

# Permitting to Impaired Waters

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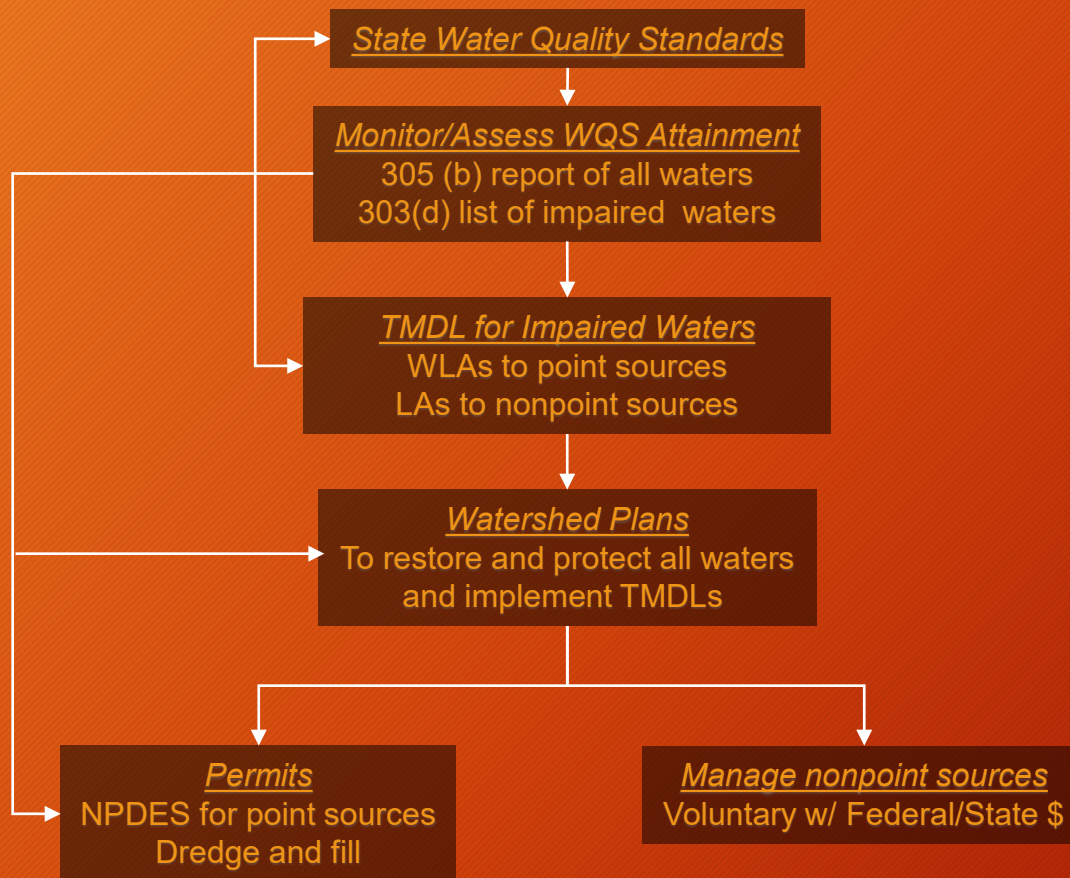
Danielle Stephan, Panelist & Moderator, OWM

Bryant Thomas, Virginia DEQ, Panelist



# Clean Water Act Framework

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303(c) - States must establish water quality standards (WQS)

304(a) - EPA must develop & publish water quality criteria

301(b)(1)(C) - permits include effluent limits needed to meet WQS

303 (d) - total maximum daily loads (TMDLs) for impaired segments

# Top pollutants for Listing waters as impaired

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## Assessed Lakes, Reservoirs, and Ponds

