Water Quality Sampling

July 21, 2022

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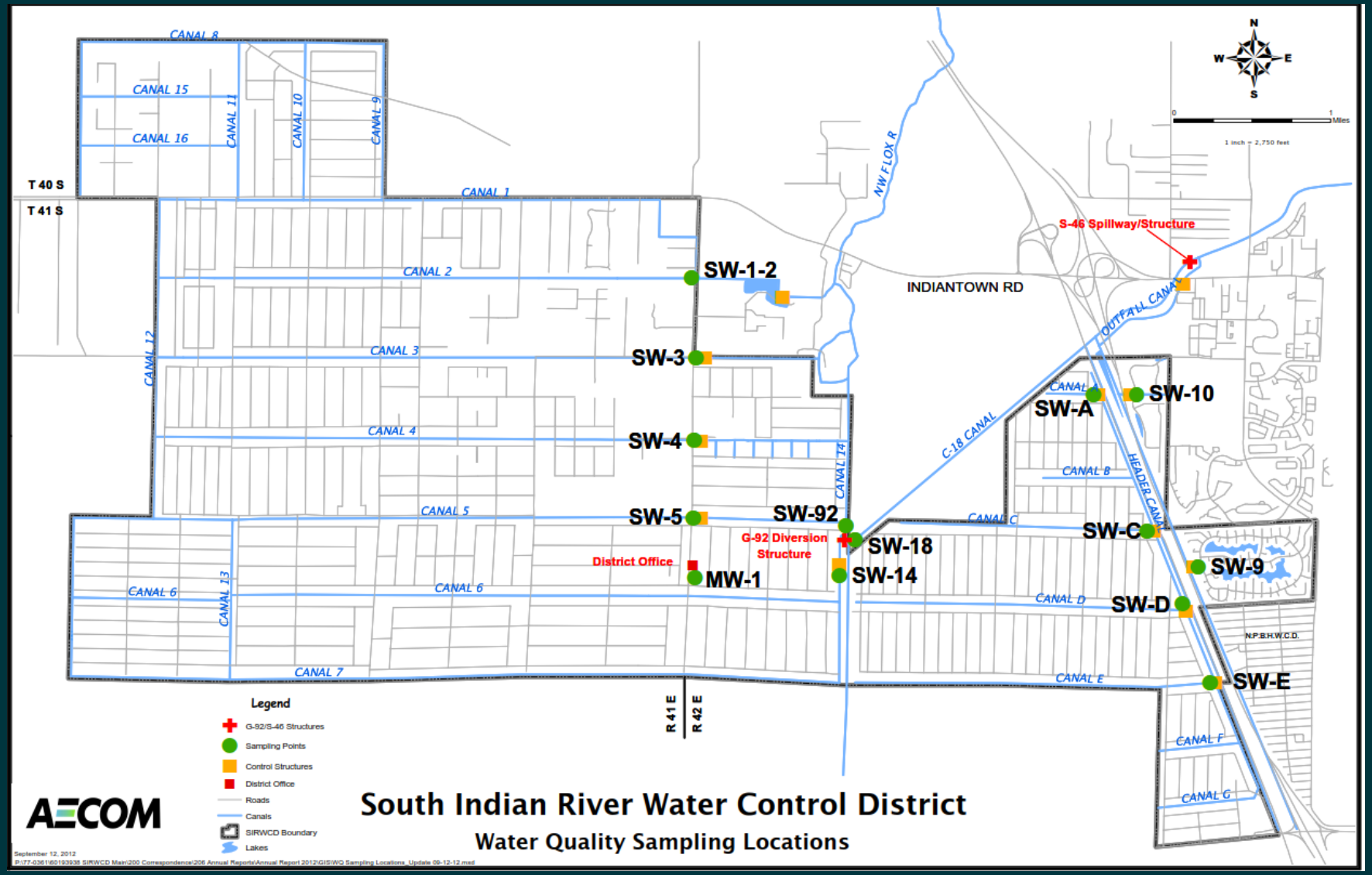
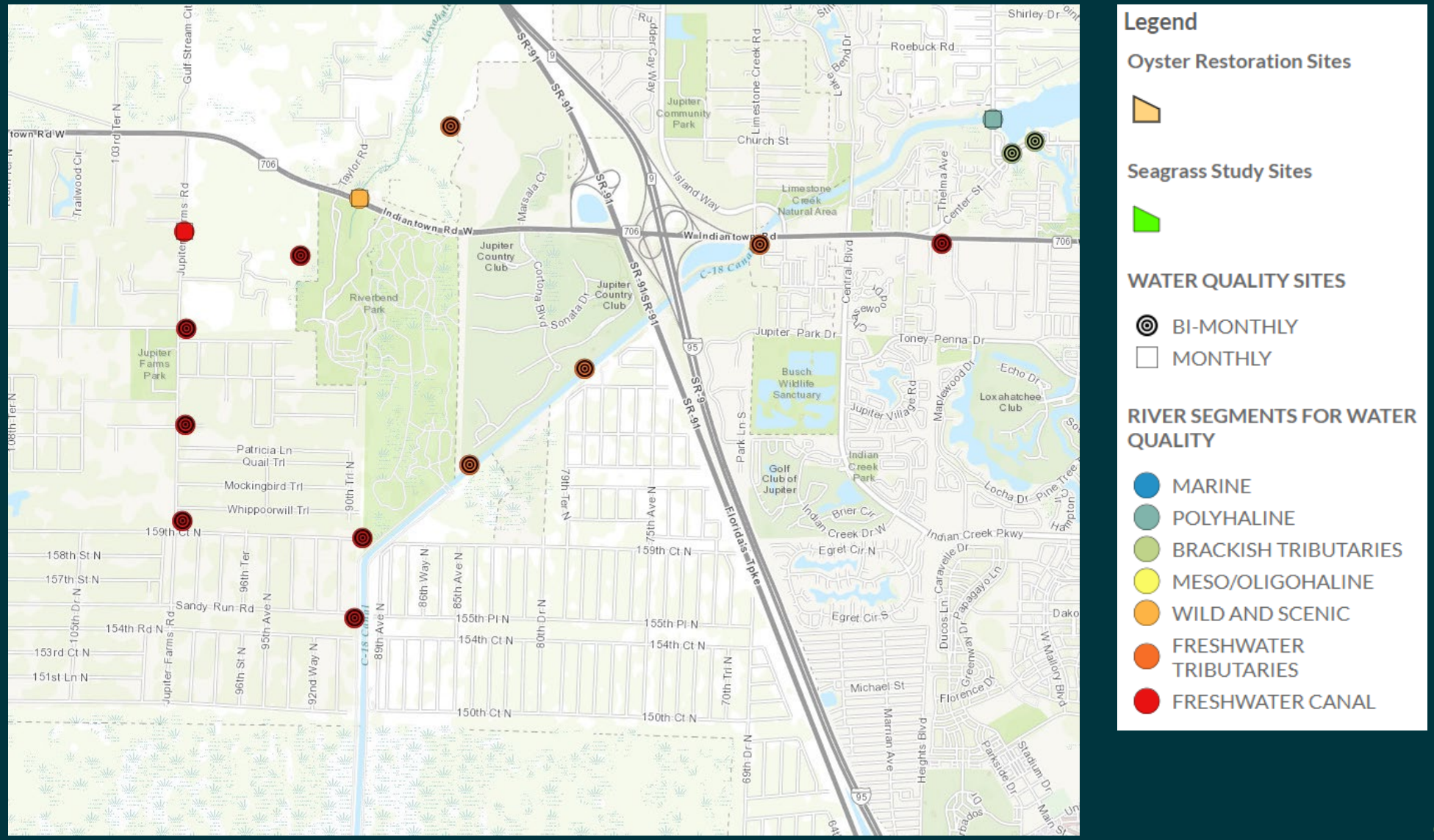
Agenda

