

The background of the slide is white and is decorated with numerous realistic water droplets of various sizes. Some droplets are at the top, some are in the middle, and some are at the bottom, creating a fresh and clean aesthetic.

CHESAPEAKE BAY COMMISSION

URBAN STORMWATER:

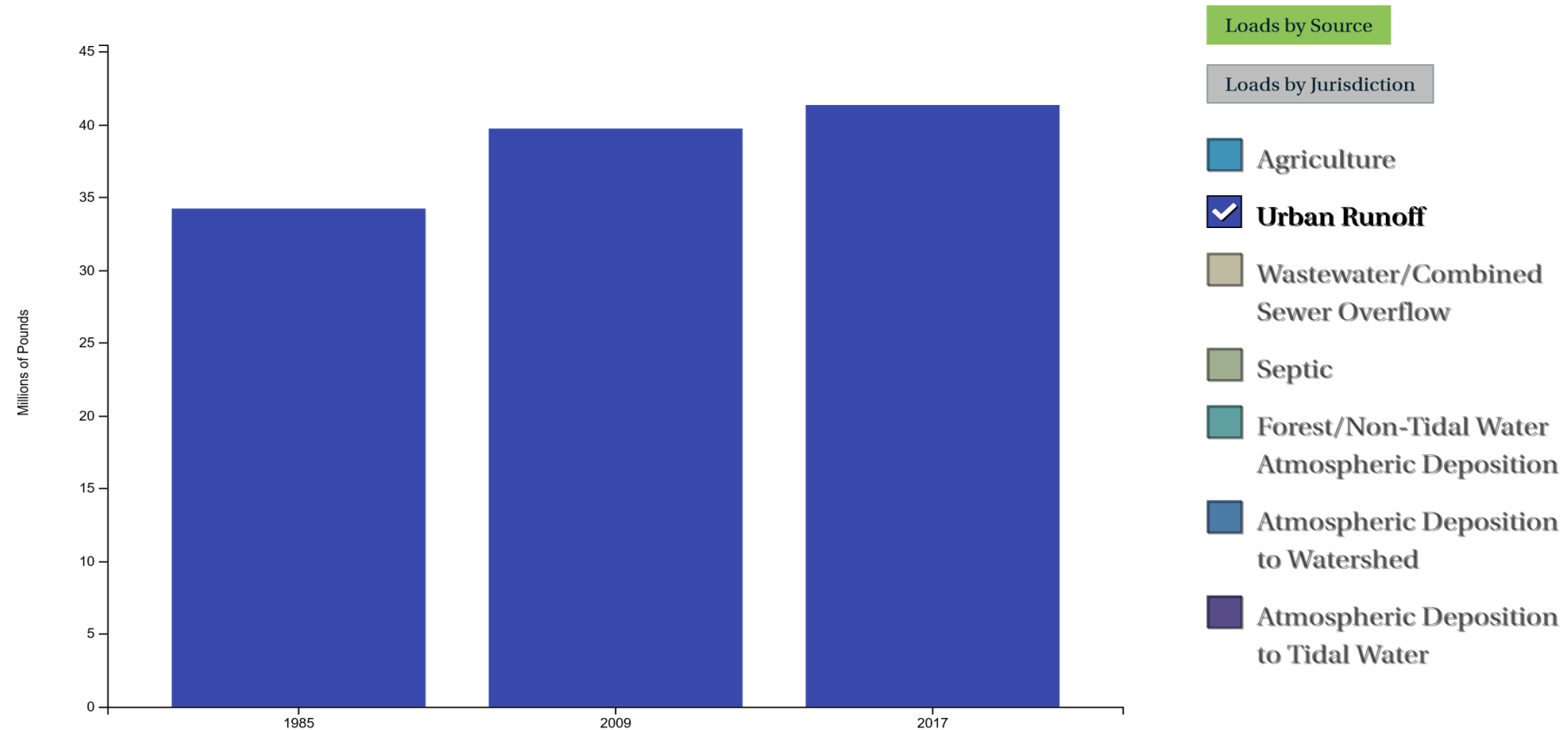
REDUCING LOADS FROM A GROWING SOURCE

NORM GOULET

NORTHERN VIRGINIA REGIONAL COMMISSION &
CHESAPEAKE BAY PROGRAM URBAN STORMWATER WORKGROUP CHAIR

Modeled Nitrogen Loads to the Chesapeake Bay (1985-2025)

Loads simulated using Watershed Model (Phase 5.3.2) and jurisdiction-reported data on wastewater discharges.

