

EMERGING ISSUES IN WATER MANDATES - FLEXIBILITY CHALLENGES

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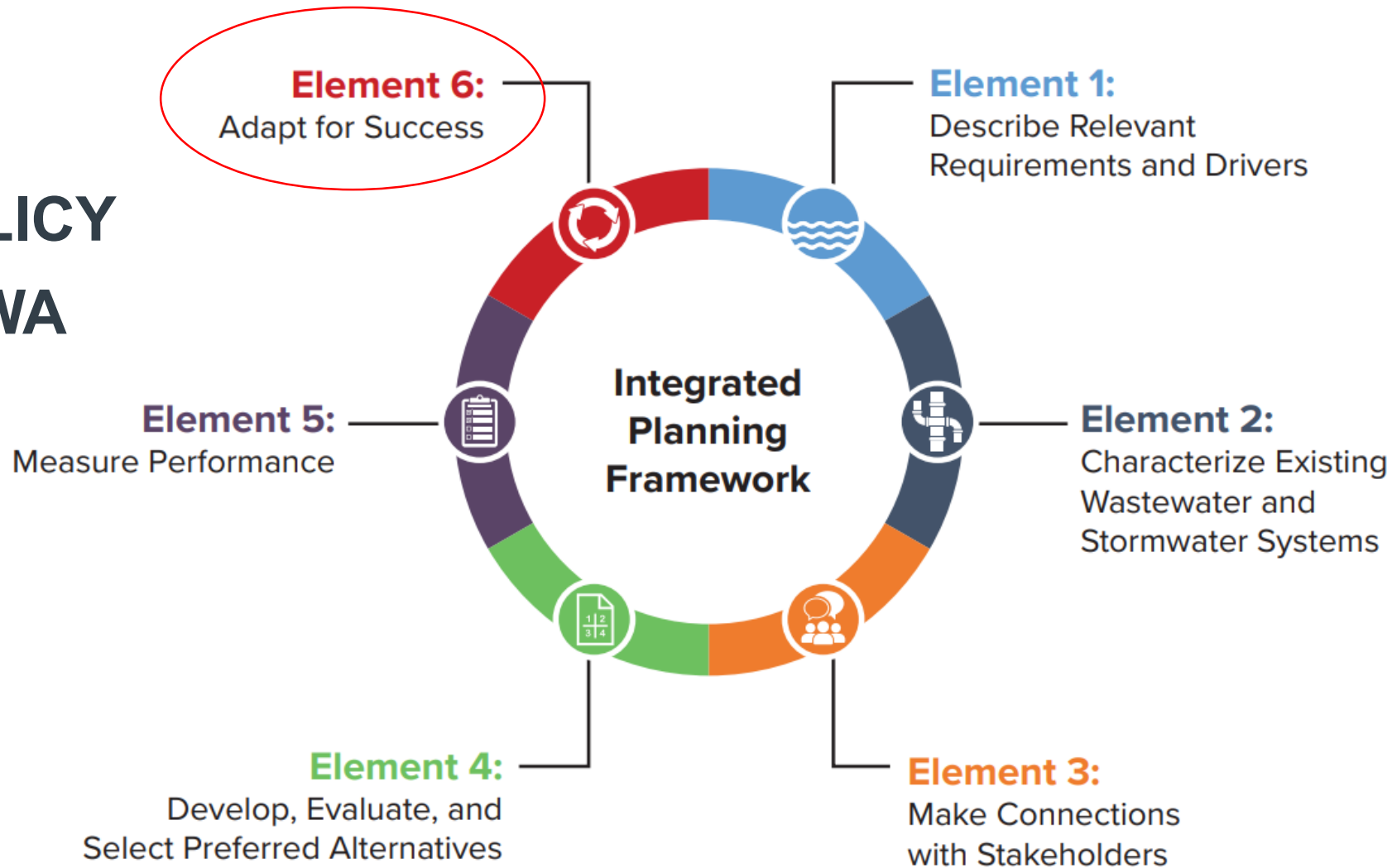
1905: McMillan Sand
Filtration Plant, Washington
Aqueduct Division