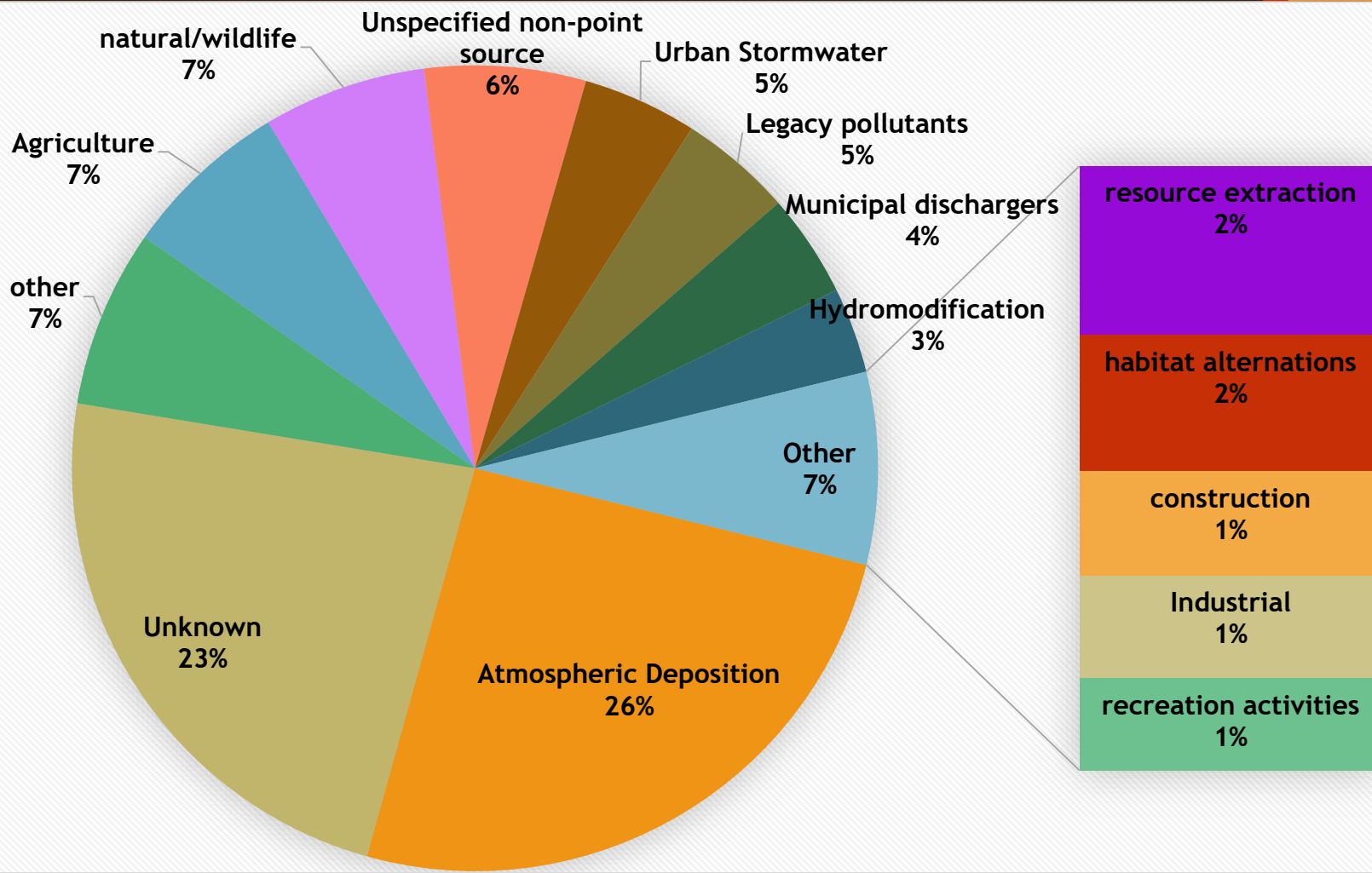
<u>Cause of Impairment Group</u>	<u>Acres Threatened or Impaired</u>
<a href="#">Mercury</a>	8,507,712
<a href="#">Nutrients</a>	3,943,395
<a href="#">Polychlorinated Biphenyls (PCBs)</a>	3,222,935
<a href="#">Turbidity</a>	1,473,536
<a href="#">Organic Enrichment/Oxygen Depletion</a>	1,445,959
<a href="#">Metals (other than Mercury)</a>	1,199,074
<a href="#">pH/Acidity/Caustic Conditions</a>	1,037,051
<a href="#">Salinity/Total Dissolved Solids/Chlorides/Sulfates</a>	859,642
<a href="#">Algal Growth</a>	719,287
<a href="#">Nuisance Exotic Species</a>	600,546
<a href="#">Pathogens</a>	503,071
<a href="#">Sediment</a>	502,200
<a href="#">Pesticides</a>	412,672
<a href="#">Total Toxics</a>	243,628
<a href="#">Temperature</a>	236,014

