

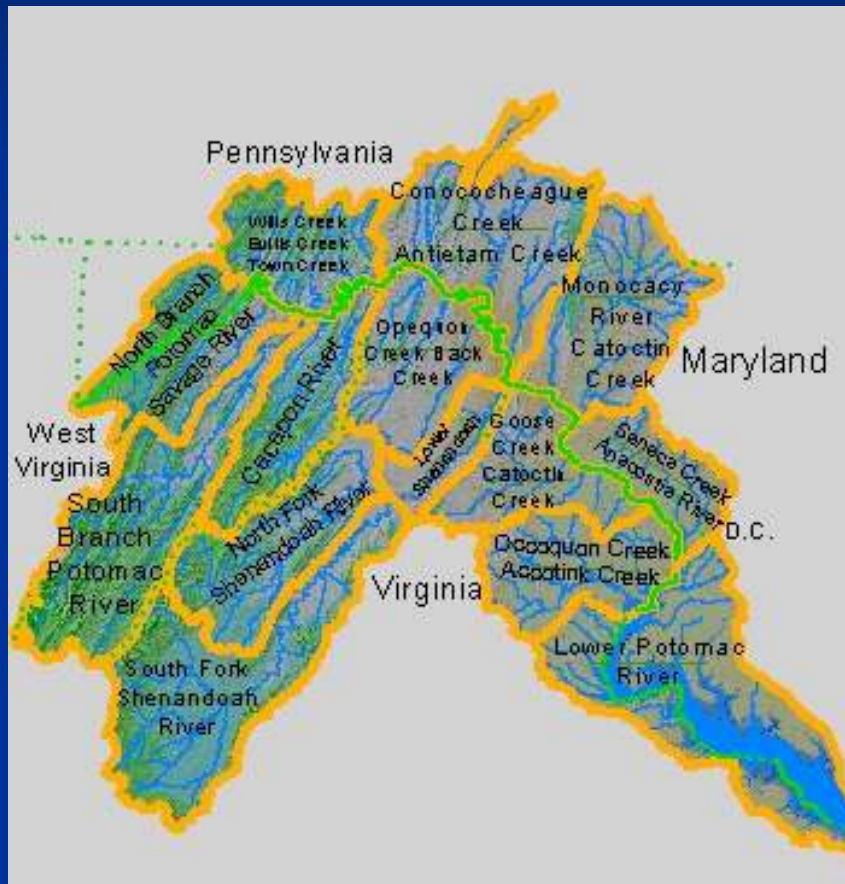


Streamflow and Water Quality Data

**Potomac River Basin
Early Warning Monitoring Workshop
August 25, 2004**

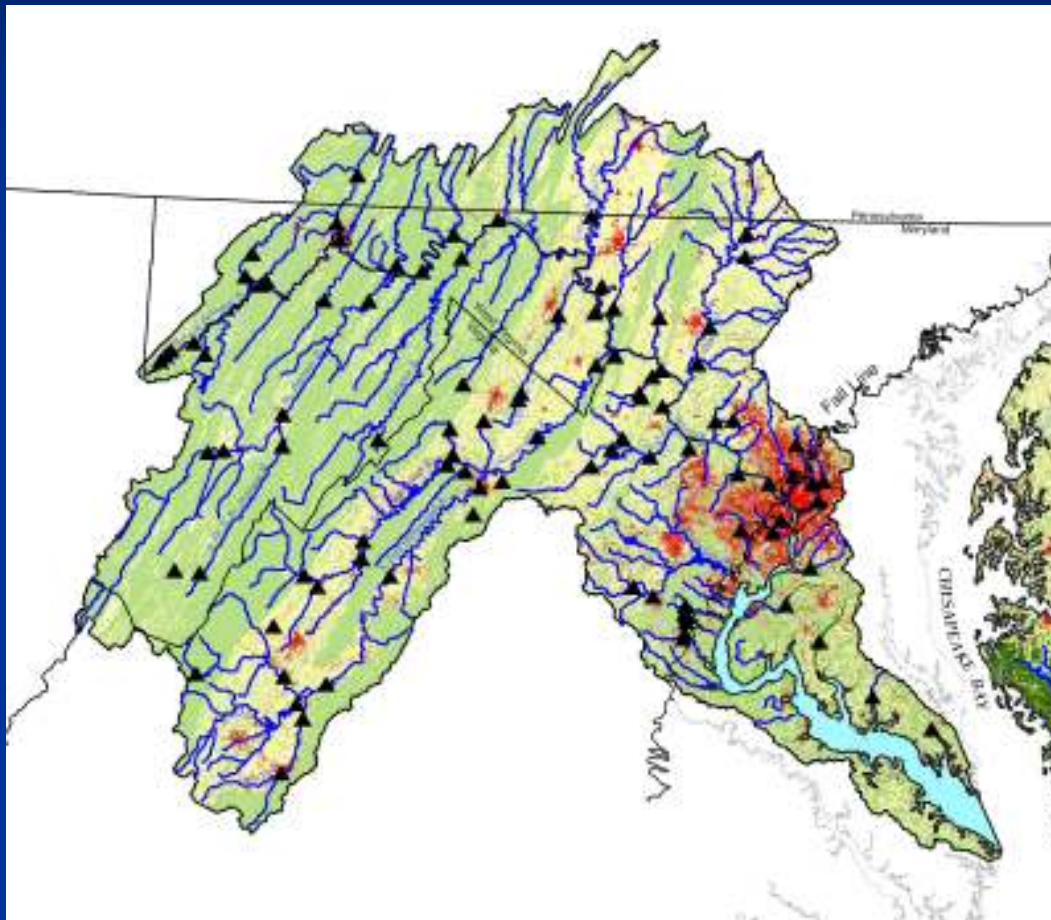
U.S. Department of the Interior
U.S. Geological Survey

