

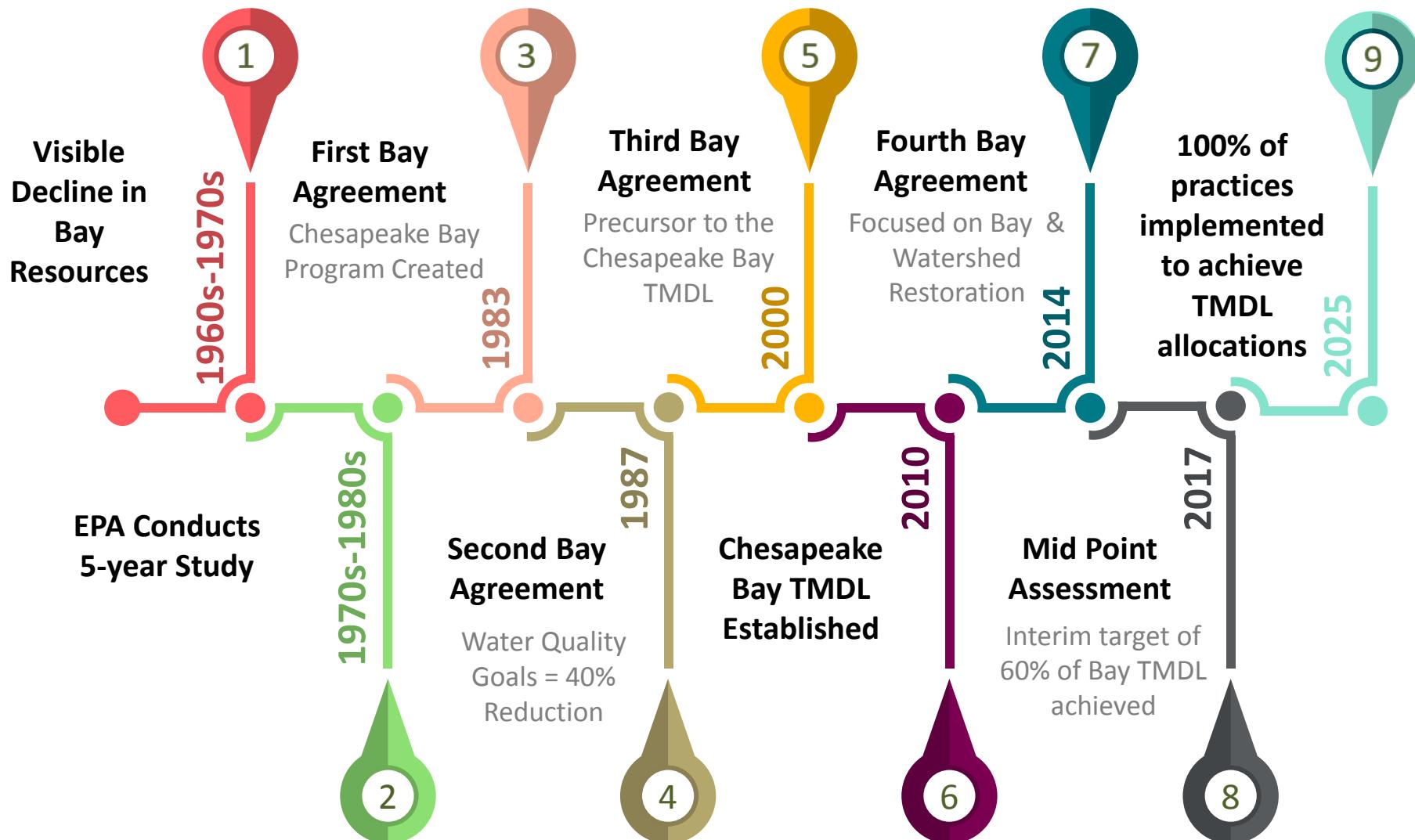
Chesapeake Bay TMDL update

Presented to
HRPDC
November 16, 2017

Whitney Katchmark, P.E.
Principal Water Resources Engineer
Hampton Roads Planning District Commission