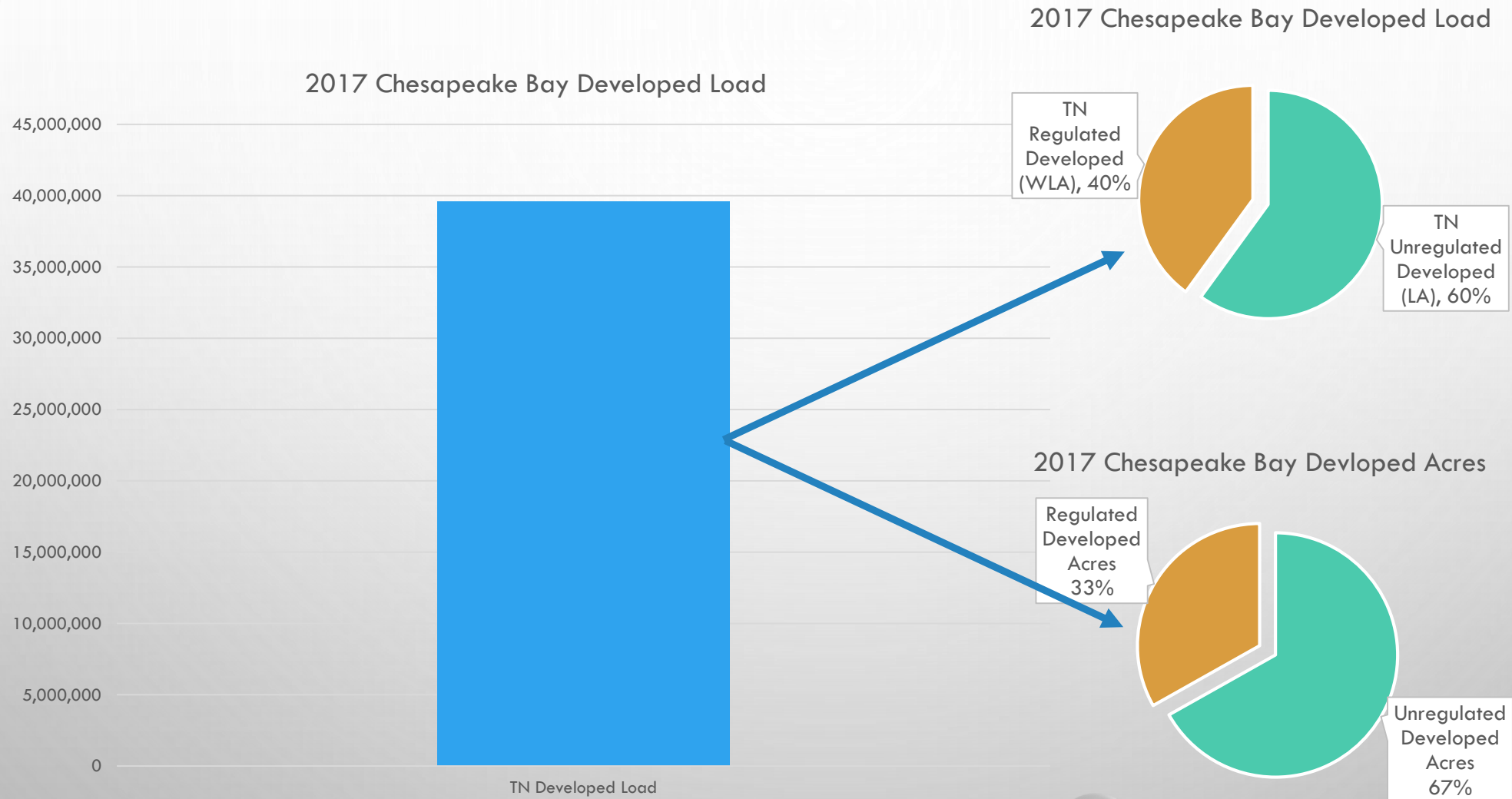




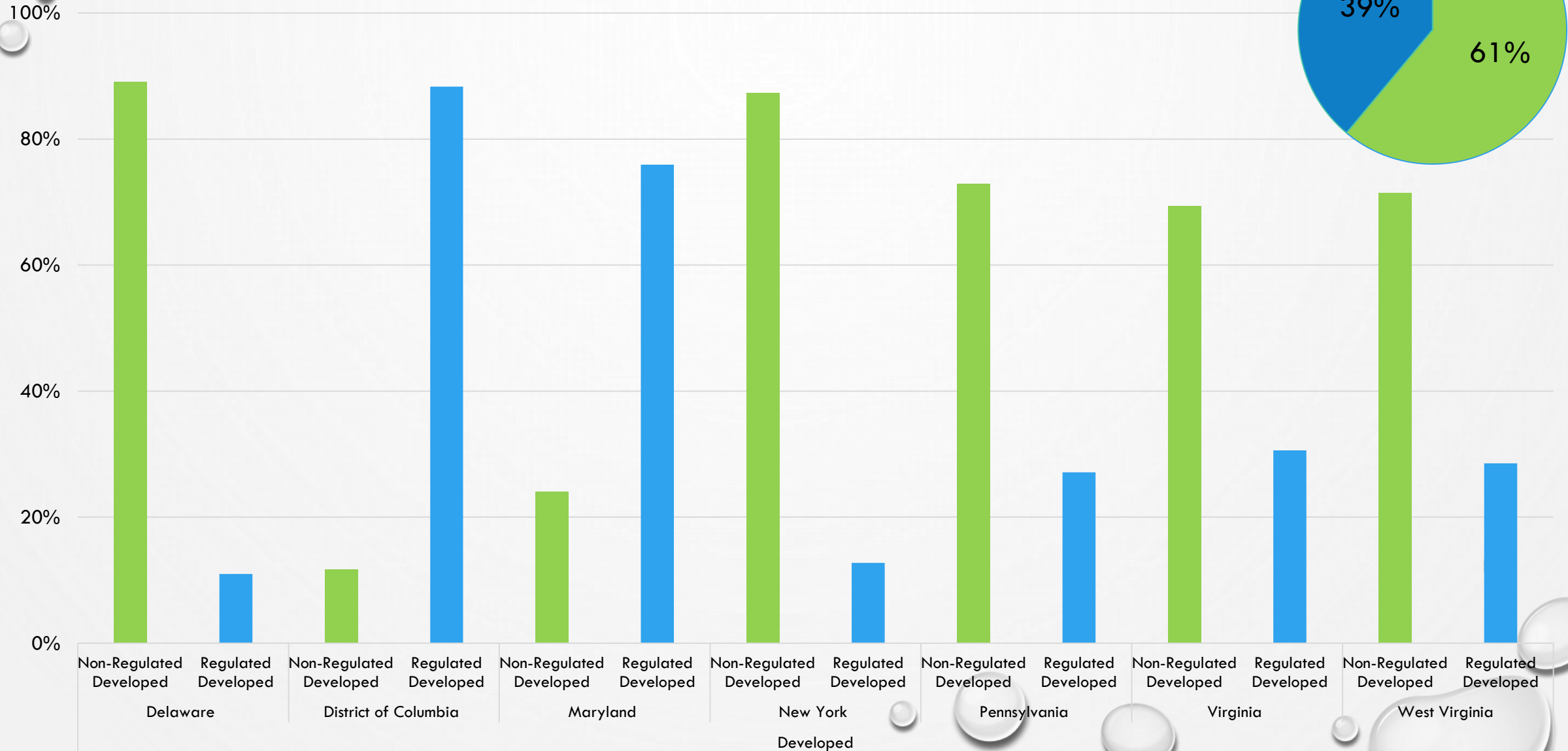
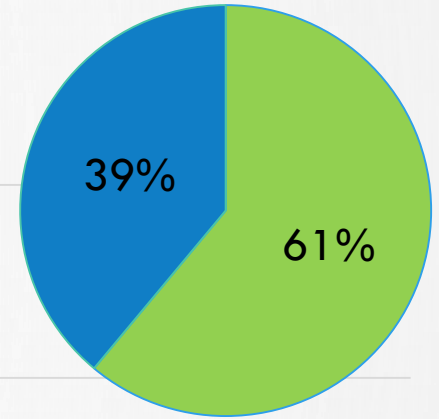
URBAN STORMWATER PROGRESS