## Assessed Rivers and Streams

<u>Cause of Impairment Group</u>	<u>Miles Threatened or Impaired</u>
<a href="#">Pathogens</a>	187,872
<a href="#">Sediment</a>	138,874
<a href="#">Nutrients</a>	118,831
<a href="#">Organic Enrichment/Oxygen Depletion</a>	98,037
<a href="#">Temperature</a>	94,488
<a href="#">Metals (other than Mercury)</a>	94,384
<a href="#">Polychlorinated Biphenyls (PCBs)</a>	82,311
<a href="#">Mercury</a>	72,554
<a href="#">Habitat Alterations</a>	63,019
<a href="#">Turbidity</a>	47,750
<a href="#">Cause Unknown</a>	45,318
<a href="#">Cause Unknown - Impaired Biota</a>	44,900
<a href="#">Flow Alteration(s)</a>	41,329
<a href="#">Salinity/Total Dissolved Solids/Chlorides/Sulfates</a>	38,072
<a href="#">pH/Acidity/Caustic Conditions</a>	33,740
<a href="#">Pesticides</a>	18,069

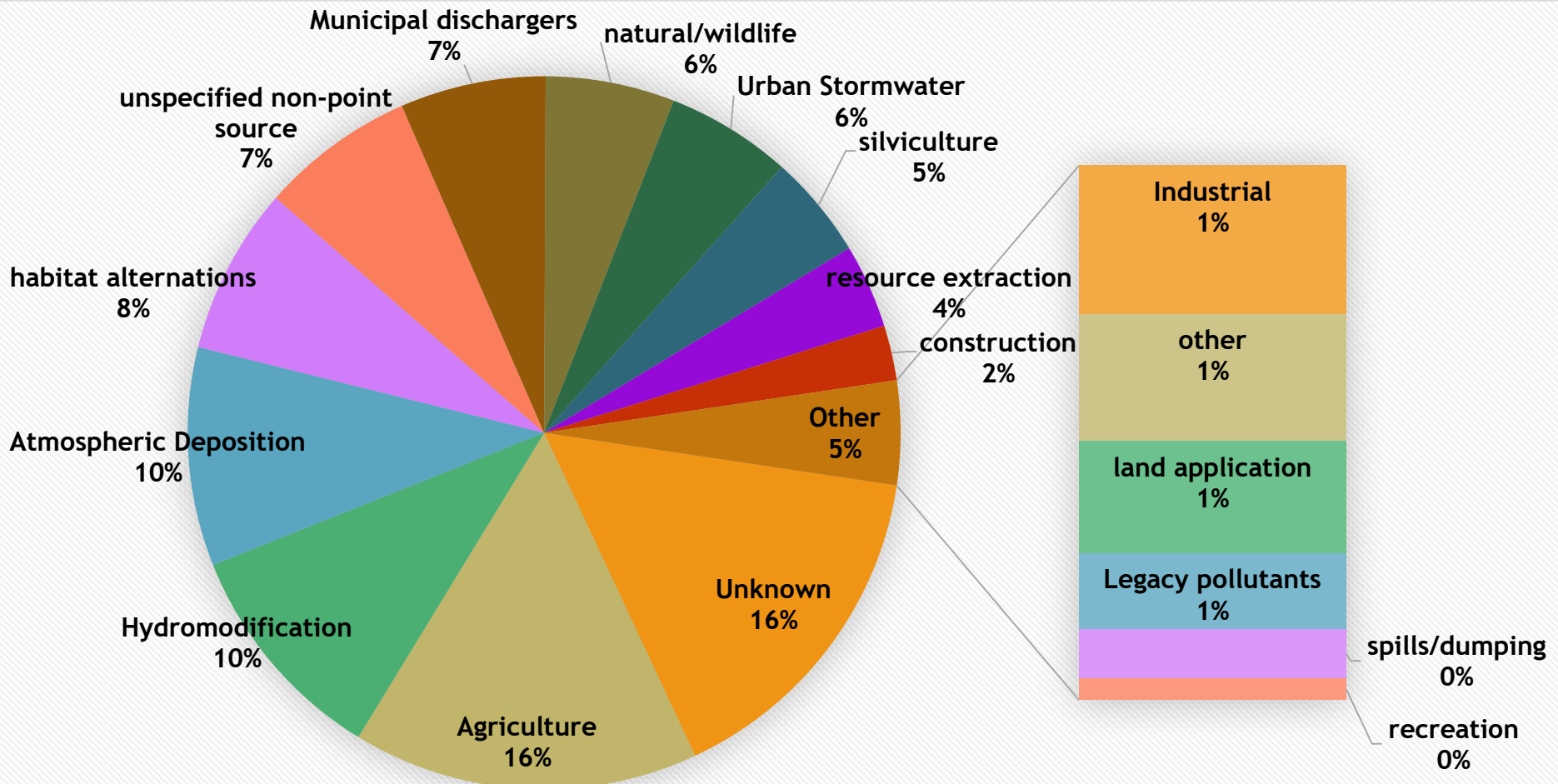
# Probable Sources of Impairments in Lakes, reservoirs and Ponds