- SIRWCD Water Quality Monitoring
- Loxahatchee River District Water Quality Monitoring
- District and LRD Testing Parameter Comparison
- E. Coli vs Fecal Coliform Costs
- NPDES Permit/Water Quality Assessment

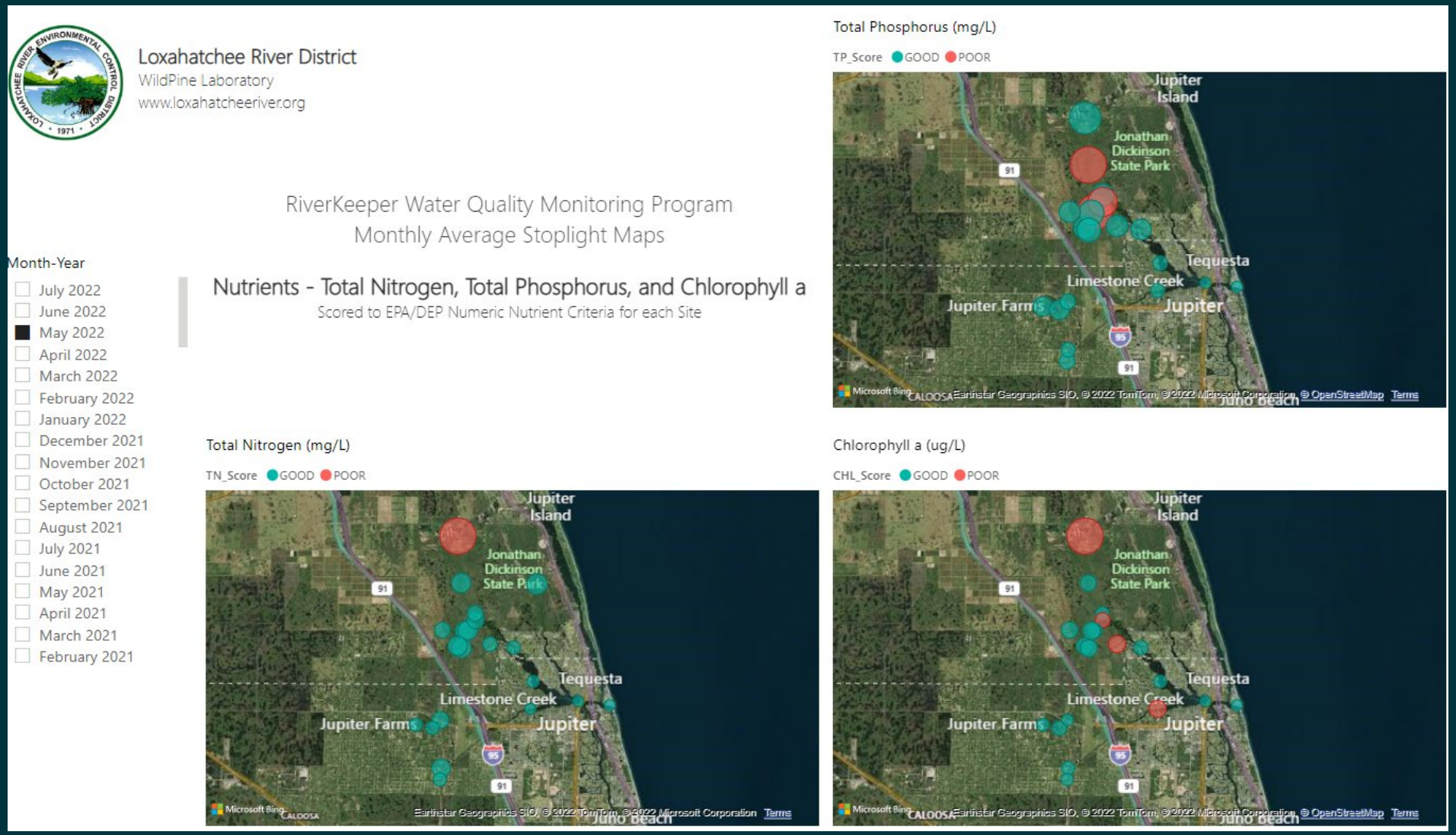
South Indian River Water Control District
Water Quality Monitoring Locations