- **NOT ALL DEVELOPED IS CREATED EQUAL**
 - CHEMISTRY MATTERS
 - IS IT REALLY A DEVELOPED LOAD
 - CAPACITY
- 

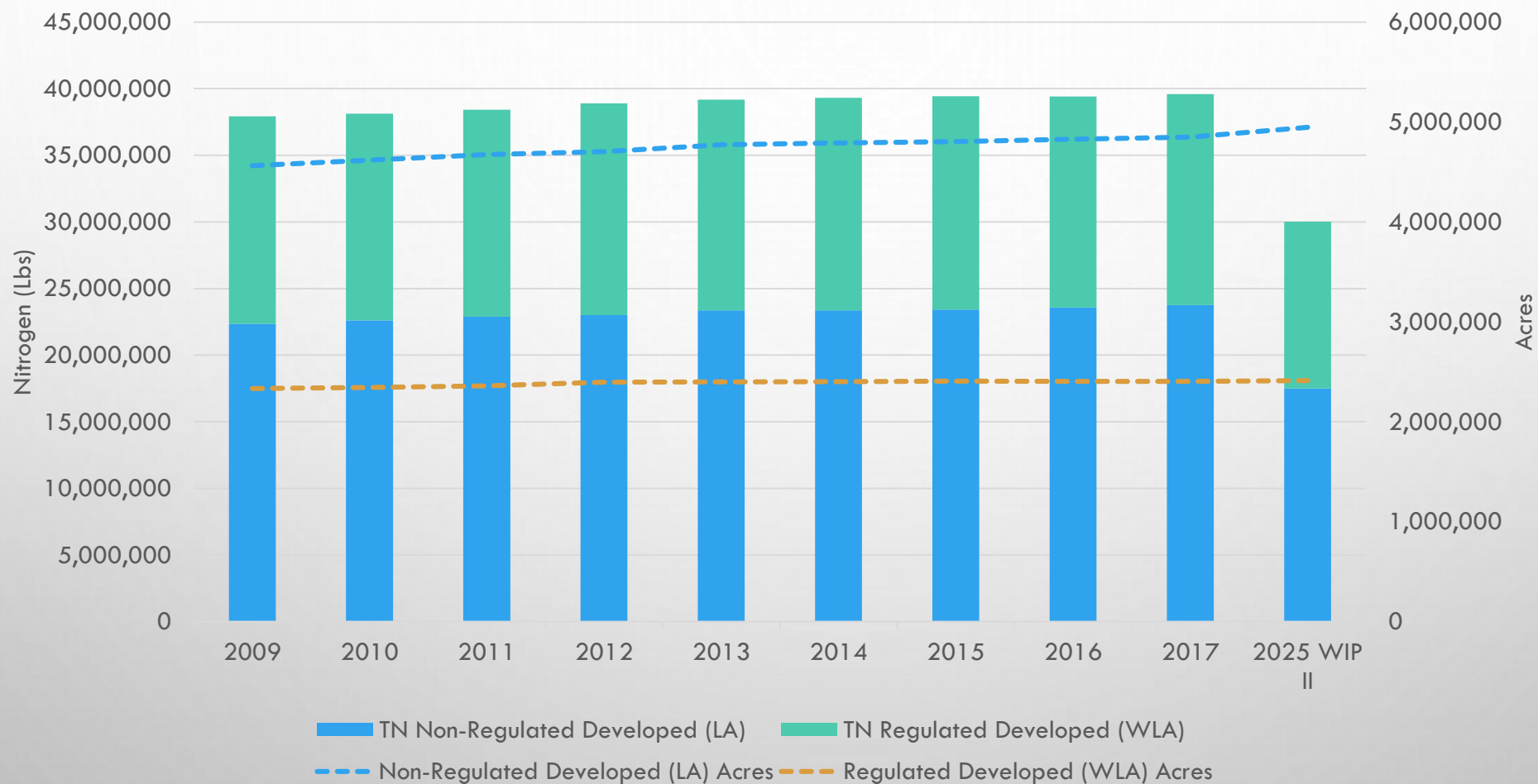
LOOKING A BIT DEEPER



Regulated / Non-Regulated Developed by 2025