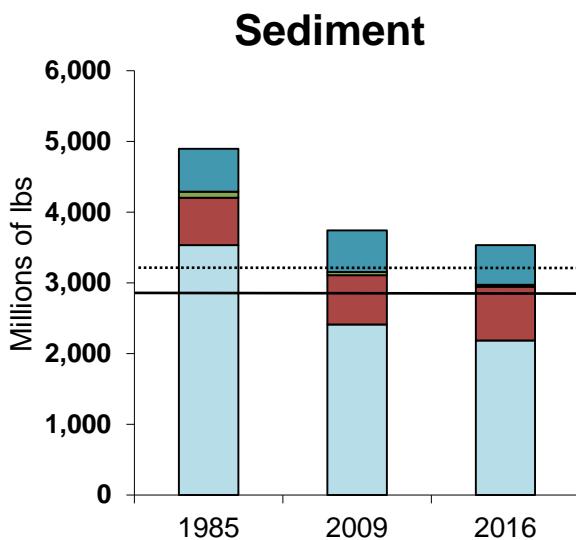
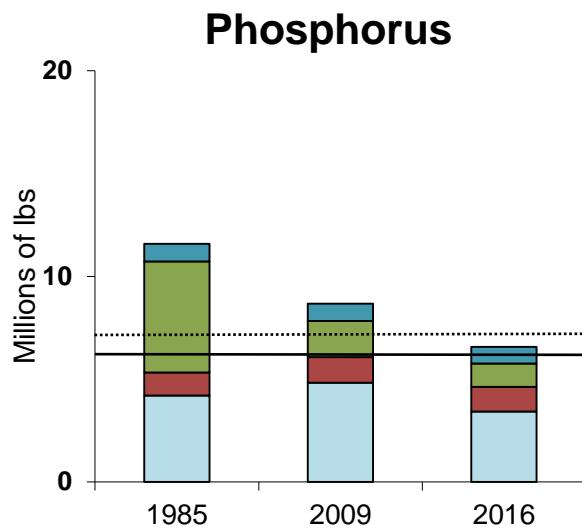
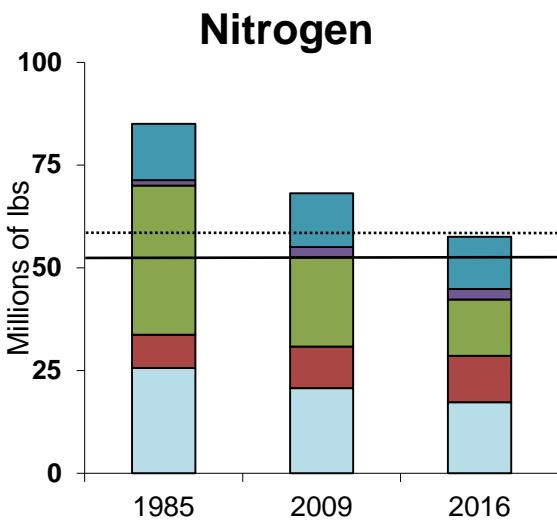


Chesapeake Bay Restoration: 50-year History & Look Forward



Virginia's Simulated Pollution Loads Delivered to the Bay (million pounds/year)