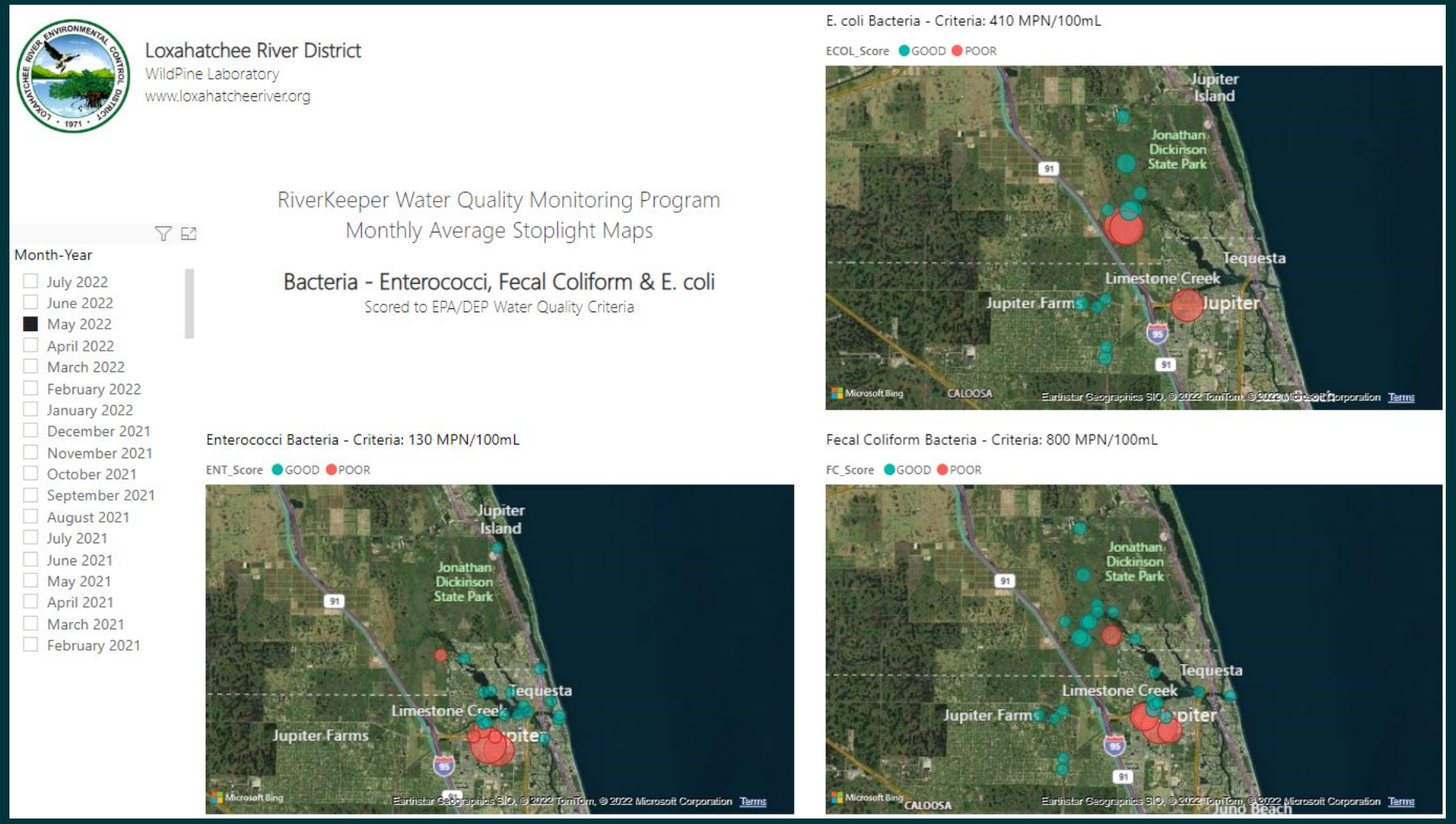
Loxahatchee River District
Water Quality Monitoring Locations



Loxahatchee River District
Water Quality Monitoring - Results



Loxahatchee River District
Water Quality Monitoring – Results 2



District Water Quality Testing Parameter Comparison

South Indian River Water Control District

Alkalinity	Magnesium
Ammonia	Nitrate-Nitrite
Arsenic	Orthophosphate
Cadmium	pH
Calcium	Specific Conductivity
Chlorophyll-A Corrected	Total Kjeldahl Nitrogen
Color	Total Nitrogen
Copper	Total Phosphorus
Disolved Oxygen	Total Suspended Solids
Fecal Coliform	Turbidity
Hardness	Water Temperature
Lead	Zinc

Loxahatchee River District

Alkalinity	Orthophosphate
Chlorophyll-A Corrected	pH
Chlorophyll-A Uncorrected	Salinity
Color	Water Temperature
Special Conductivity	Total Kjeldahl Nitrogen
Dissolved Oxygen	Total Organic Carbon
E Coli	Total Nitrogen
Fecal Coliform	Total Phosphorus
Nitrate	Total Suspended Solids
Nitrite-Nitrate	Turbidity
Organic Nitrogen	

E. Coli vs Fecal Coliform

The cost of E. Coli testing by Pace Analytical Labs is $240 per month, the same as Fecal Coliform.

Product	Line-Item Description	Total-Price
Total Metals (water)	As, Cd, Ca, Cu, Pb, Mg, Zn	$448.00
Hardness, Total (water) (Calculation Only)	Calculation	$84.00
Color, True		$120.00
Alkalinity, as CaCO3 (carbonate) (water)		$120.00
Solids, Total Dissolved (TDS)		$120.00
Phosphorus, Ortho (water)		$144.00
Phosphorus, Total (water)		$144.00
Bacteria, Fecal Coliforms (Membrane Filtration) (water)	8-hour hold time	$240.00
Chlorophyll/ Pheophytin		$440.00
Miscellaneous	E. Coli by SM9223/ Quanti-Tray method 8-hour hold time	$240.00
Environmental Impact Fee (Per Invoice)		$15.00
Sample Disposal	Per sample	$24.00
Grand Total (with Surcharge)		**$2,301.23**

Permit Fee Comparison

	SIRWCD	NPBCID	ITID	LWDD	NSLRWCD	EAA WCDs		Recommended SIRWCD Fees
Minor Activities Involving Single Family Lots up to 2.5 Acres	$25	$250	$250	$300 (irrigation)/ $500 (drainage connection)	$50	$0		$250
Activities Affecting Commercial Use or Parcels of Land larger than 2.5 Acres	$75	$500 (including gov. and utility companies)	$500	$300 (irrigation)/ $500 (drainage connection)	see Review Deposits below	$0		$500
Underground or Overhead Utilities	$250	$500	Overhead Utility Permit - $500; $1,000 for first 1000 LF, 500 for each 1000 LF after	$710 per pole or $2-$16/LF with $300 min fee	$500/$200 each pole, guy wire/anchor units, valve boxes, MH in District R/W	$0		see below
Culvert Connections, Culvert Crossings, Bridge Crossings, other Major Activities	$300		see Review Deposits and Reimbursement below	$300 to $500	$50-$150	$0		see below
Land Development Projects	Non-standard/ Reimbursement	see Reimb. below	see Review Deposits and Reimbursement below	$500 per drainage connection	see Review Deposits below	$0		see below
Resubmittal/Modification Fee	$0	$250	$250	$300		$0		$250
Permit Extensions	$0			$300	$50/ 1-yr ext.	$0		$250
Expired Permits	$0		$500			$0		$500
Review Deposit	$0	N/A	$2,000 for Utility or R/W Easement Permit		<10 ac. -$2,000 >10-40 acres - $2500 Culvert Crossings $2,000 Utility Construction - $2000	$0		$0
Review Reimbursement	only for land dev. projects	100% (invoiced for actual amt if <$2k or in $2k increments, and inv'd prior to permit issuance)	Final fee based on actual engineering and/or legal costs; Interim invoices sent in $1,000 increment			100% engineering fee reimbursement at time of permit issuance.		100% engineering fee reimbursement at time of permit issuance.
Inspection Fees	0	$250 min. or 3% of the Engineer's Cost Estimate, whichever is greater; unused balance returned at project close				$0		$250 min. or 3% of the Engineer's Cost Estimate, whichever is greater; unused balance returned at project close