Potomac Early Warning Monitoring Workshop Streamflow and Water Quality Data



**The Potomac River
Watershed has many
subbasins.**

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Stream-Gaging Stations

In 2003, there were 99 active continuous USGS stream-gaging stations located throughout the watershed.

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USGS Stream-Gaging Stations Operated in 2003

Basin (HUC)	Total stations	Main- stem stations	HCDN stations	Mean D.A. (mi ²)	Mean years of record
Upper Potomac	36	9	10	366*	47
Shenandoah	22	4	4	175*	47
Middle Potomac	20	3	7	82*	39
Lower Potomac	21	0	3	32	36



*Does not include nested main-stem stations.

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Stream-Gaging Station Operations

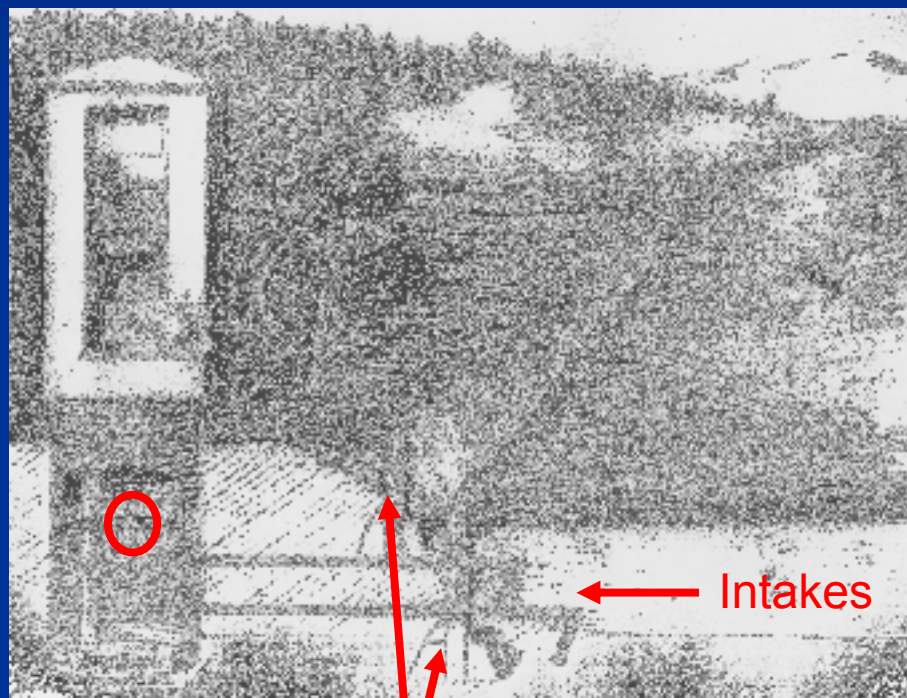
- More than 35,000 data values per year are collected, processed, and verified for each regular stream-gaging station.
- Operating costs include:
 - Instrument rental and maintenance.
 - 6-8 routine site visits and measurements.
 - Troubleshooting site visits.
 - Flood measurements.
 - Satellite and/or phone fees.
 - Data processing.
 - Quality assurance.
 - Publication of data.



