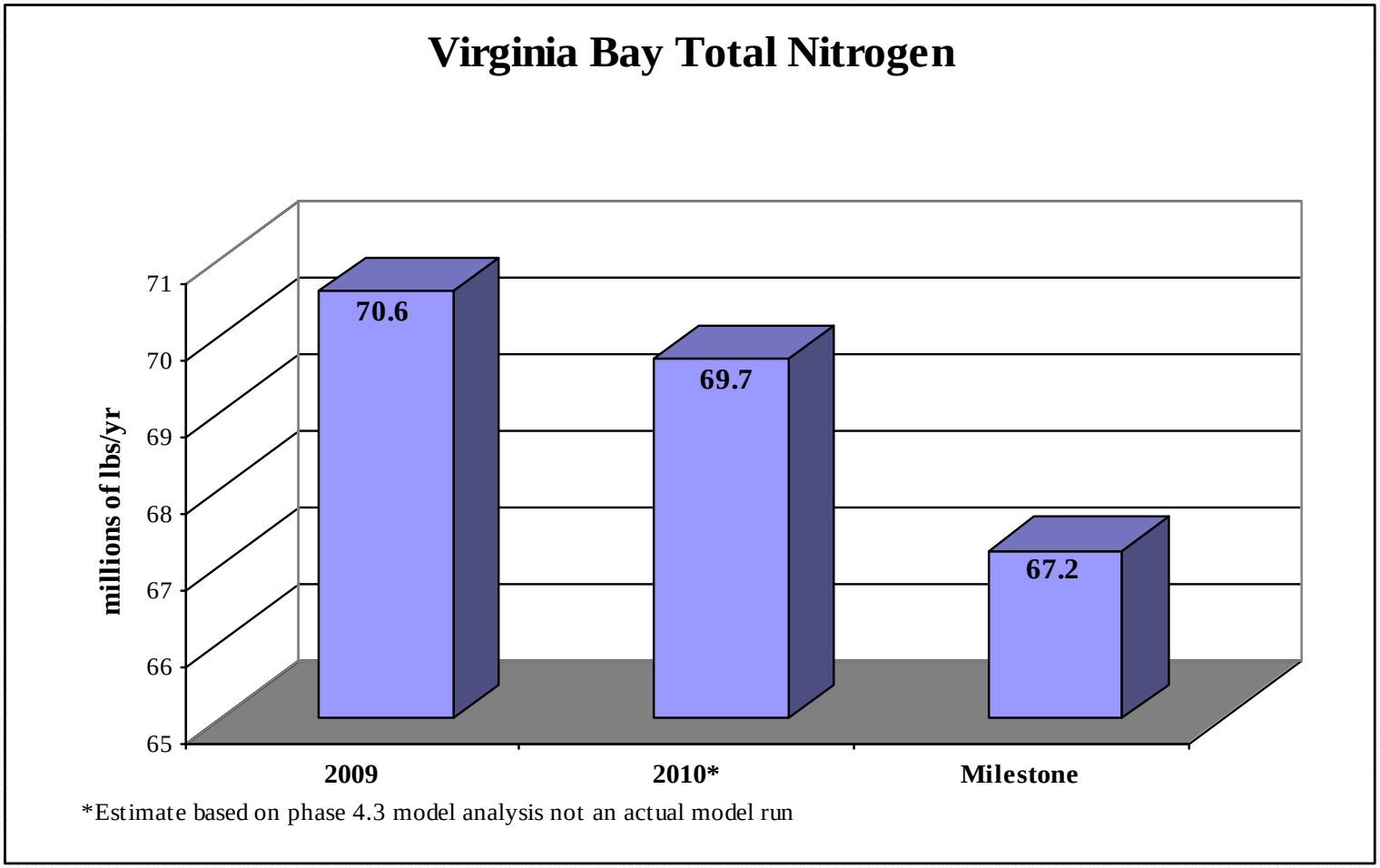
Expected in 2011 & 2012:

- EPA model corrections & improvements on agriculture and stormwater BMP calculation – treatment train, new practices
- States develop Phase II WIPS; draft 2011 & final 2012
- Modifications of TMDL allocations by EPA by 15 Dec 2011
- VA establish 2012-13 milestone goal and actions; other milestones 2014-15 and 2016-17

Expected in 2017:

- Modifications of the TMDL allocations by Dec 2017
- Adjust allocations according to progress on state plans
- States submit Phase III WIPS (2017 – 2025)

Status of 2011 Virginia Bay Nitrogen Milestone



Example Milestone BMPs

- Cover Crops 2009 - 53,946 acres or 45% of goal
- Cover Crops 2010 - 93,094 acres or 78% of goal
- CNT 2010 - 95,382 acres or 118% of goal
- Forested Buffers 2010 - 18,028 acres or 78% of goal
- Urban NM 2010 - 21,224 acres or 16% of goal
- Septic System Pumping 2010 - 28,109 far exceeds goal of 806 systems pumped annually