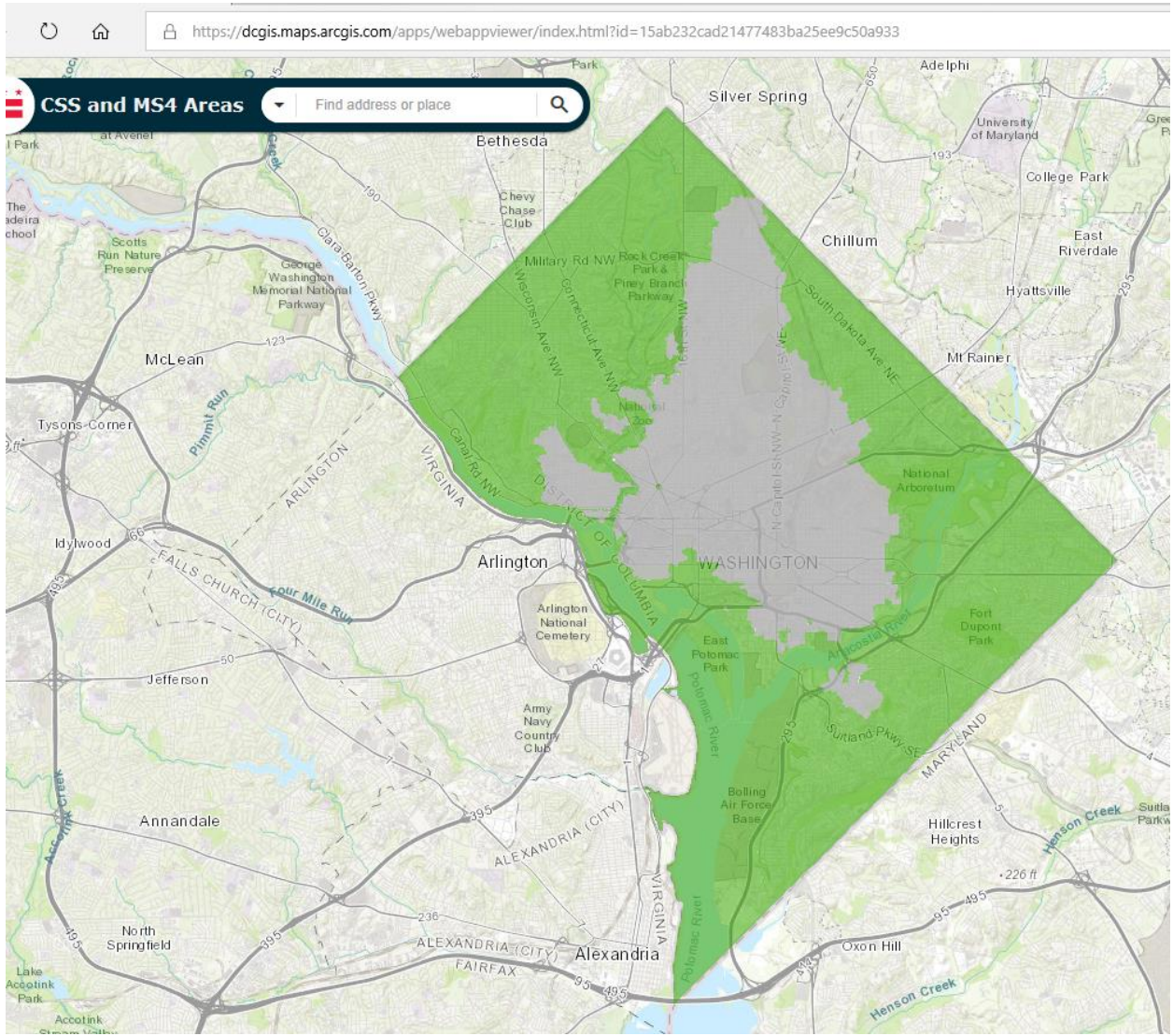


Water Quality Monitoring Initiatives in the District of Columbia