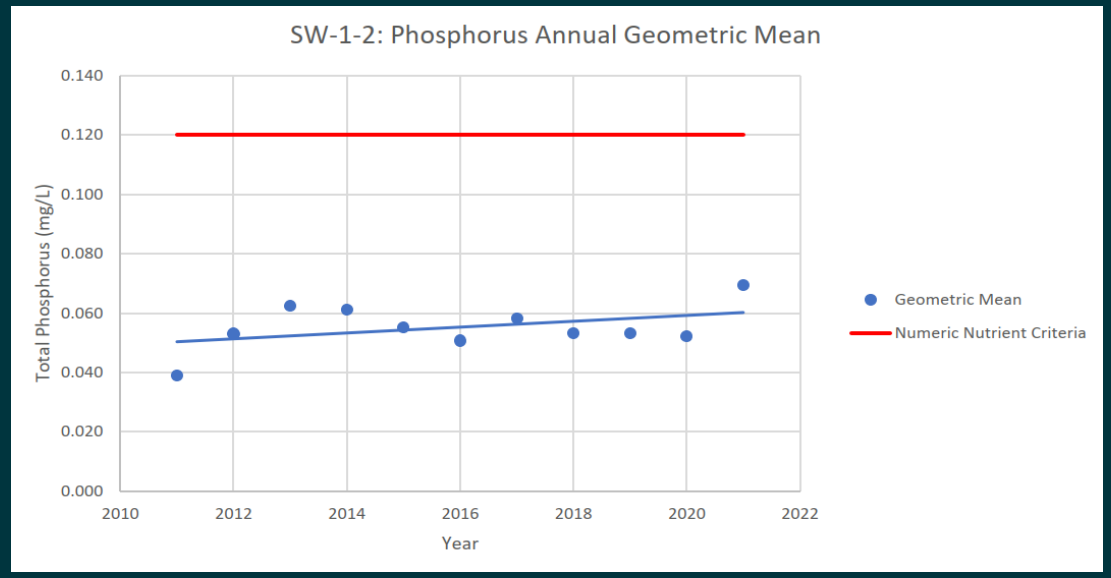
NPDES Municipal Separate Storm Sewer System (MS4) Permit

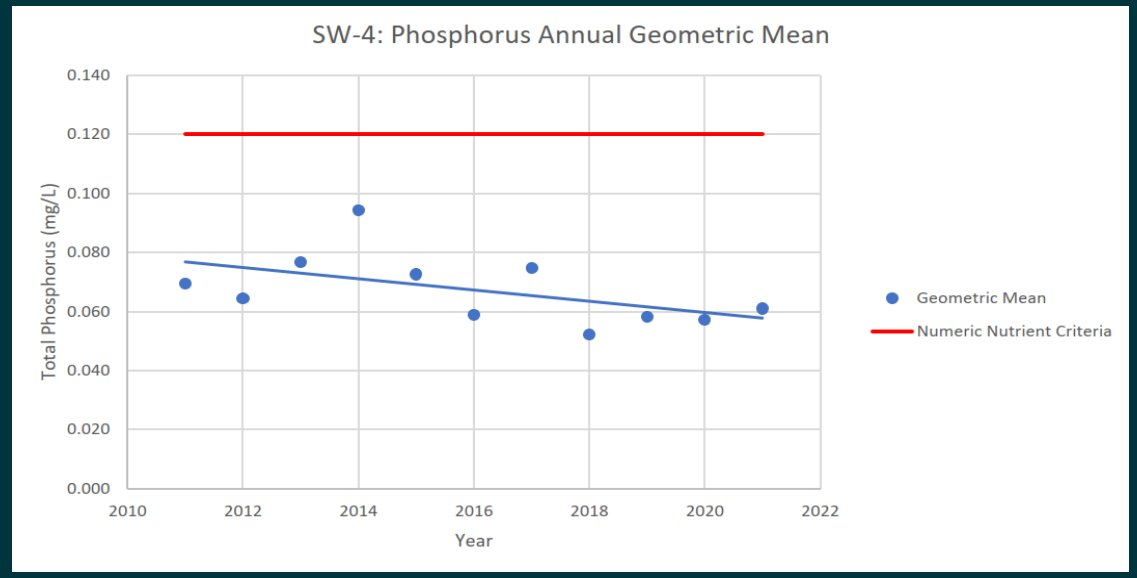
Stormwater Management Program:

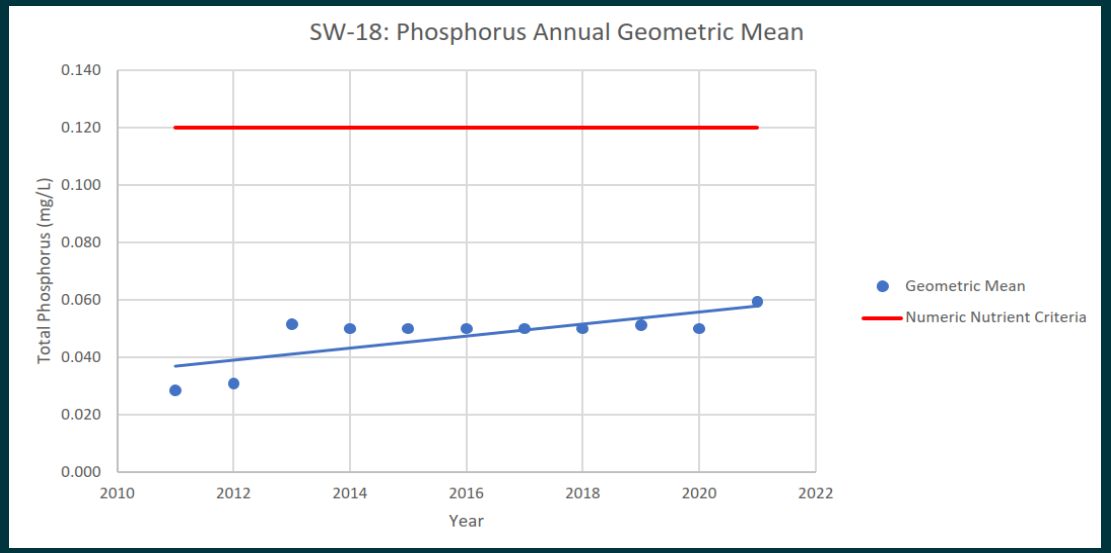
- Structural Controls and SW Collection System Operation – system inventory and maintenance activities, documentation
- Litter Control – Volume and frequency of collection
- Waste Storage – Maintenance yard dumpster
- Pesticides, Herbicides and Fertilizer Application –Aquatic Weed Control
- Public Education – Newsletter and Palm Beach County NPDES Public Outreach Activities
- Illicit Discharges and Improper Disposal
- Construction Site Runoff – Inspections