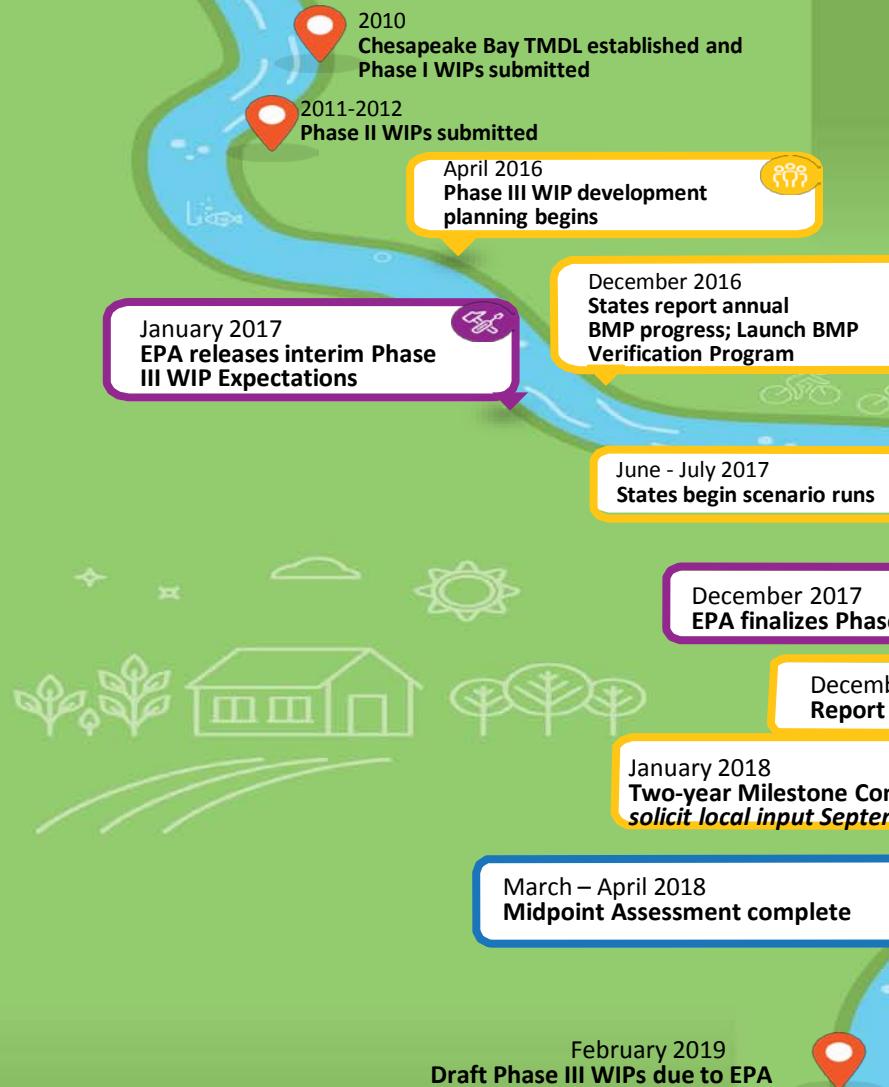
Midpoint Targets for Nitrogen and Phosphorus are being met



Dash Lines = 2017 Target
Solid Lines = 2025 Target

- Forest + Atm. Deposition
- Septic
- Wastewater
- Urban Runoff
- Agriculture

Local Government Engagement and Communication during the Chesapeake Bay Midpoint Assessment and Phase III WIP Development (April 2016–June 2019)



Key dates in Bay TMDL process

Key activities or information that needs to be communicated to local governments or others

Key activities requiring local government engagement

Guidance for Phase III WIP development released

2025 100% of practices in place to meet Bay restoration goals set by TMDL

June - August 2018 States develop local planning goals

December 2018 States report annual BMP progress; Verification programs in place

June 7, 2019 Final Phase III WIPs due to EPA

Spring 2017 States finalize initial local engagement strategy; Water quality monitoring trends released; Milestone Evaluation complete