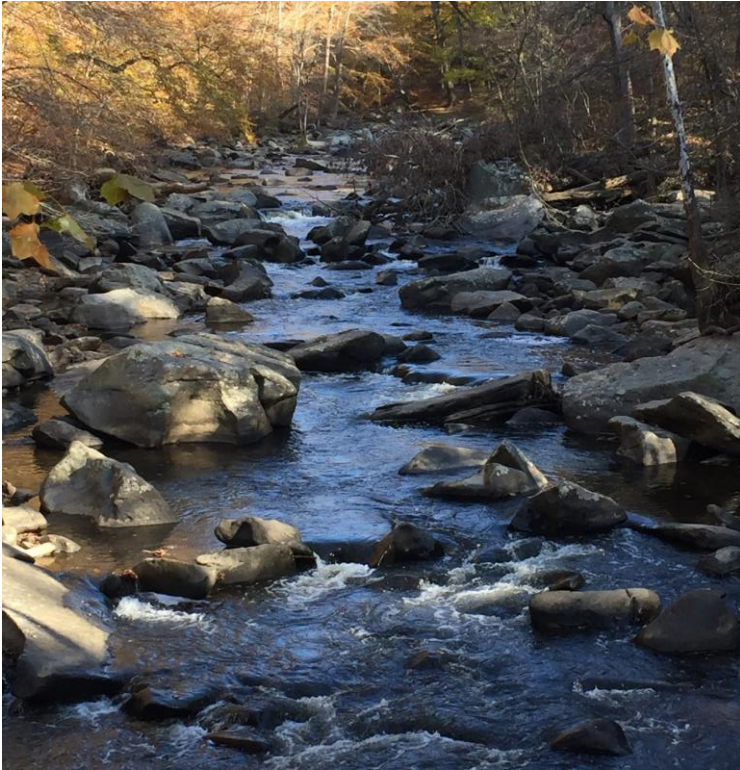




Perspective



Stormwater sewer
Combined sewer