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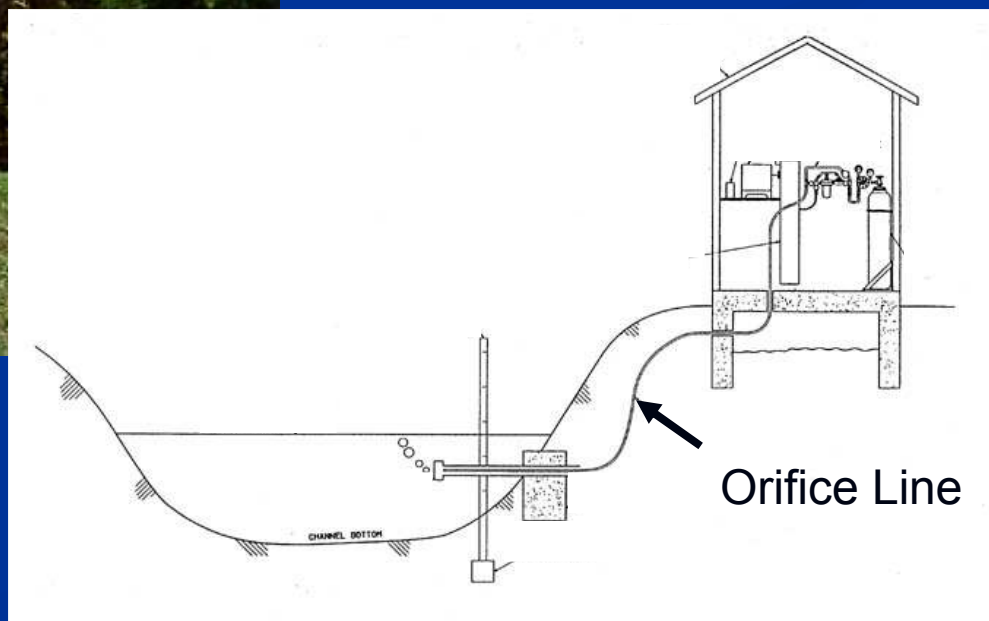
Stilling-Well Station



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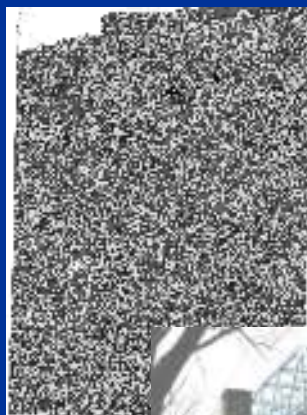
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Pressure Transducer Station