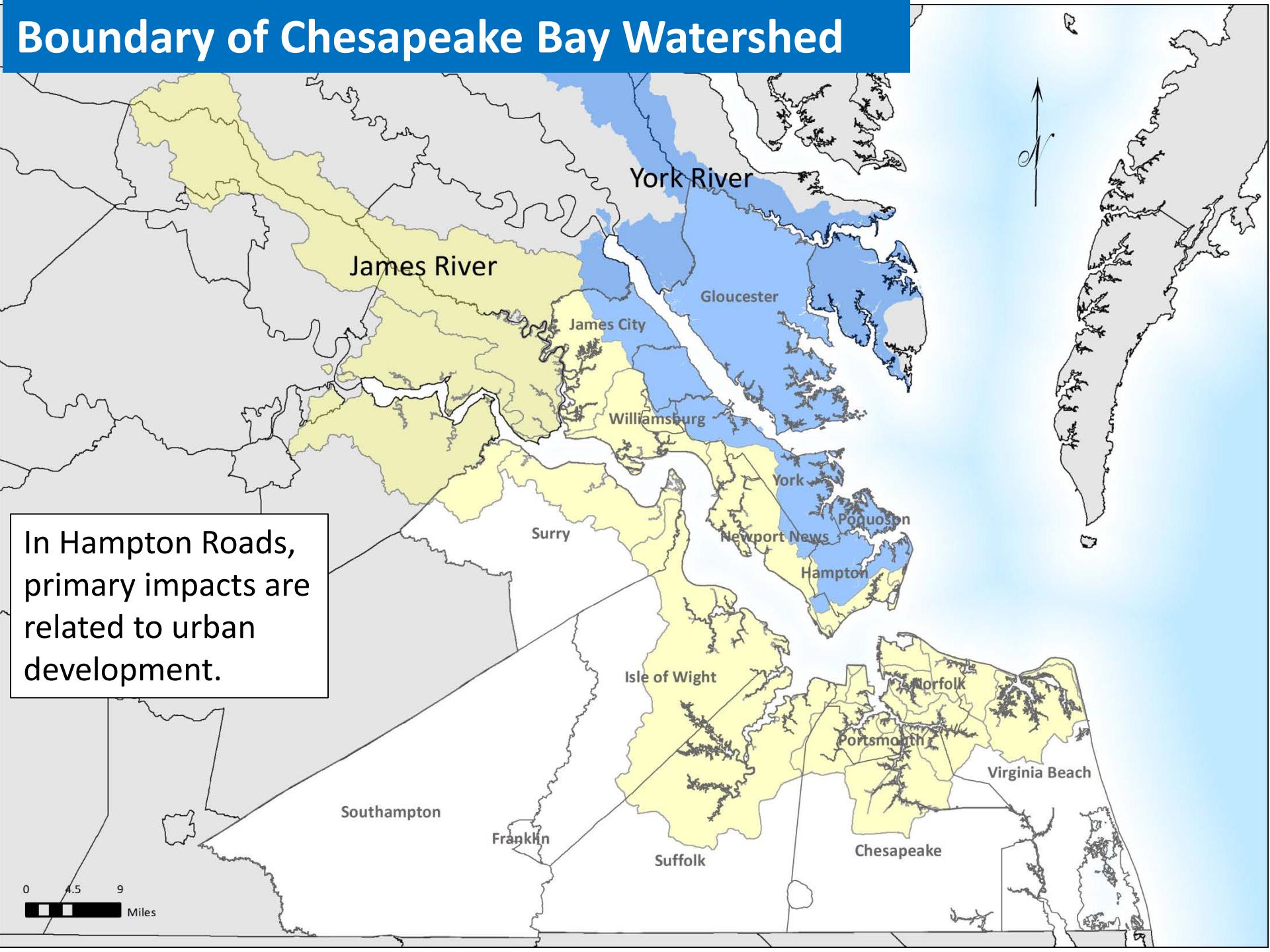
November 2017 Partnership finalizes modeling tools

December 22, 2017 EPA releases draft Phase III WIP planning targets

November-December 2017 States present local engagement strategy to CBP leadership

May 2018 EPA finalizes Phase III WIP planning targets

Boundary of Chesapeake Bay Watershed



2010: TMDL Established

Two Strategies proposed to reduce Stormwater Loads

Reduce Future Nutrient Loads

- New Development and Redevelopment will increase nutrient loads by creating impervious area & lawns.
- New regulations set criteria to make future development “nutrient neutral”.

Reduce Existing Nutrient Loads

- Impervious areas and lawns already deliver too much nutrients to waterways.
- MS4 permits will require localities to build BMPs that remove nutrients from stormwater before it reaches waterways.



MS4 Retrofits: Rough Cost Estimates

| Locality | Total Cost over 15 years | Locality | Total Cost over 15 years |
|----------------------|--------------------------|-------------------|--------------------------|
| Chesapeake | \$255M | James City County | \$87M |
| Hampton | \$198M | Poquoson | \$14M |
| Newport News | \$224M | Suffolk | \$109M |
| Norfolk | \$280M | Williamsburg | \$18M |
| Portsmouth | \$125M | York County | \$94M |
| Virginia Beach | \$323M | Gloucester County | \$33M |
| Isle of Wight | \$40M | Surry County | \$7M |
| Hampton Roads | \$1.8B | | |

2017: TMDL Midpoint

MS4 Permits with Bay Requirements

- New stormwater regulations went into effect and locality ordinances updated to implement.
- New MS4 permits with Bay Requirements issued.
- Stormwater Local Assistance Fund created.