District Surface Waters

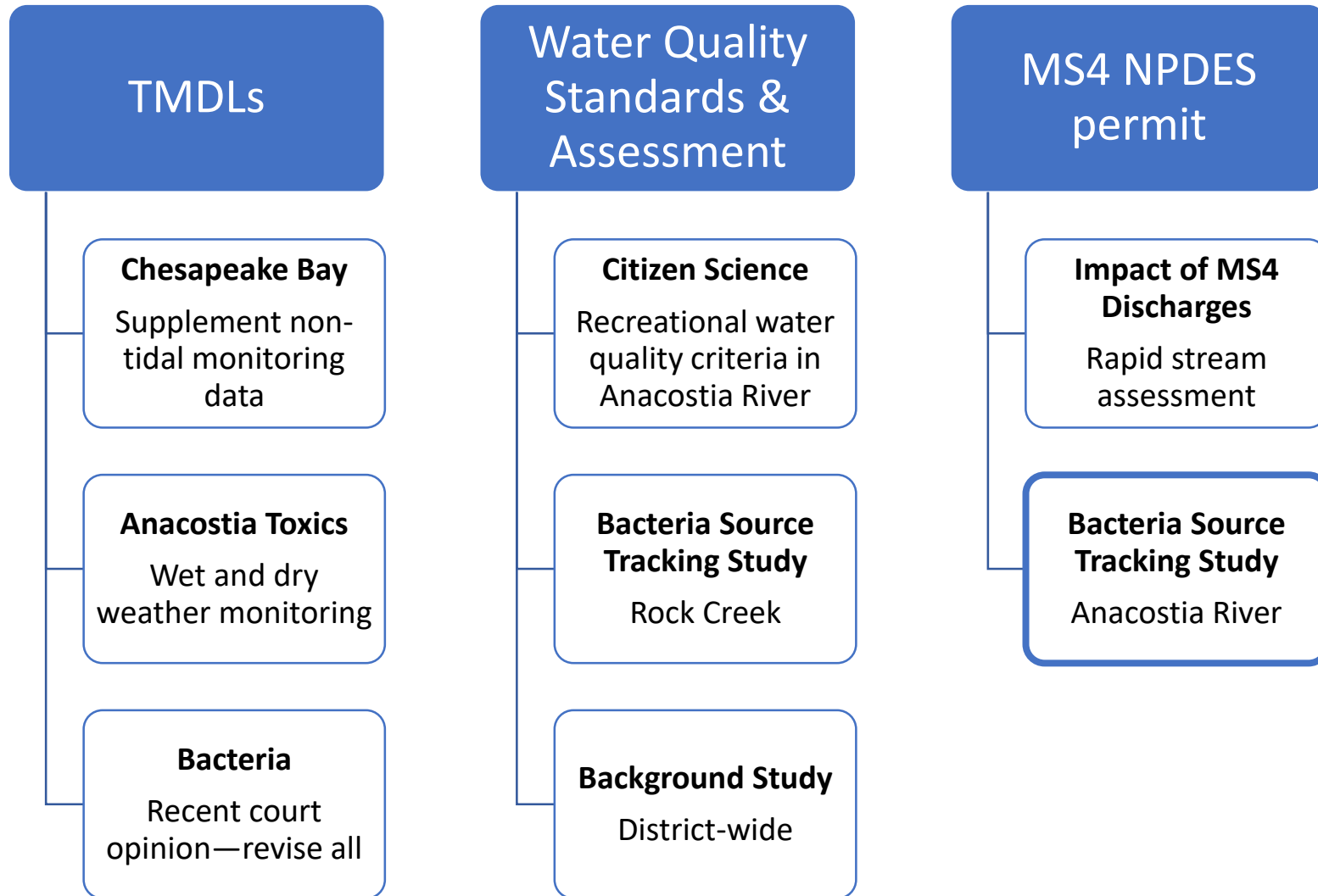
Site-specific Targeted Monitoring Results