CHESAPEAKE BAY DEVELOPED NITROGEN LOADING TRENDS



CHESAPEAKE BAY DEVELOPED PHOSPHORUS LOADING TRENDS



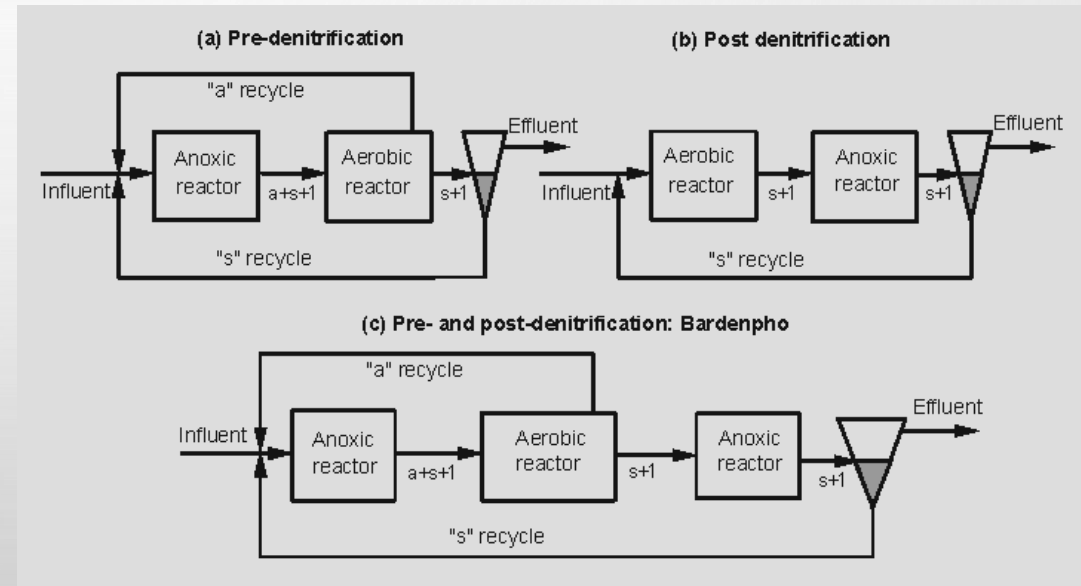
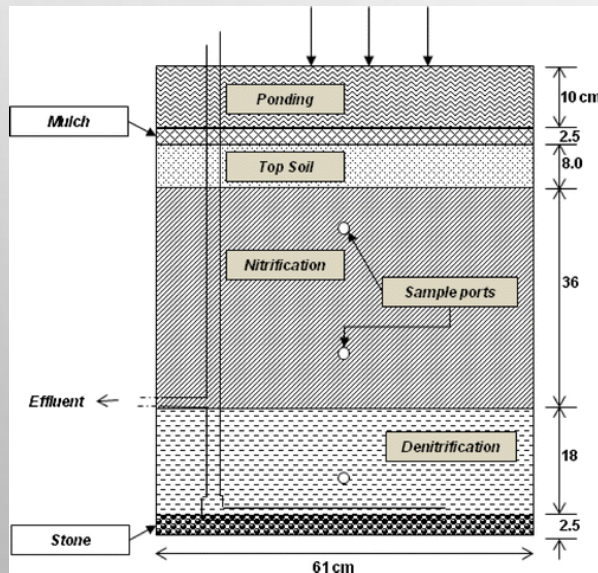