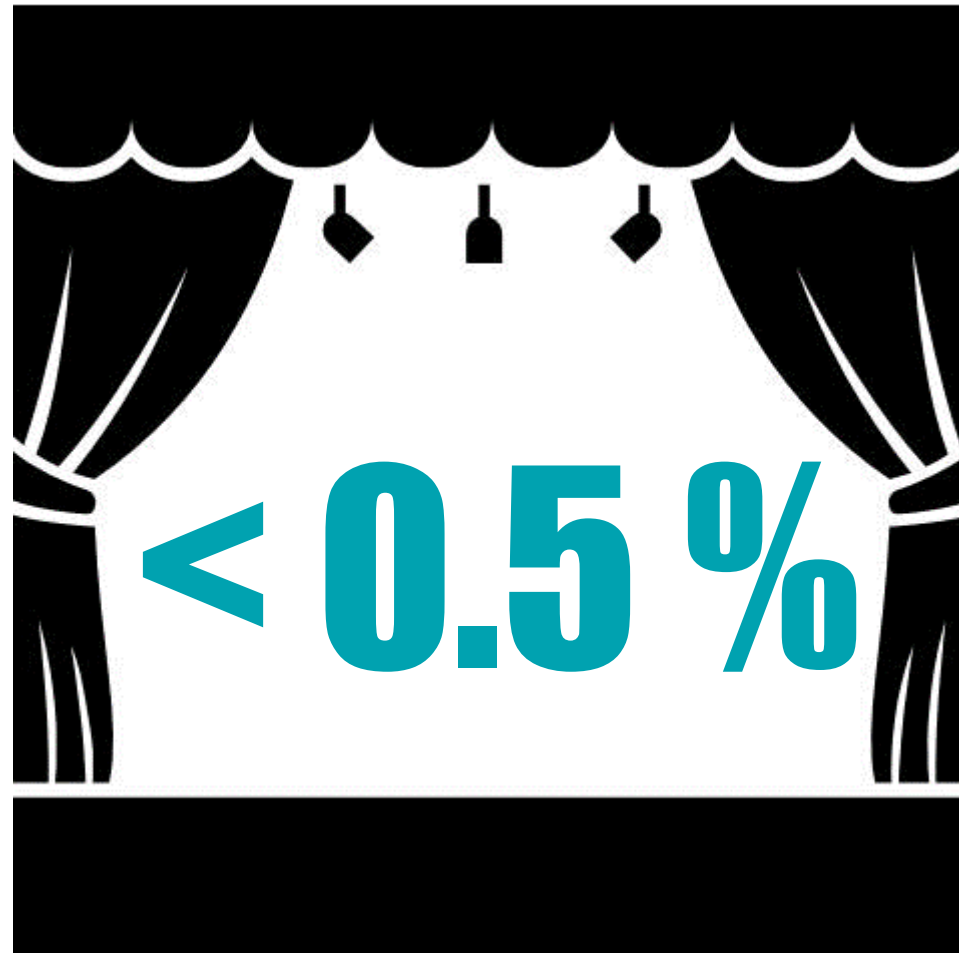
2021: Yorba Linde Water District – Nation's Largest
PFAS Water Treatment Plant

EPA INTEGRATED PLANNING FRAMEWORK

2012 – POLICY
2019 - CWA



11 YEARS LATER



IPTF Survey

Some states are supportive, others believe they don't have time.



IPTF MISSION: INTEGRATED PLANNING IS ROUTINE

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- PFAS, PFAS, PFAS
- Lead & Copper
- Legionella
- Funding
- Waters of the U.S.
- Supply Chain
- Drought
- Project Delivery
- Energy
- PHOSPHORUS & NITROGEN
- PFAS
- WILDFIRES
- ...

PHOSPHORUS & NITROGEN

Location	Total Phosphorus (mg/L)	Total Nitrogen (mg/L)
Domestic wastewater influent	5 – 20	20 - 35
Typical secondary treatment plant	1 - 4	10 - 20
Chesapeake Bay	0.2 – 0.3	3 - 4
Illinois	0.5*	
City of Euclid, OH (proposed by EPA R3)	0.008**	

* Rolling annual average geometric mean; also requires a Nutrient Assessment Reduction Plan.