Causes of Impairment District Of Columbia Rivers and Streams 2016

[Description of this table](#)

Cause of Impairment	Cause of Impairment Group	Miles Threatened or Impaired
Polychlorinated Biphenyls (PCBs)	Polychlorinated Biphenyls (PCBs)	38.4
Escherichia Coli (E. Coli)	Pathogens	38.4
Copper	Metals (other than Mercury)	27.6
Zinc	Metals (other than Mercury)	27.6
Turbidity	Turbidity	25.6
Dieldrin	Pesticides	21.9
Heptachlor Epoxide	Pesticides	21.9
Arsenic	Metals (other than Mercury)	21.6
Chlordane	Pesticides	21.1
Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	Toxic Organics	20.7

Monitoring Initiative Examples



“During the permit term, the Permittee shall conduct a bacteria source tracking study to identify sources of bacteria in the MS4 Permit Area where *E. coli* WLAs have not yet been attained and where waters are impaired by *E. coli*.”

DC MS4 Permit, 2018



Bacteria Source Tracking Study



Bacteria Source Tracking Study



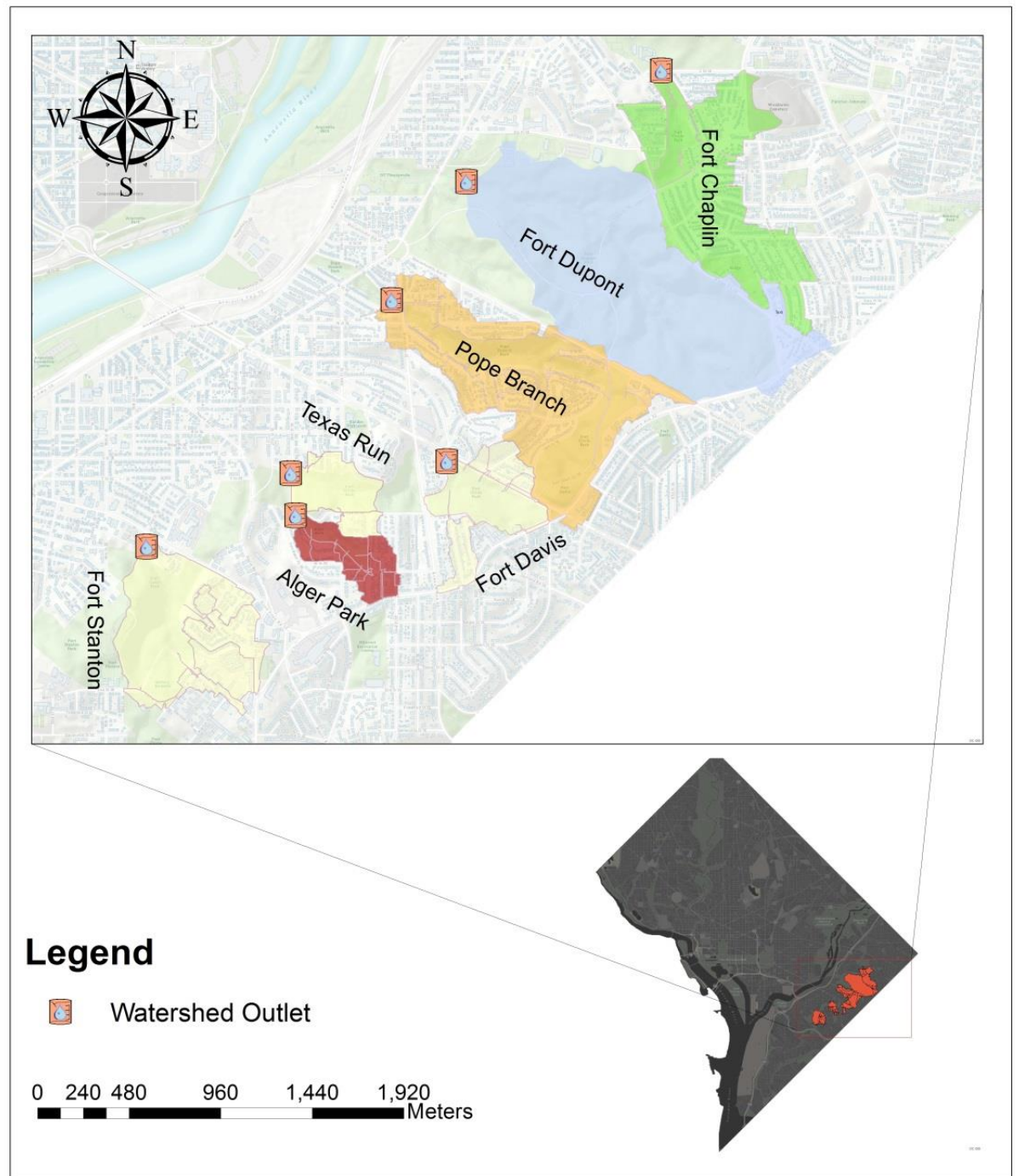
Characterize fecal
pollution sources in
outfalls