URBAN STORMWATER PROGRESS

- NOT ALL DEVELOPED IS CREATED EQUAL
 - **CHEMISTRY MATTERS**
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 - CAPACITY
- 

CHEMISTRY MATTERS

- STORMWATER TREATMENT STILL LOOKING FOR ITS MAGIC BULLET
 - LIMITATIONS ON VOLUME RETAINED
 - LIMITATIONS ON RETENTION TIME
 - NOT ALL NITROGEN CHEMISTRY AVAILABLE



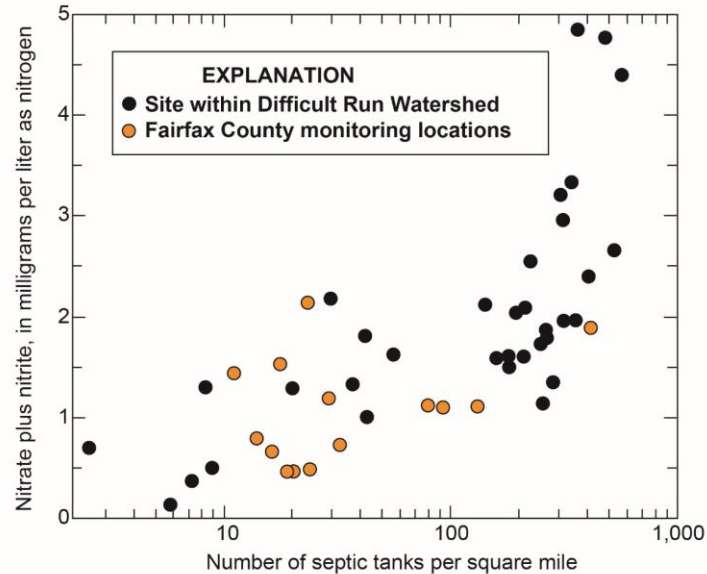


URBAN STORMWATER PROGRESS

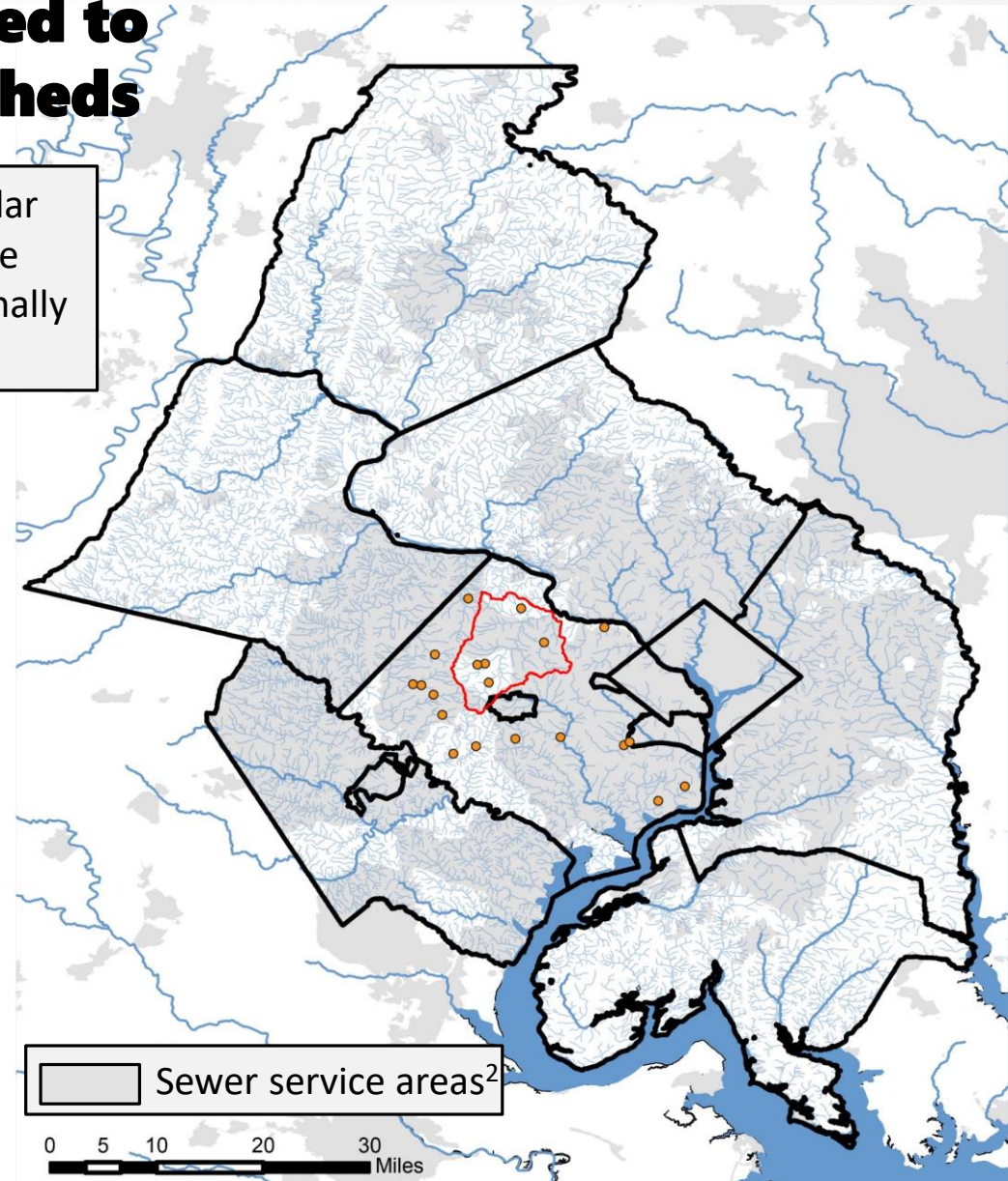
- A GROWING SOURCE - NOT ALL DEVELOPED IS CREATED EQUAL
 - CHEMISTRY MATTERS
 - **IS IT REALLY A DEVELOPED LOAD?**
 - CAPACITY
- 

TN: Diffuse wastewater inputs can be important sources of nitrogen delivered to streams from urban watersheds

Fairfax county monitoring locations had a similar septic-nitrate relation and suggest that diffuse wastewater from septic systems may be a regionally important source of nitrogen to streams¹.



There are approximately 131,000 septic tanks within the COG region².





URBAN STORMWATER PROGRESS

- NOT ALL DEVELOPED IS CREATED EQUAL
 - CHEMISTRY MATTERS
 - IS IT REALLY A DEVELOPED LOAD
 - **CAPACITY**
- 

LOCAL GOVERNMENT CAPACITY

**Even if you gave
me a billion
dollars
tomorrow.....**

The wheels of government turn slow

- Capital improvement budgets multi-year increments
- Design to permits to construction takes years

Programmatic Resource Limitations

- Staffing capacity
- Qualified design engineers
- Qualified construction companies
- Programmatic capacity

Policy Consideration

- Unregulated Localities
 - Incentives
- Regulated Localities
 - Disincentives/Incentives