

Fairfax County Monitoring Initiatives

(current and past)

Diverse Monitoring Programs

Multiple Objectives

Well Supported

Monitoring Locations:

- MS4 Outfalls
- BMPs
- Lakes
- Stream channels
- Floodplains & Riparian Systems
- Watersheds (site networks)



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(current and past)

Study designs:

- Targeted
- Probabilistic/random
- Trend
- BACI
- Performance
- Network/Systemic

Parameter categories:

- Bacteria
- Physiochemical Water quality
- Discharge/flow
- Channel Physical conditions (geomorphology)
- Habitat
- Aquatic Biology (benthic macros & fish)
- Soils microbiology

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Current Priorities:

1. Stream Restoration (using NCD) Monitoring (*measuring functional uplift*). Ecological Lift (???)
305(b)/303(d) Listed Impaired Waters – Aquatic Life Uses (Benthic TMDLs)
2. Watershed scale effects of cumulative restoration efforts on Quality, Quantity and Biology [e.g. USGS Gages Study]
3. Green Stormwater Infrastructure - Performance, functionality & sustainability (individual & suites)
4. Ions (e.g. Na⁺, Cl⁻) – For TMDLs and water supply. Source, fate & transport.
5. TMDL load allocations [nutrients, sediment, bacteria, etc.] – Reality Check