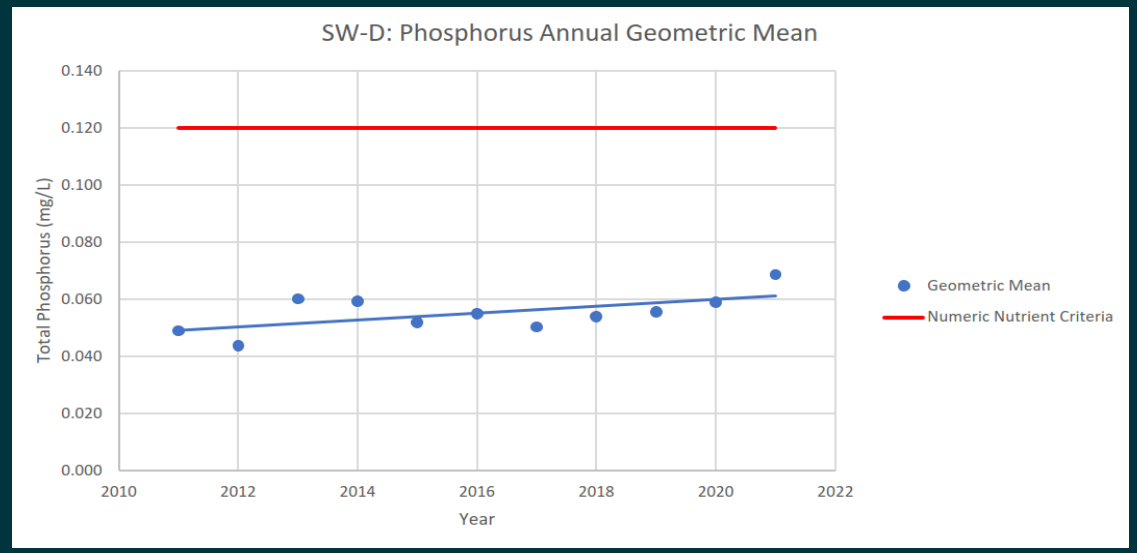
Water Quality Assessment Report

NPDES Water Quality Assessment – Phosphorus Annual Geometric Mean

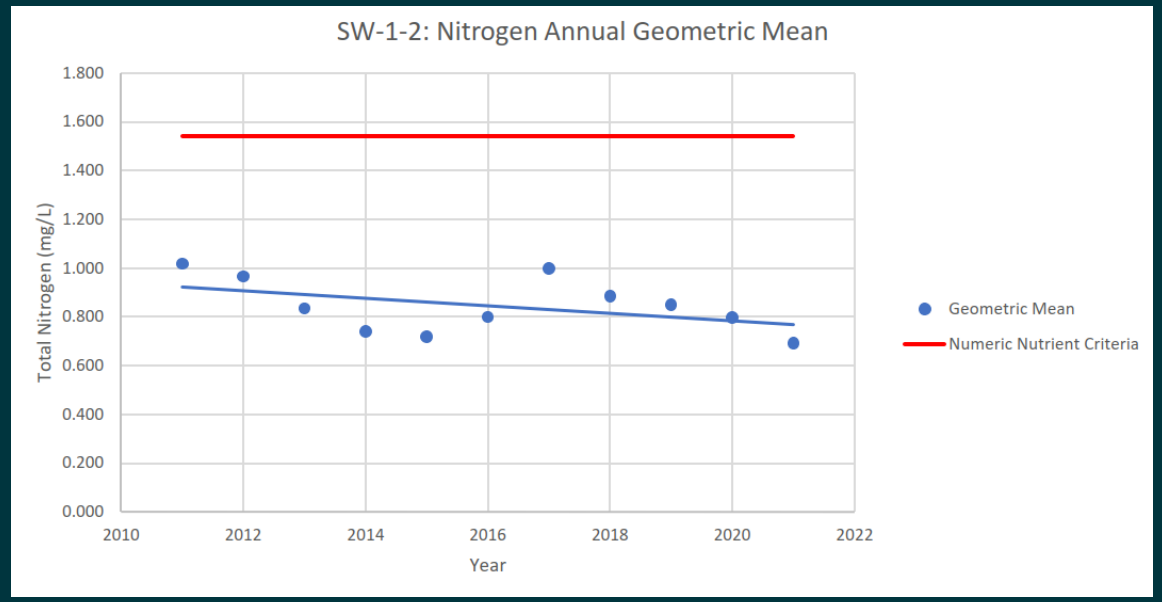


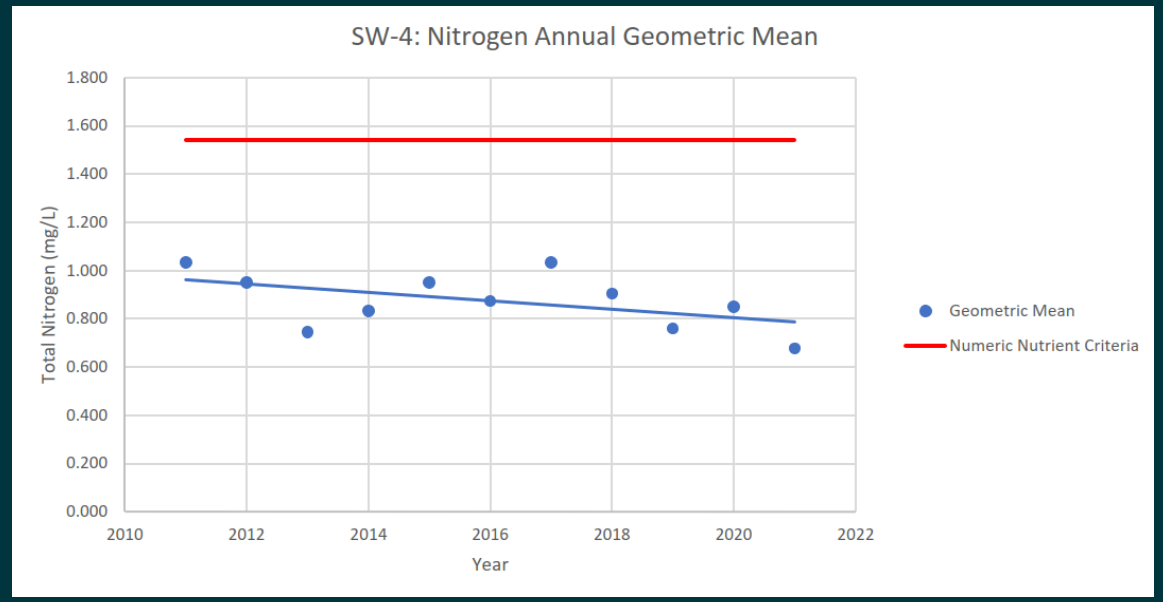