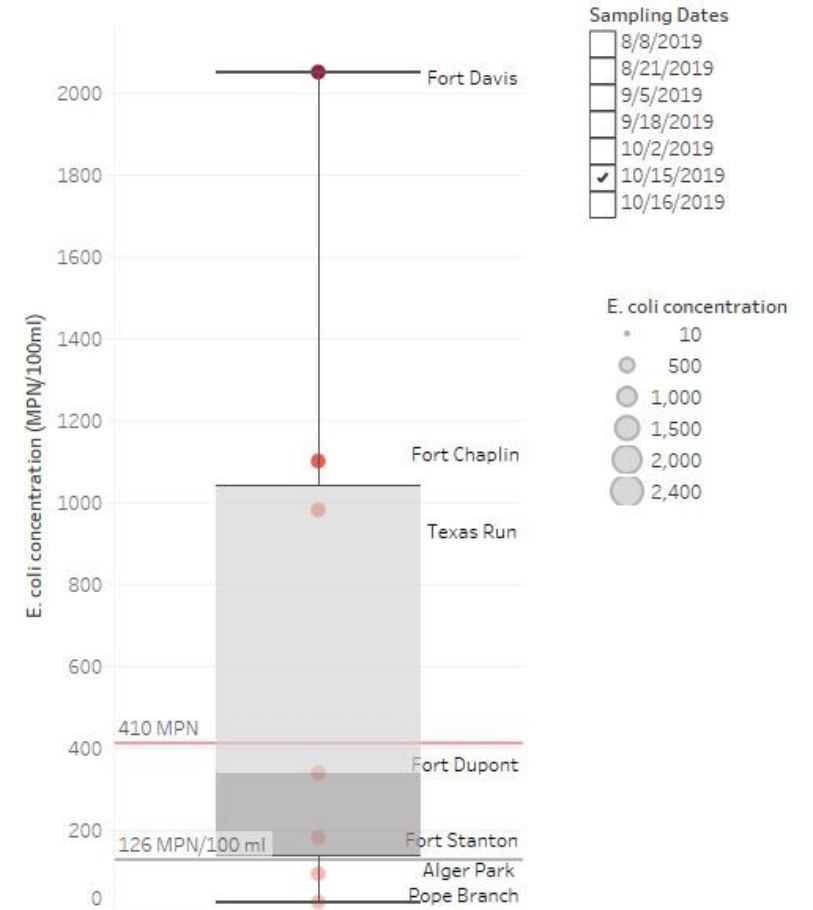
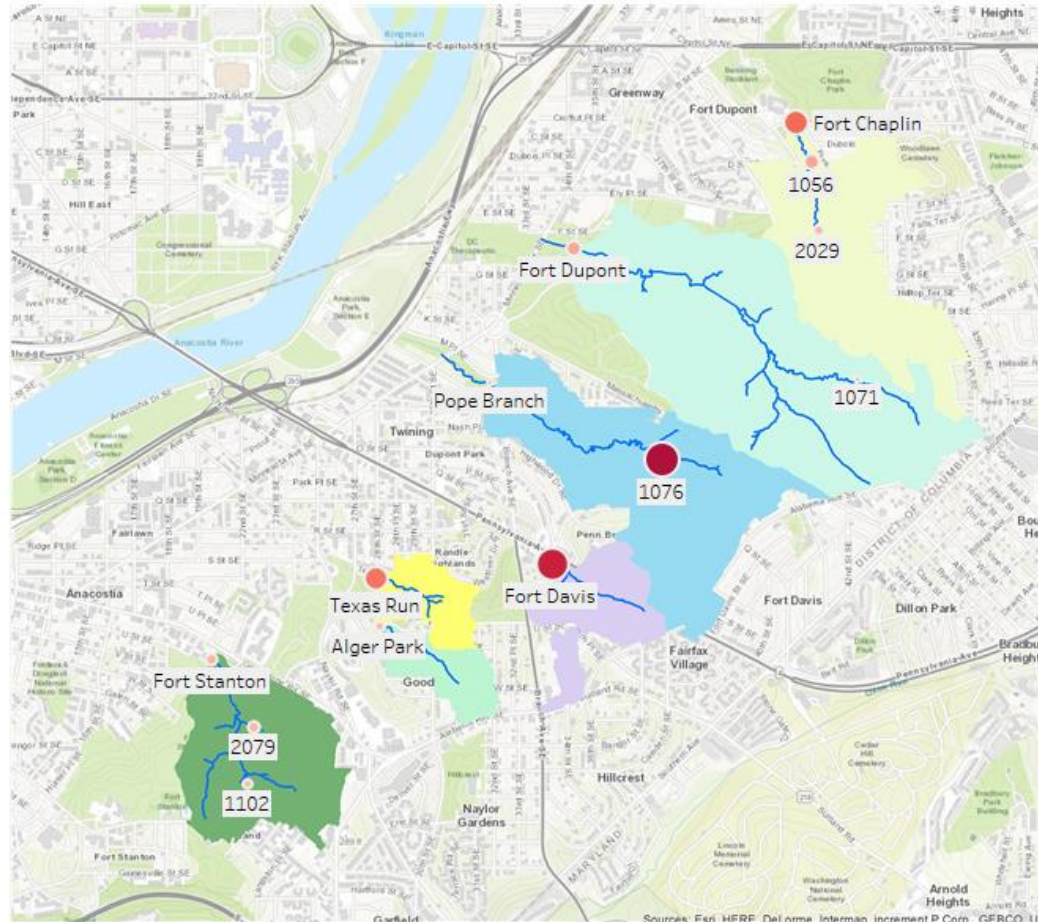
Develop procedure
with quantitative PCR