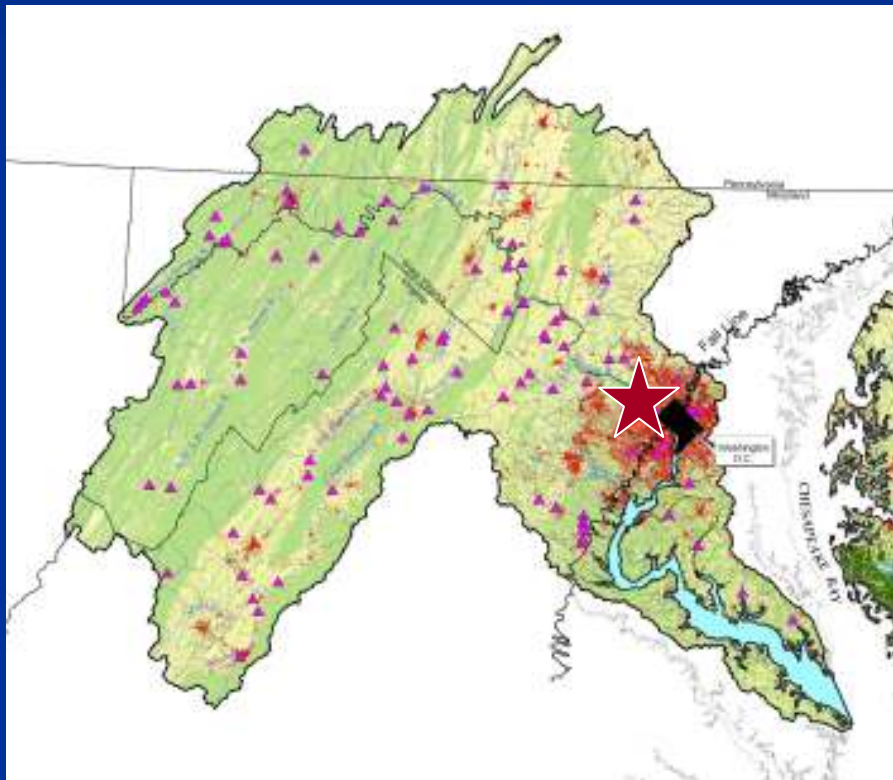
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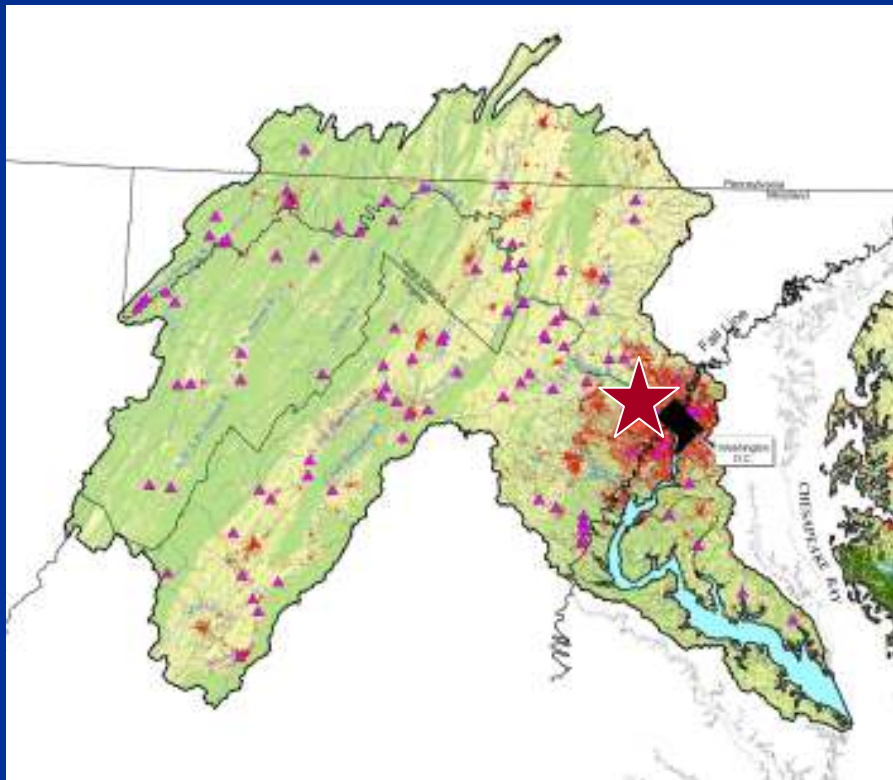
NAWQA



- High-intensity 1993-1995, 2001-2003
- Fixed stations
- Low intensity now
- Chain Bridge active
- Nutrients, pesticides, sediment, ecology
- 100+ synoptic sites also sampled