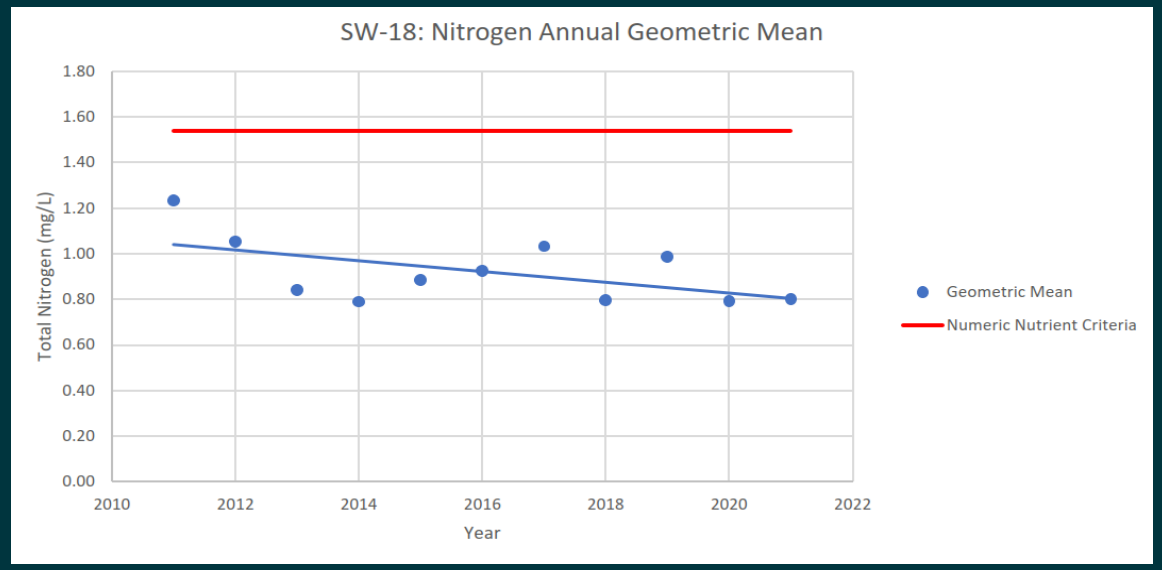


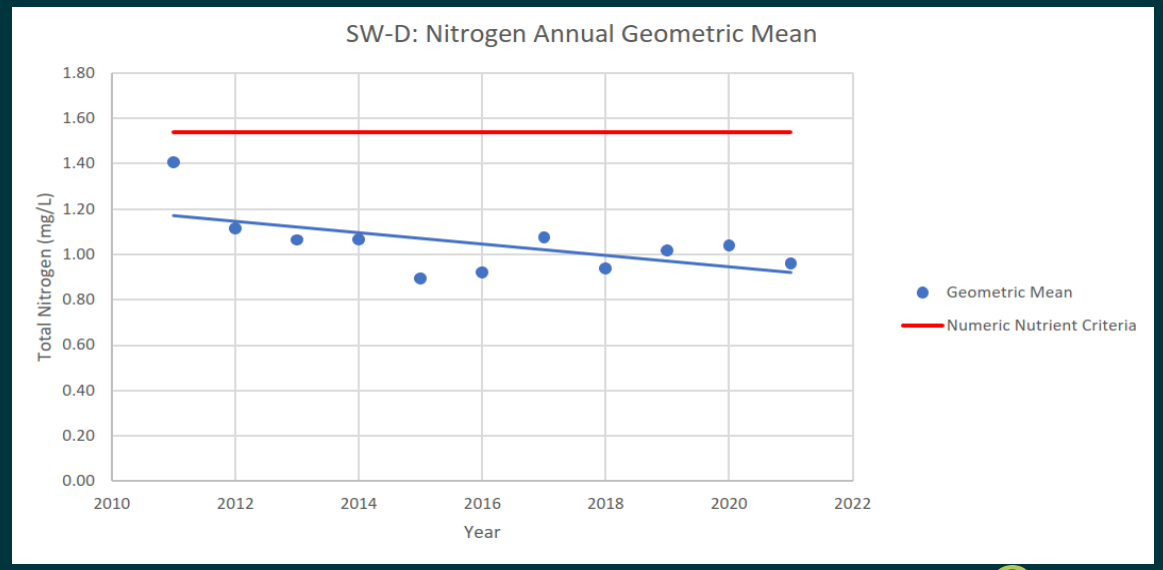


NPDES Water Quality Assessment – Nitrogen Annual Geometric Mean

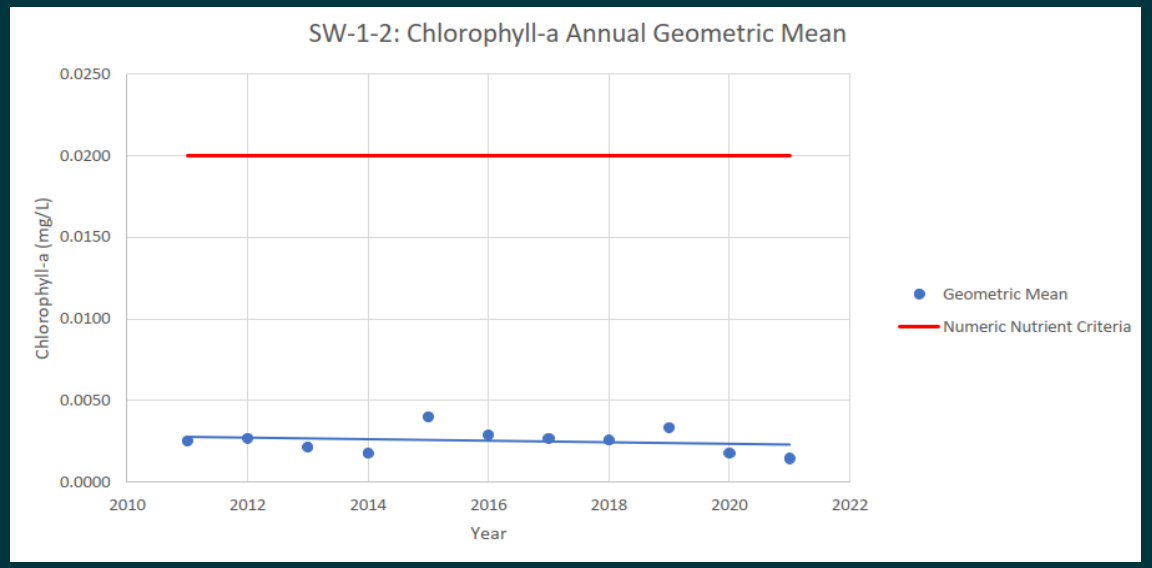


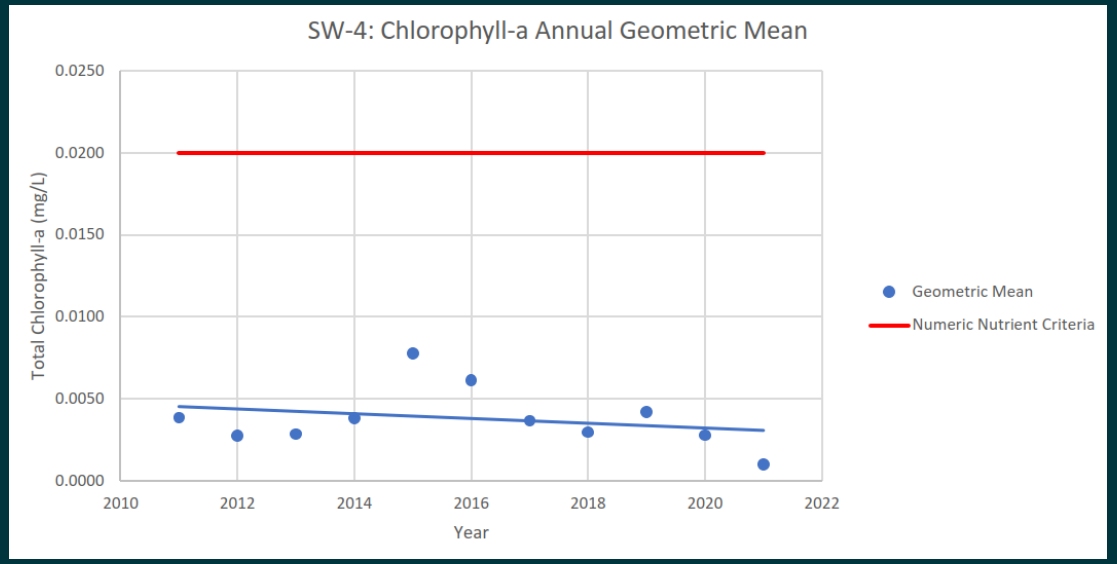