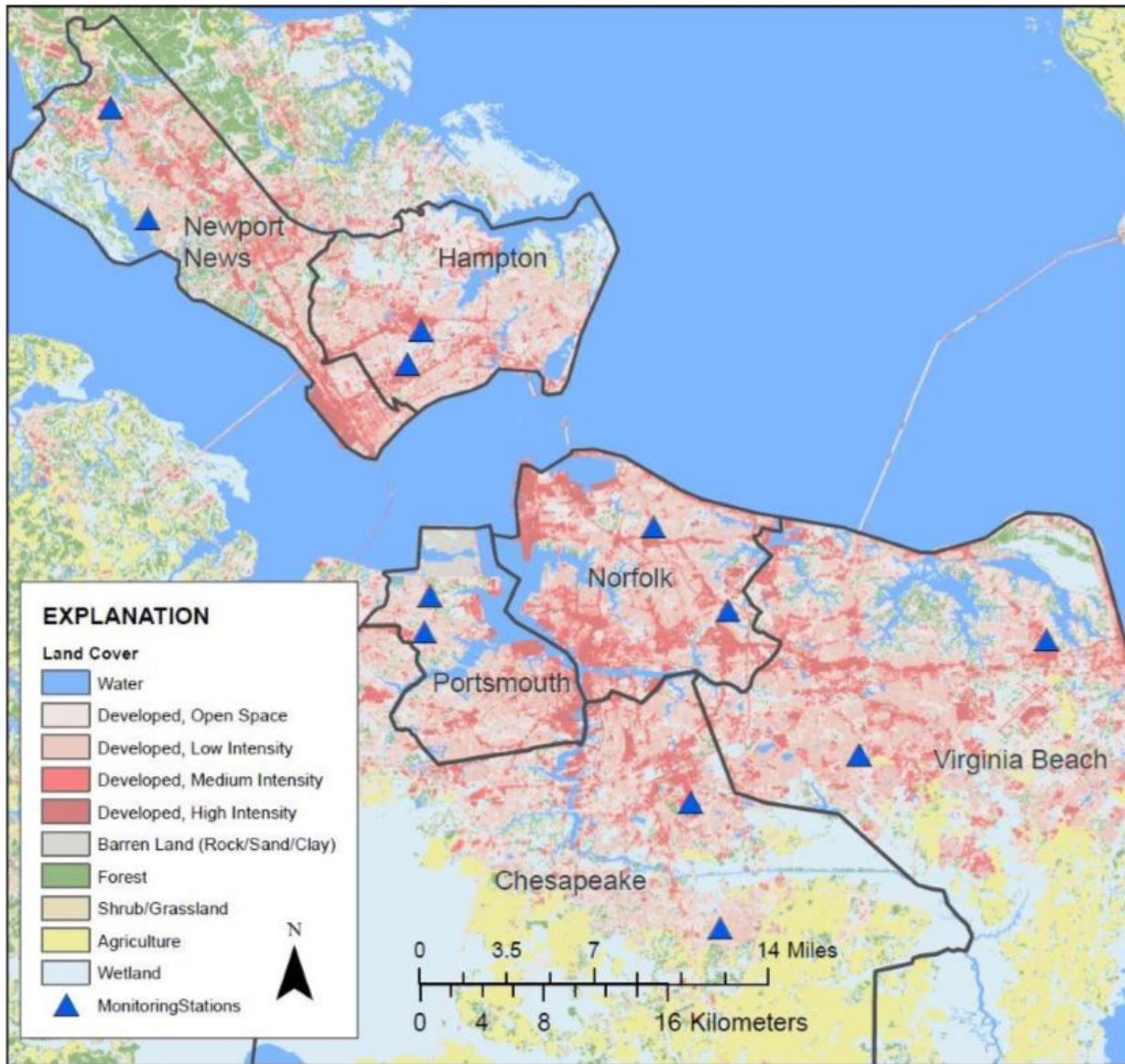


- MS4 retrofit requirements can be met through trading with HRSD.
- Localities signed Memorandums of Understanding providing credits until 2036.
- Localities can pivot to focus on stormwater infrastructure maintenance, flooding and local water quality problems.
- Stormwater fees won't be reduced but avoided the increases required to construct retrofits.

Hampton Roads grants from
Stormwater Local Assistance Fund

| Year | Number of Projects | Awards (\$M) |
|-------|--------------------|--------------|
| FY14 | 26 | \$6.9 |
| FY15 | 25 | \$4.9 |
| FY16 | 6 | \$3.8 |
| FY17 | 12 | \$4.5 |
| Total | 69 | \$20.1 |

The Urban Monitoring Network



2025: TMDL Deadline

No Significant Changes Expected

- Virginia DEQ does not intend to revise the stormwater regulations for development or alter the MS4 requirements related to the Chesapeake Bay TMDL.
- However, MS4 permits will be renewed several times before 2025 which creates an opportunity to change locality requirements.