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River Input Monitoring

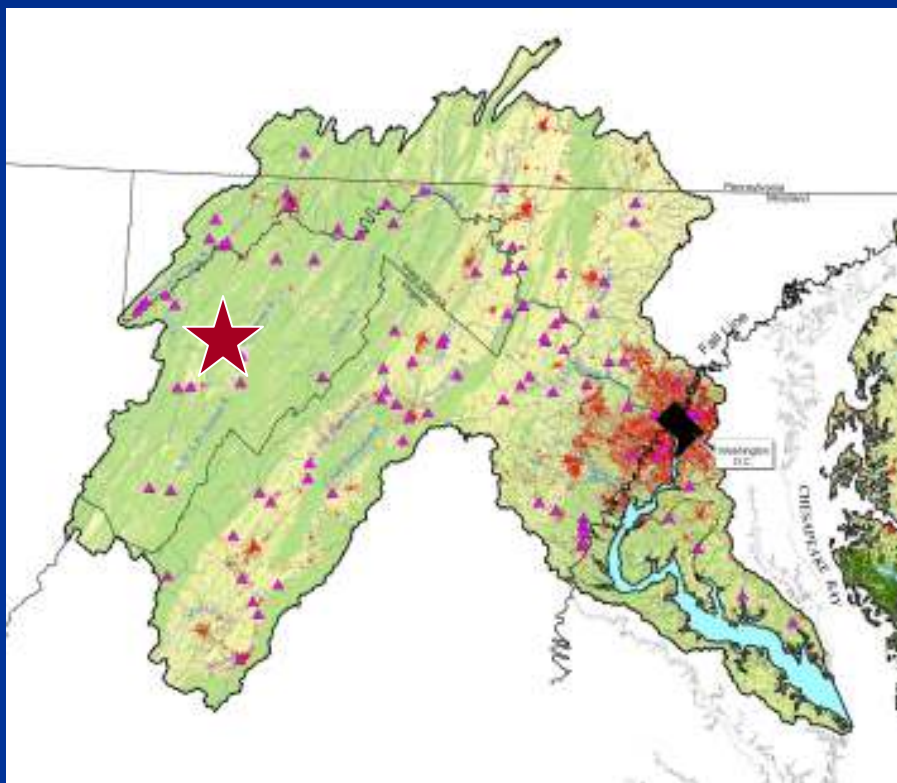


- MDE and Va. DEQ
- 1985-Present
- Fall-line station at Chain Bridge
- Routine and storm samples
- Nutrients, pesticides, sediment

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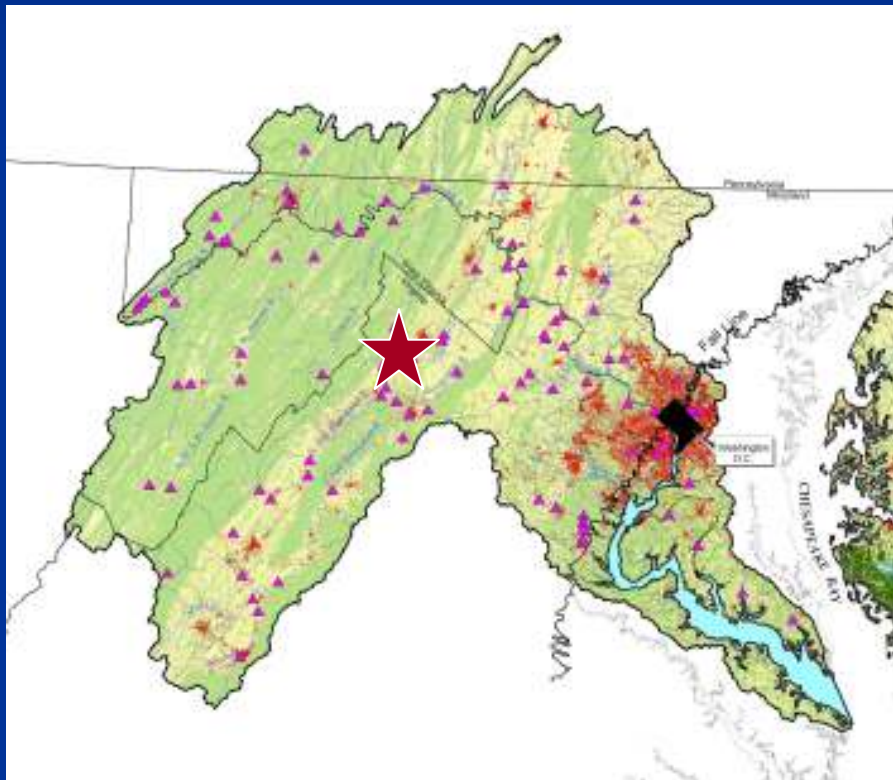
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South Br. Potomac