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# Probable Sources of Impairments in Rivers and Streams

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# Top Impairments in TMDLs

<u>Pollutant Group</u>	<u>Number of TMDLs</u>	<u>Number of Causes of Impairment Addressed</u>
<u>Mercury</u>	█ <u>21,649</u>	21,679
<u>Pathogens</u>	█ <u>14,168</u>	14,483
<u>Metals (other than Mercury)</u>	█ <u>10,387</u>	10,590
<u>Nutrients</u>	█ <u>6,685</u>	8,237
<u>Sediment</u>	█ <u>4,031</u>	4,689
<u>Polychlorinated Biphenyls (PCBs)</u>	█ <u>2,626</u>	3,557
<u>Temperature</u>	█ <u>2,454</u>	2,464
<u>Organic Enrichment/Oxygen Depletion</u>	█ <u>2,230</u>	2,366
<u>pH/Acidity/Caustic Conditions</u>	█ <u>2,033</u>	2,092
<u>Turbidity</u>	█ <u>1,819</u>	2,083
<u>Salinity/Total Dissolved Solids/Chlorides/Sulfates</u>	█ <u>1,762</u>	1,821
<u>Pesticides</u>	█ <u>1,395</u>	1,558
<u>Ammonia</u>	█ <u>1,149</u>	1,260

- This report lists, by TMDL pollutant, the number of TMDLs approved, as well as the number of causes of impairments associated with all TMDLs for that pollutant nationally since October 1, 1995.

# Relevant Statutory Provisions

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- NPDES Permitting - 40 CFR Part 122
  - 40 CFR 122.44(d) - NPDES permits must include water quality-based effluent limits:
    - designed to ensure that WQS are attained AND
    - consistent with the assumptions and requirements of any available wasteload allocation for the discharge, approved by EPA.

# Post-TMDL permitting on Impaired Waters: Key Challenges

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- TMDL wasteload allocations (WLAs) did not include all NPDES permitted discharges in the area covered by the TMDL
- Aggregate WLA apply to multiple dischargers
- Unclear where WLA applies
- WLA's as "Daily loads"
- Mass vs. Concentration
- WLA's based on formula



# Pre-TMDL permitting on Impaired Waters: Key Challenges

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- Cause of impairments may be unknown
- Narrative criteria implementation - need translation
- Accounting for growth
- Combination of sources - PS vs. NPS
- Cannot “wait for a TMDL” to so RP and develop limits

# Available resources

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- Permitting to Meet TMDL webpage FAQs
  - <https://www.epa.gov/npdes/permitting-meet-total-maximum-daily-load-tmdl>
- 2015 Region 9 document: “Helpful Practices for Addressing Point Sources and Implementing TMDLs in NPDES Permits”
  - <https://www.epa.gov/npdes/helpful-practices-addressing-point-sources-and-implementing-tmdls-npdes-permits>
- TMDLs and Stormwater requirements
  - <https://www.epa.gov/npdes/municipal-sources-resources>
- Regional Contacts with expertise

# Contact Information

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202-564-0759

# Discussion Questions

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Does your state have any tools/resources available to assist with these issues?

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What would help you/your state with some of these issues?

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How successful have you been in your state at putting procedures in place for better coordination between the NPDES program and TMDL programs?

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What other assistance would you like to see from EPA and/or ACWA?