Sites

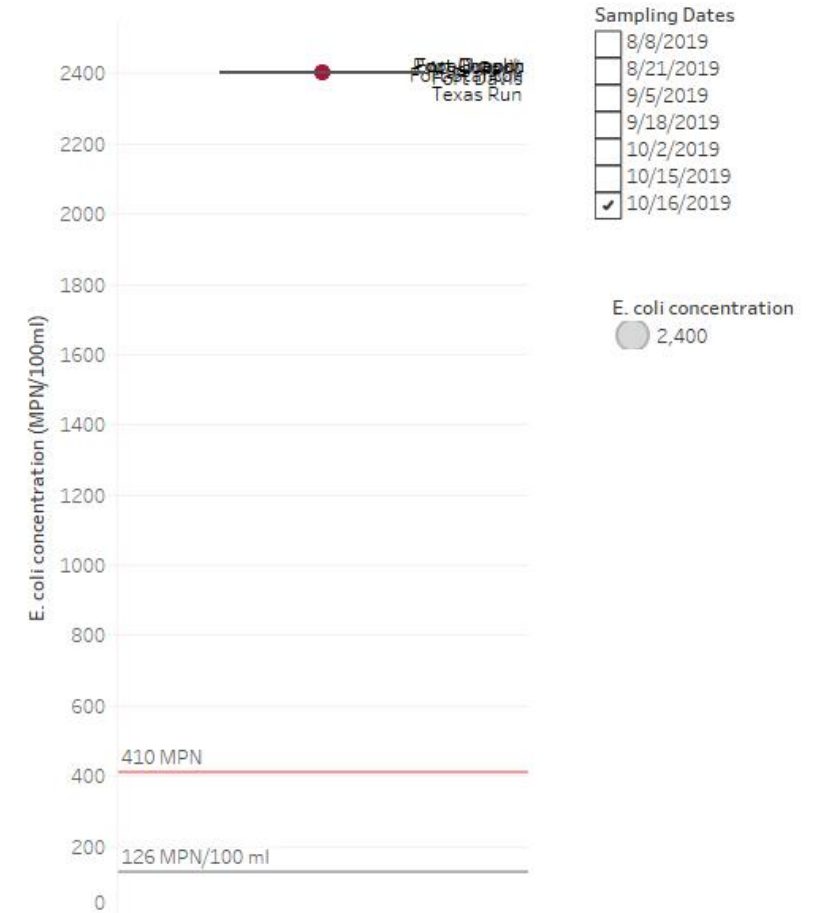
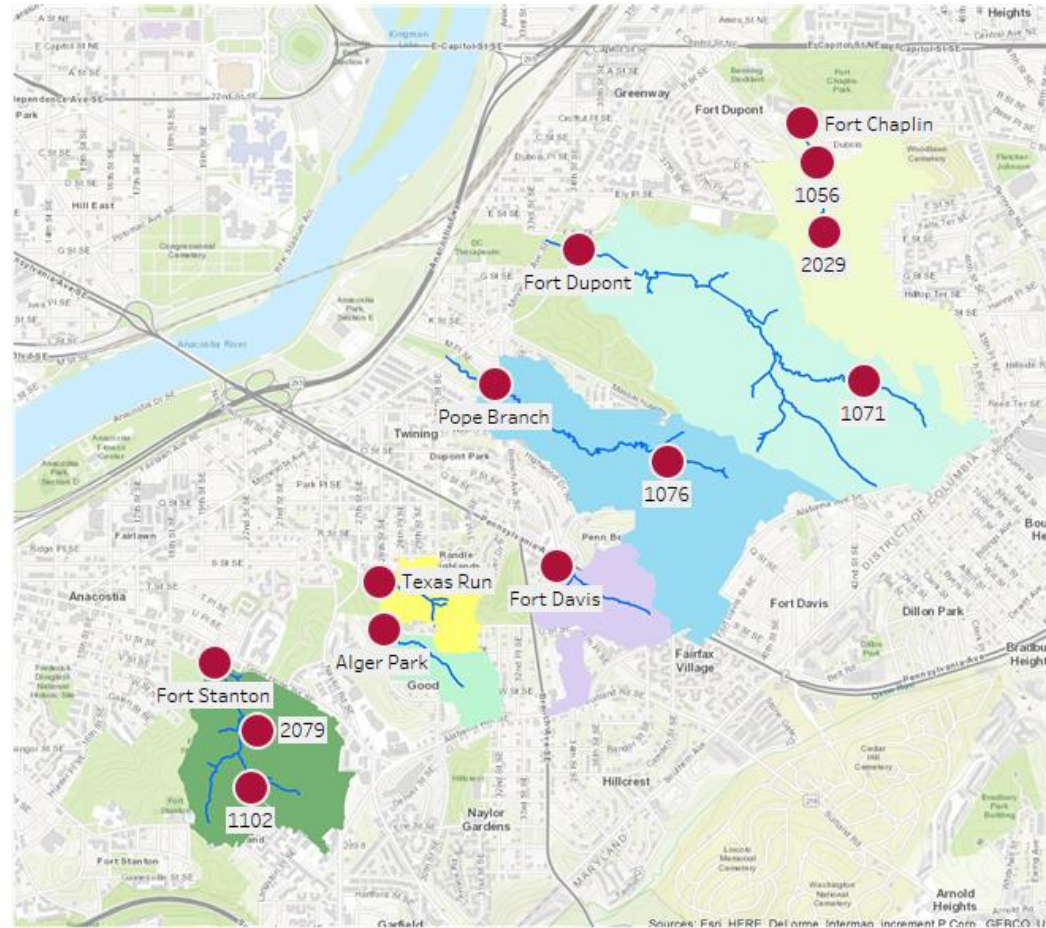
- 1st order catchments
- Historic data
- No known CSOs
- Dry weather (2/mth)
- Wet weather (6-8)
- Water quality parameters
- MST qPCR
 - Human
 - Non-human
 - bird, dog, and deer



Dry Event



Wet Event (1.4" rainfall)



THANK YOU



DEPARTMENT
OF **ENERGY &
ENVIRONMENT**

Ed Dunne

Chief, Standards and TMDLs Branch

Water Quality Division

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 **WE ARE
WASHINGTON
DC** GOVERNMENT OF THE
DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

	Rivers and Streams miles	Lakes, Reservoirs, and Ponds acres	Bays and Estuaries m²
Total Assessed Waters	38	238	6
Total Waters	39	238	6
Percent of Waters Assessed	99	100	99

District Of Columbia Causes of Impairment for 303(d) Listed Waters

[Description of this table](#)

NOTE: Click on a cause of impairment (e.g. pathogens) to see the specific state-reported causes that are grouped to make up this category. Click on the "Number of of impairment.

Cause of Impairment Group Name	Number of Causes of Impairment Reported
Pesticides	 75
Metals (other than Mercury)	 48
Turbidity	 27
Polychlorinated Biphenyls (PCBs)	 19
Toxic Organics	 15
Pathogens	 12
Organic Enrichment/Oxygen Depletion	 5
pH/Acidity/Caustic Conditions	 4
Chlorine	 1