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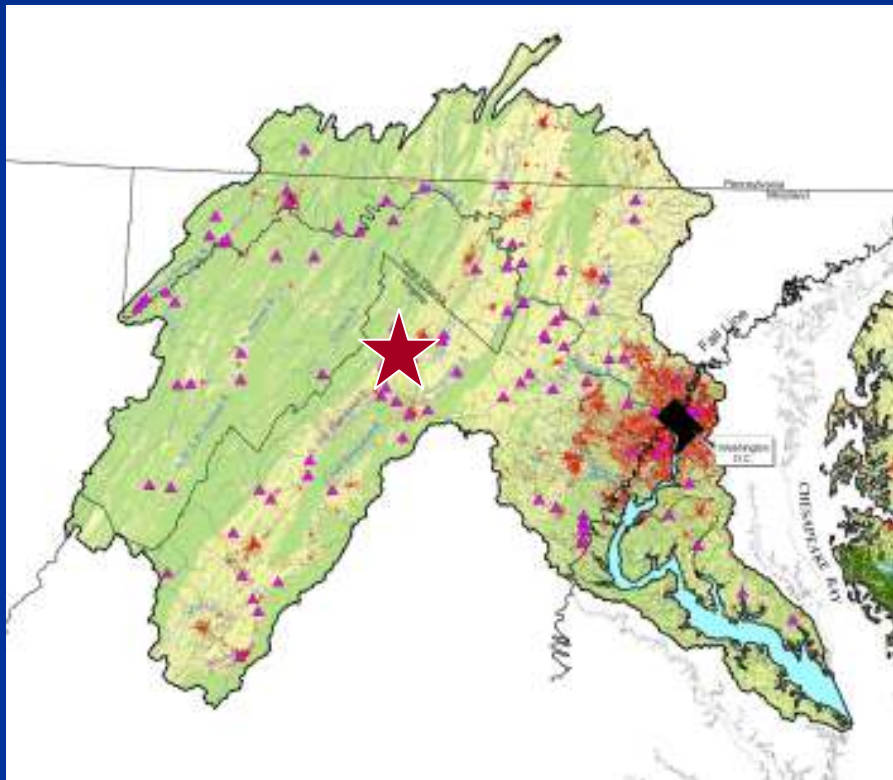
Shenandoah River, North & South Forks



- USEPA
- 1996-2002
- River Input add-on
- 2 stations
- Routine and storm samples
- Nutrients, sediment

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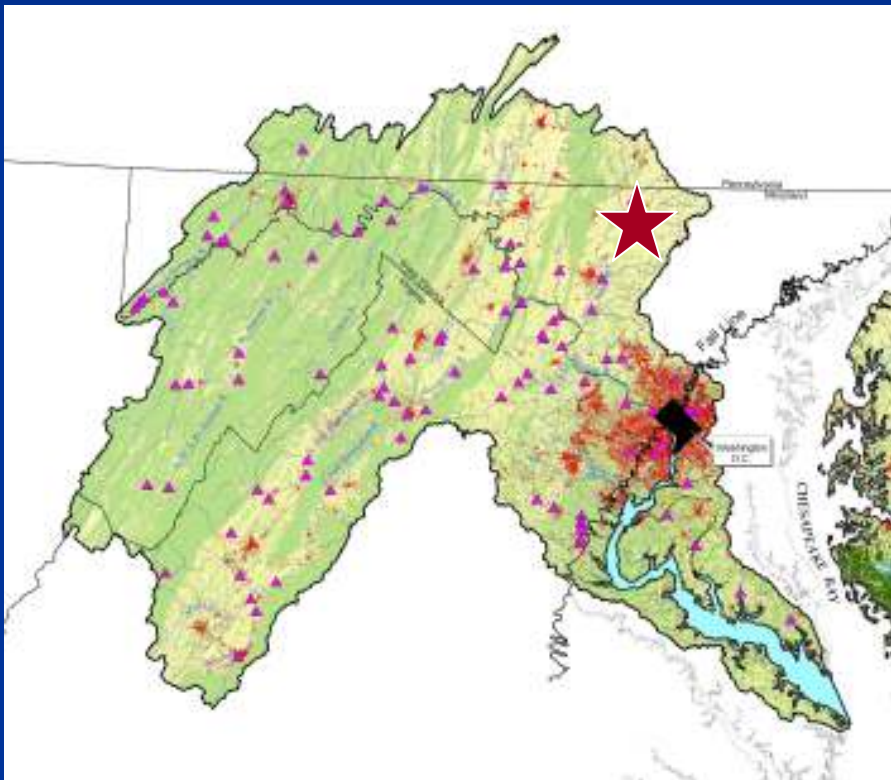
Shenandoah River, North Fork



- Northern Shenandoah Valley Regional Commission
- 1995-Present
- Minimum in-stream flow
- Flow, biology