** Estimated from EPA's proposed load limit. Requires a 60X reduction in current performance.

PHOSPHORUS & NITROGEN

Researchers in Illinois estimate that due to moldboard plowing & old phosphate rock fertilizer recommendations

- 39% of nonpoint source loads in Iowa is from streambank erosion
- ~100 years to drawdown phosphorus built-up in soils



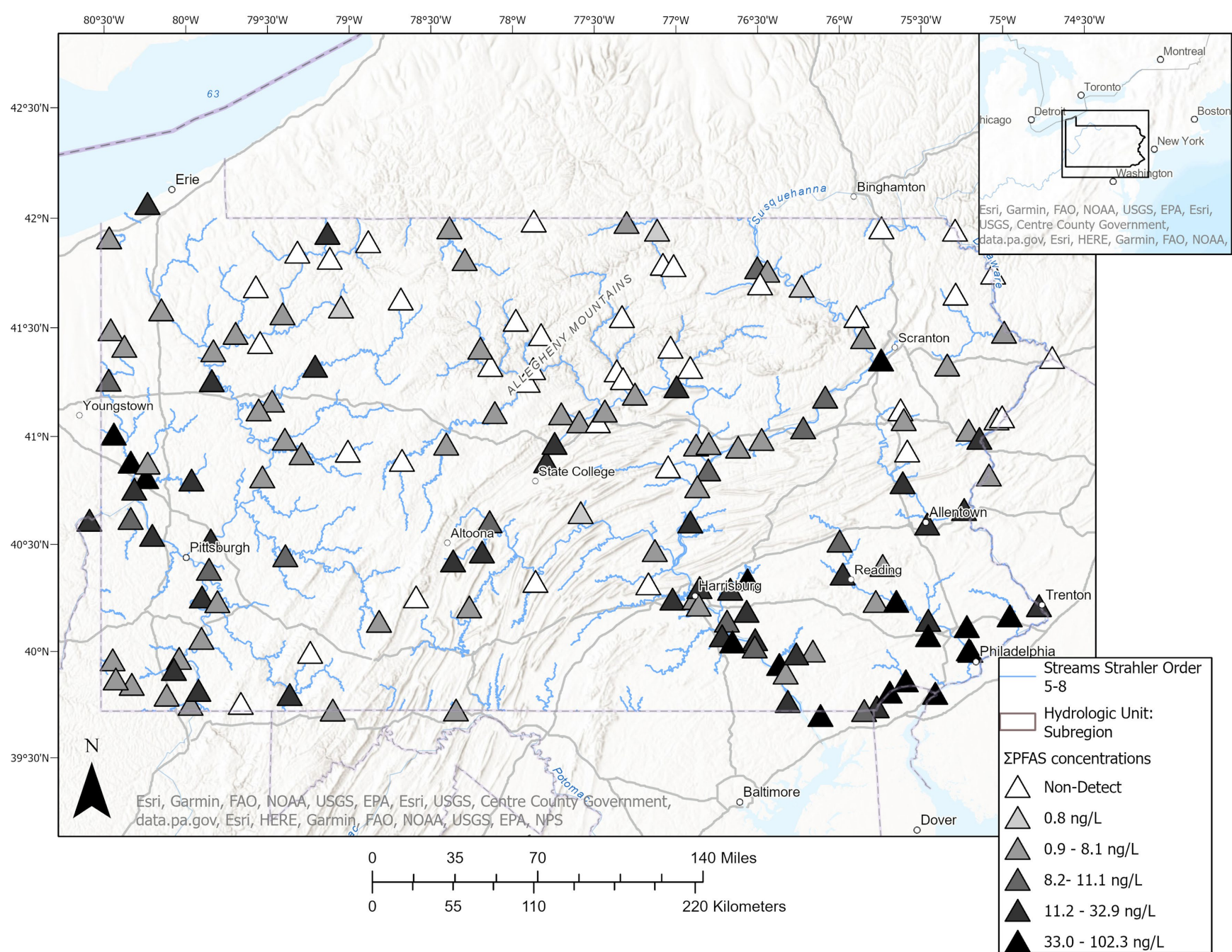
PFAS

2022: Maine bans biosolids land application; some leniency for septage haulers

Some municipalities limiting or expressing concern about composting

EPA Policy Memo from December 2023 re: NPDES discharge permits

- Monitoring and potential limits for wastewater plants
- Industrial pretreatment programs



GUIDELINES FOR DRINKING WATER CONTAMINATION

Tubbs Fire increases benzene 40,000x than state limit in Santa Rosa

- Flushing failed
- City replaced 16,000 service lines

Wildfires have increased 17% from 2019 to 2021

Dr. Andrew Whelton (Purdue) leading international “concept of operations”





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