| Permittee | 1 st Permit Cycle 5% Removal | 2 nd Permit Cycle 35% Removal | 3 rd Permit Cycle 60% Removal |
|---|--|---|---|
| Phase I MS4s: Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, and Virginia Beach | July 1, 2016 – June 30, 2021 | July 1, 2021 – June 30, 2026 | July 1, 2026 – June 30, 2031 |
| Phase II MS4s: James City County, Poquoson, Suffolk, Williamsburg, York County | July 1, 2013 – June 30, 2018 | July 1, 2018 – June 30, 2023 | July 1, 2023 – June 30, 2028 |

2025: TMDL Deadline

Uncertainty

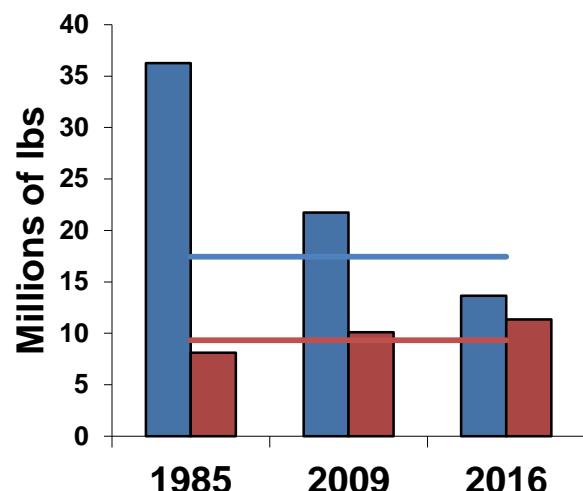
Virginia met the Midpoint Assessment state-wide target:

Success due to Wastewater sector

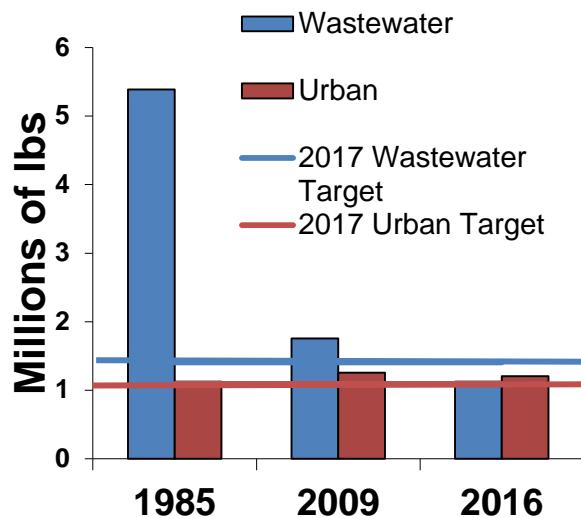
Urban sector did not make targets

No identified plan to bolster the urban sectors load reduction strategies.

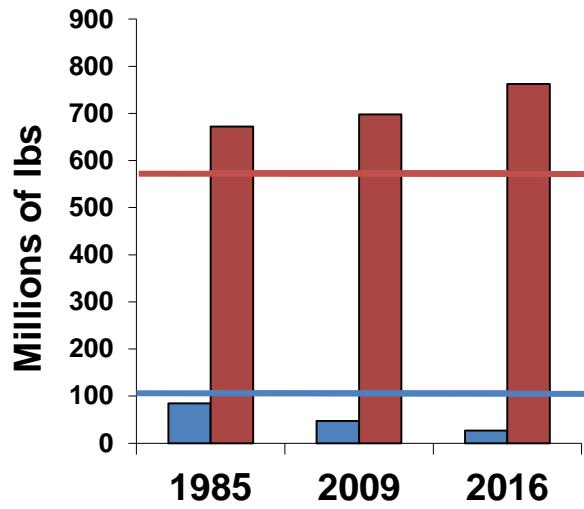
Nitrogen



Phosphorus



Sediment



Local Engagement

- Update focused on the impacts of the Chesapeake Bay TMDL on localities based on enforceable requirements.
- Expect DEQ to ask localities to offer input on the Phase III Watershed Implementation Plan.
 - Localities could report retrofits implemented to address local water quality and flooding issues.
 - Might promote private property BMPs and retrofits implemented by non-profit watershed groups.
 - Offer to promote state cost share program for parcel scale BMPs called Virginia Conservation Assistance Program