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Monocacy River

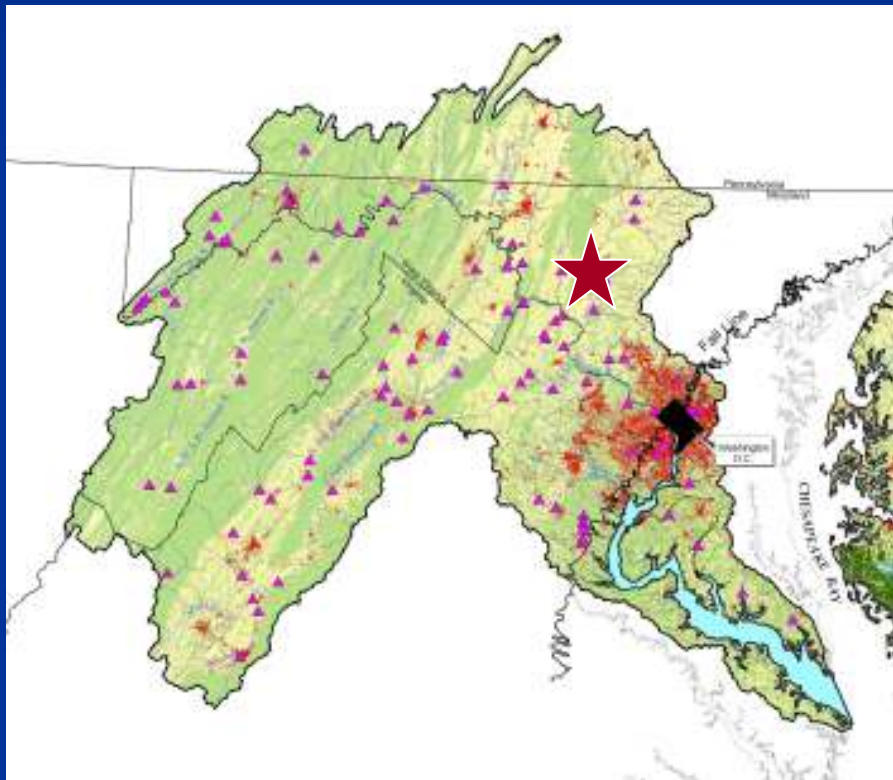


- ICPRB, City of Frederick
- Recent emphasis on water availability
- New station just above water plant intake

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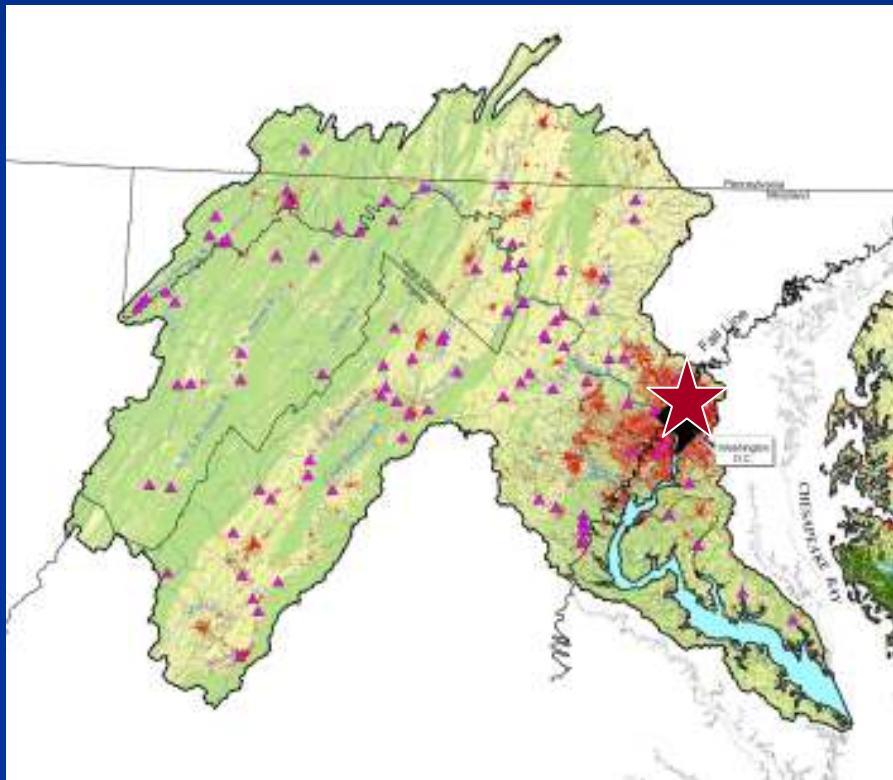
Clarksburg SPA



- **Montgomery County
DEP, USEPA**
- **5 stations**
- **Urbanization impacts**
- **Streamflow and
ecology**