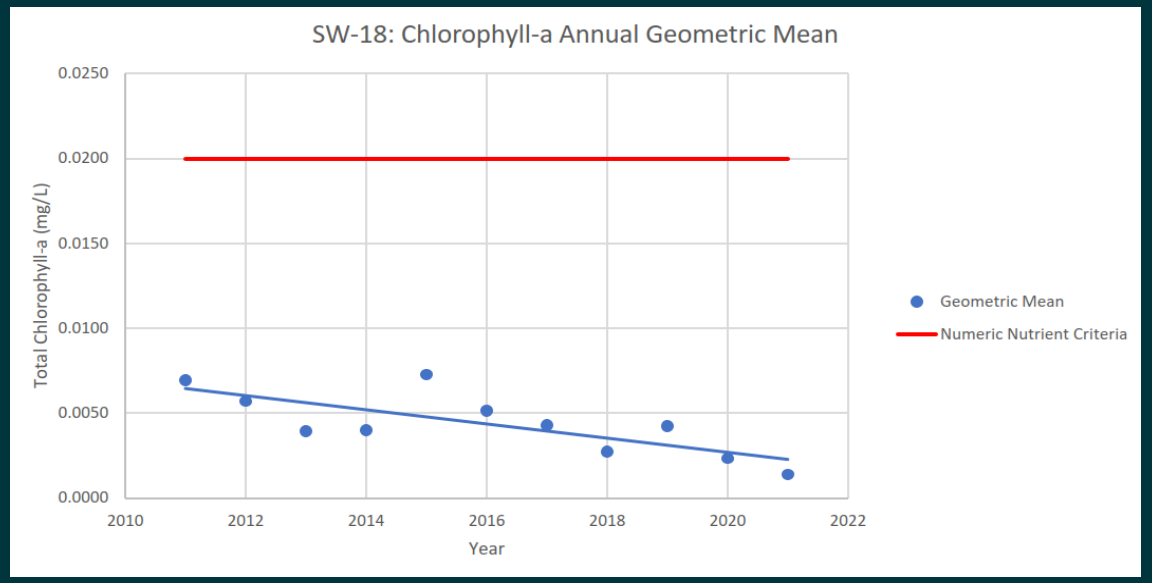


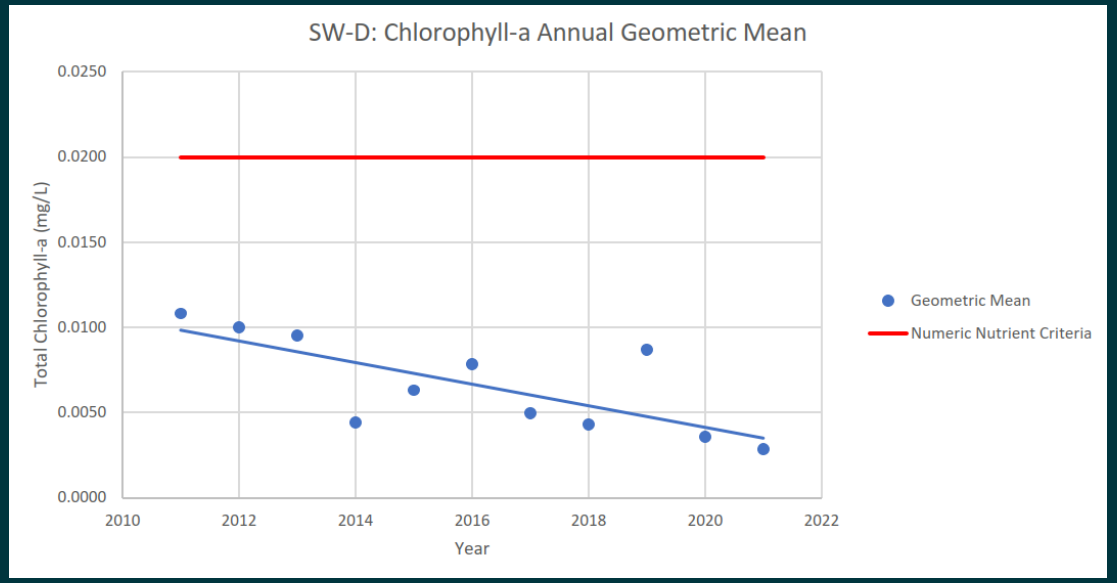


NPDES Water Quality Assessment – Chlorophyll-a Annual Geometric Mean

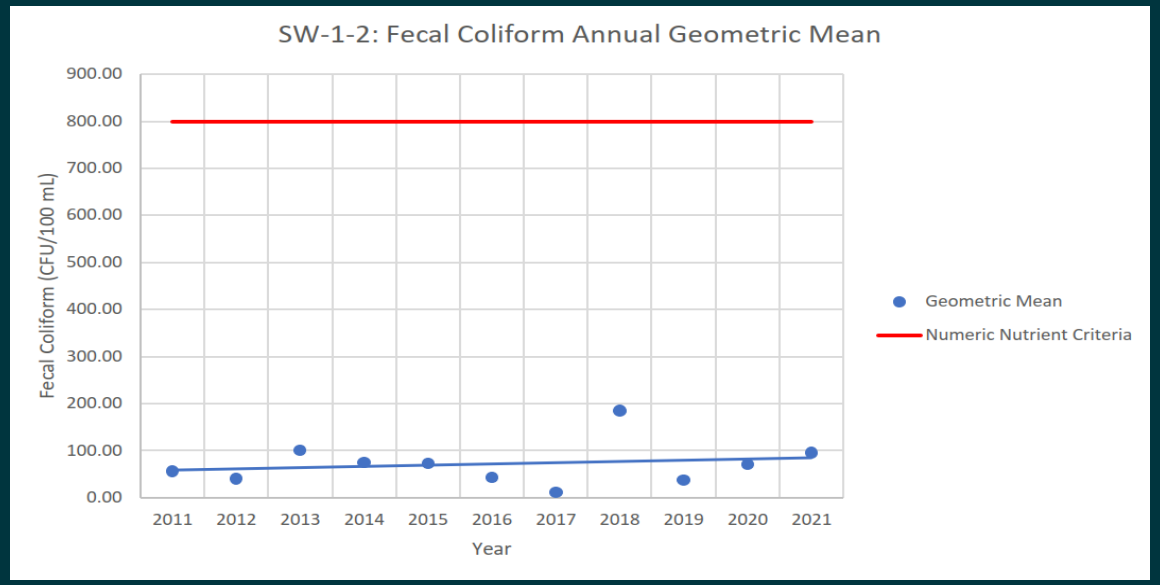


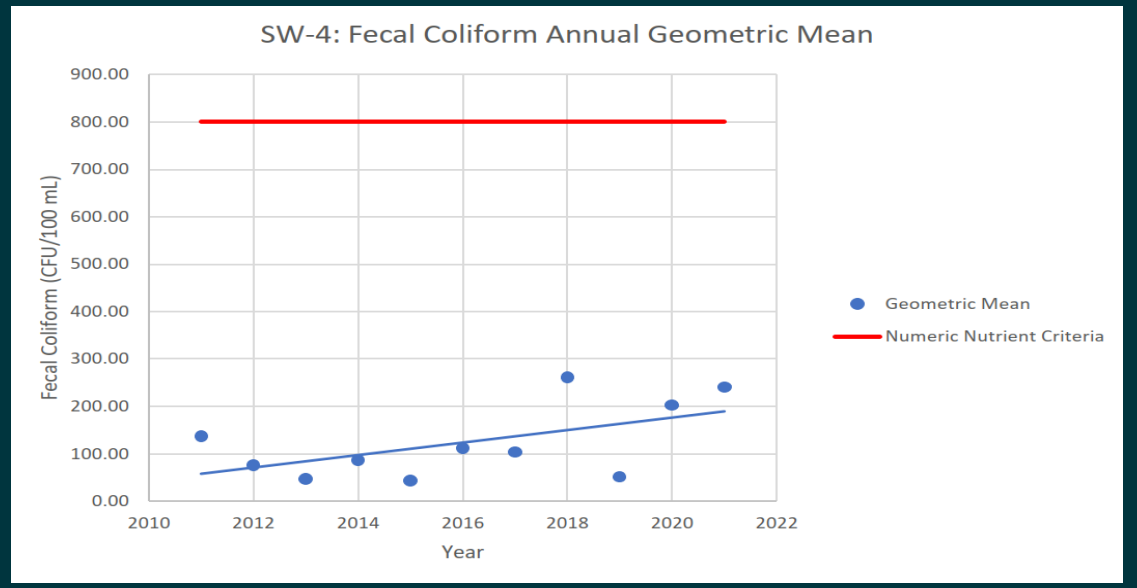