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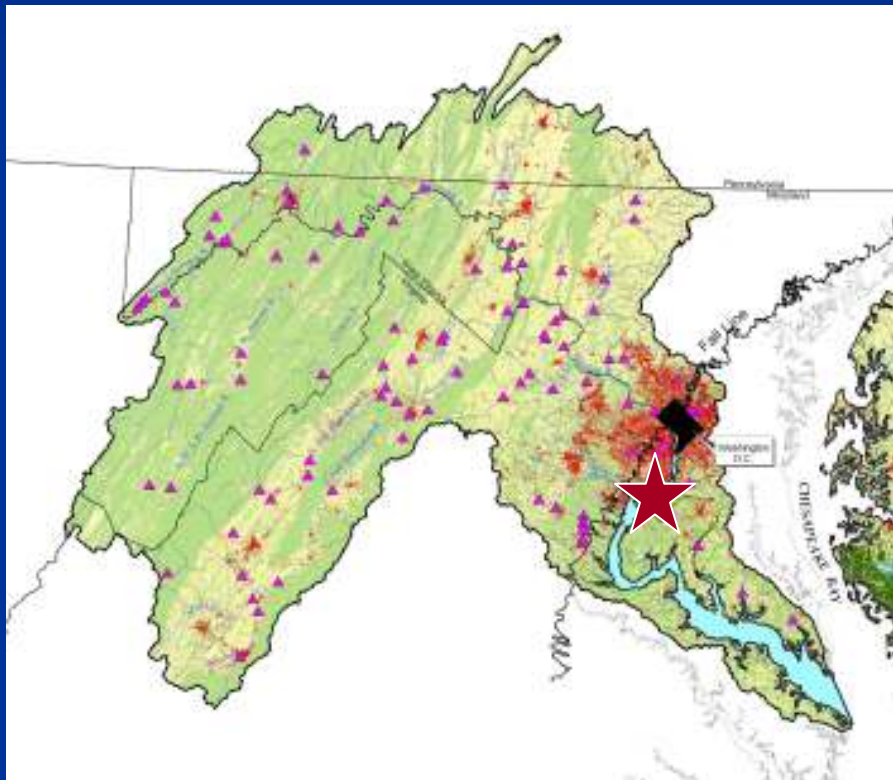
Anacostia River



- Prince Georges County, MDE
- 2 stations
- TMDL, restoration
- Nutrients, pesticides, sediment, ecology
- Real-time parameters

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Mattawoman Creek

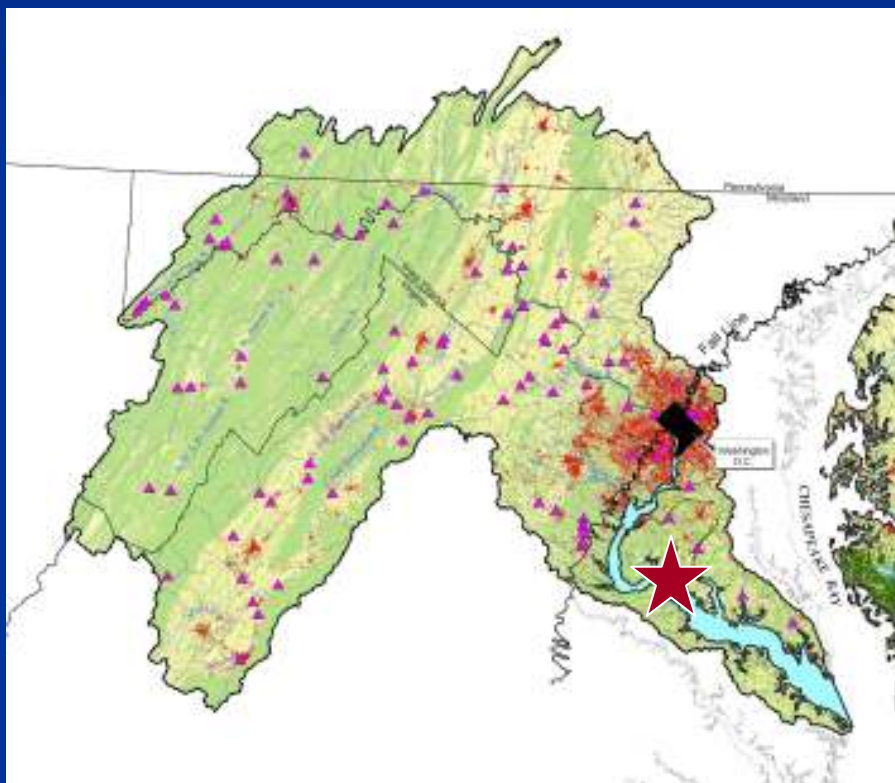


- Charles County
- TMDL, restoration
- Nutrients, sediment
- Real-time parameters
- Real-time sediment

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Coastal Plain



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