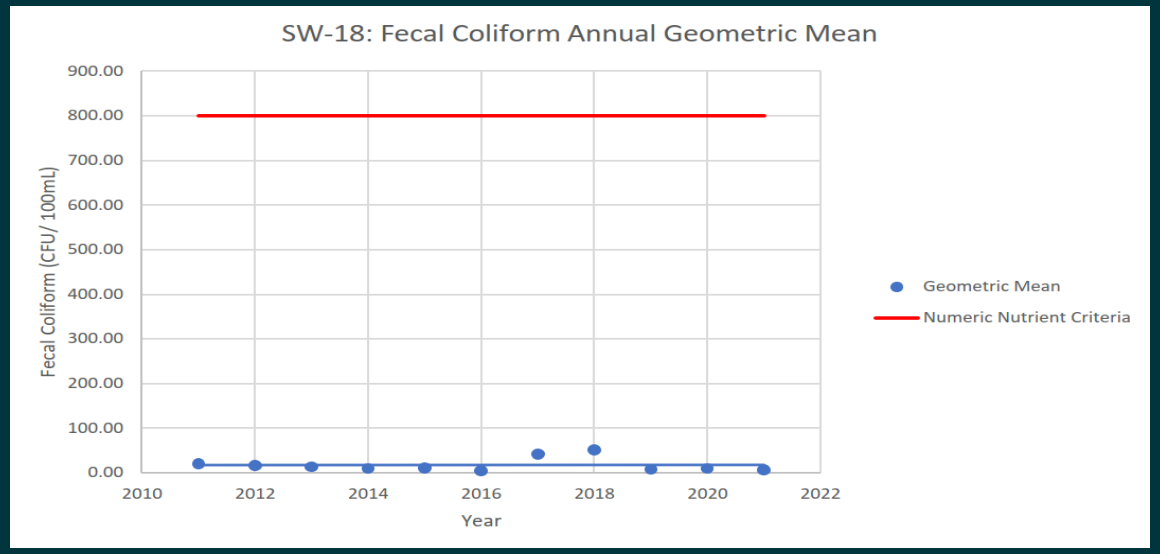


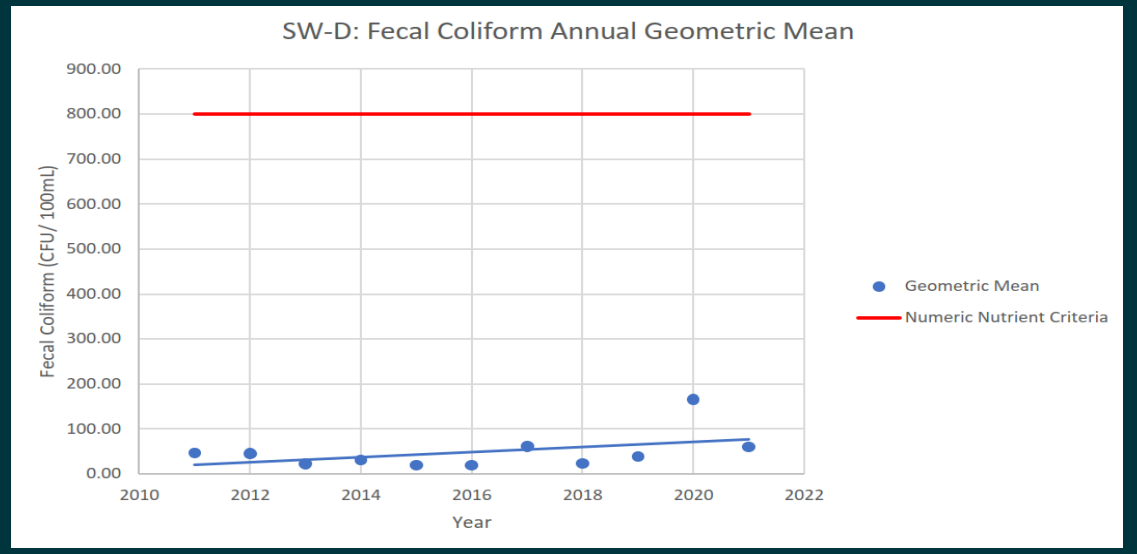


NPDES Water Quality Assessment – Fecal Coliform Annual Geometric Mean









Thank you.

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