

2017 Monitoring Program Update

Former DuPont Waynesboro Site, Virginia
Area of Concern (AOC) 4



April 19, 2017



Agenda

- Monitoring Reports
- STM Update
- LTM Update
- 2017 Field Schedule
- Database Update



Monitoring Reports

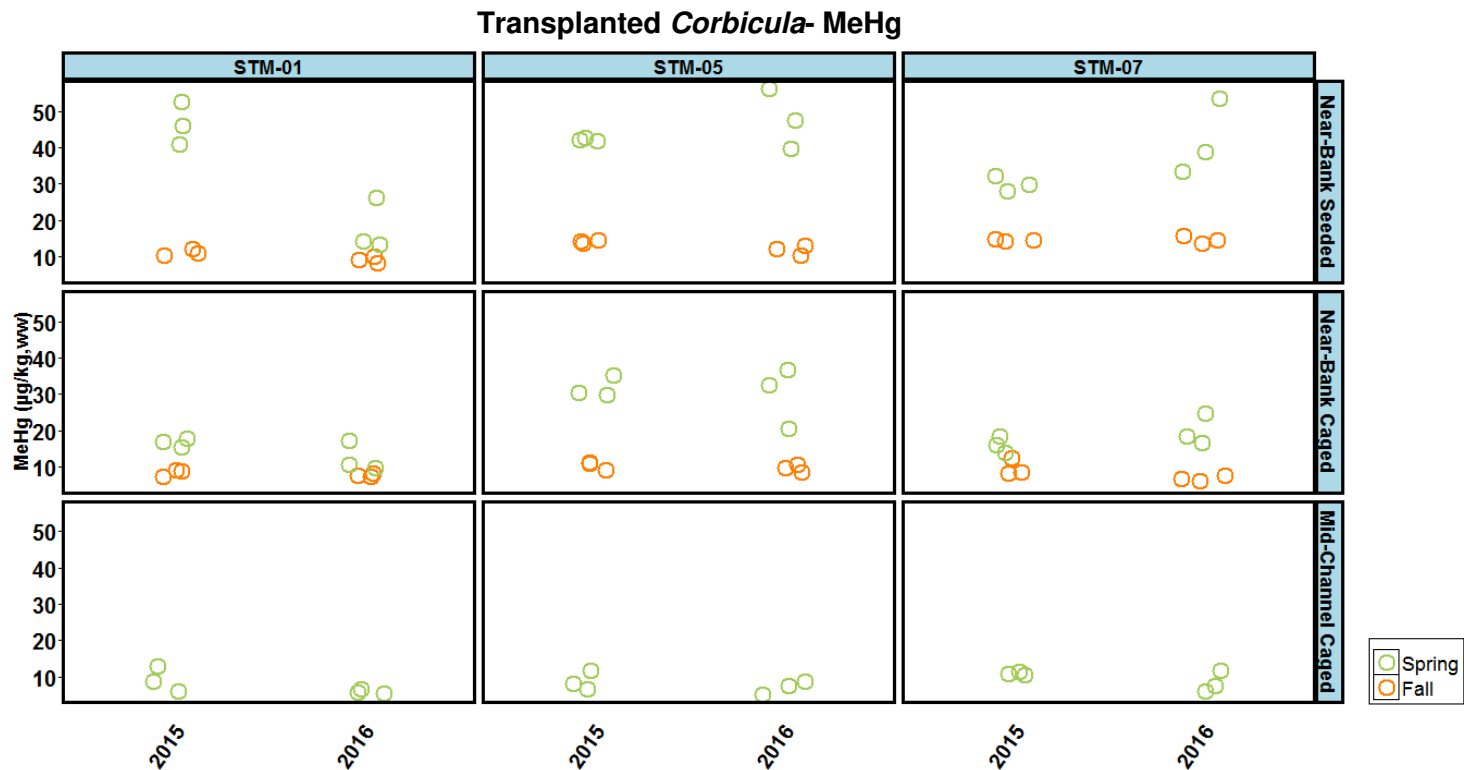
- 2016 STM Report submitted
- LTM Baseline Report submitted



STM Update

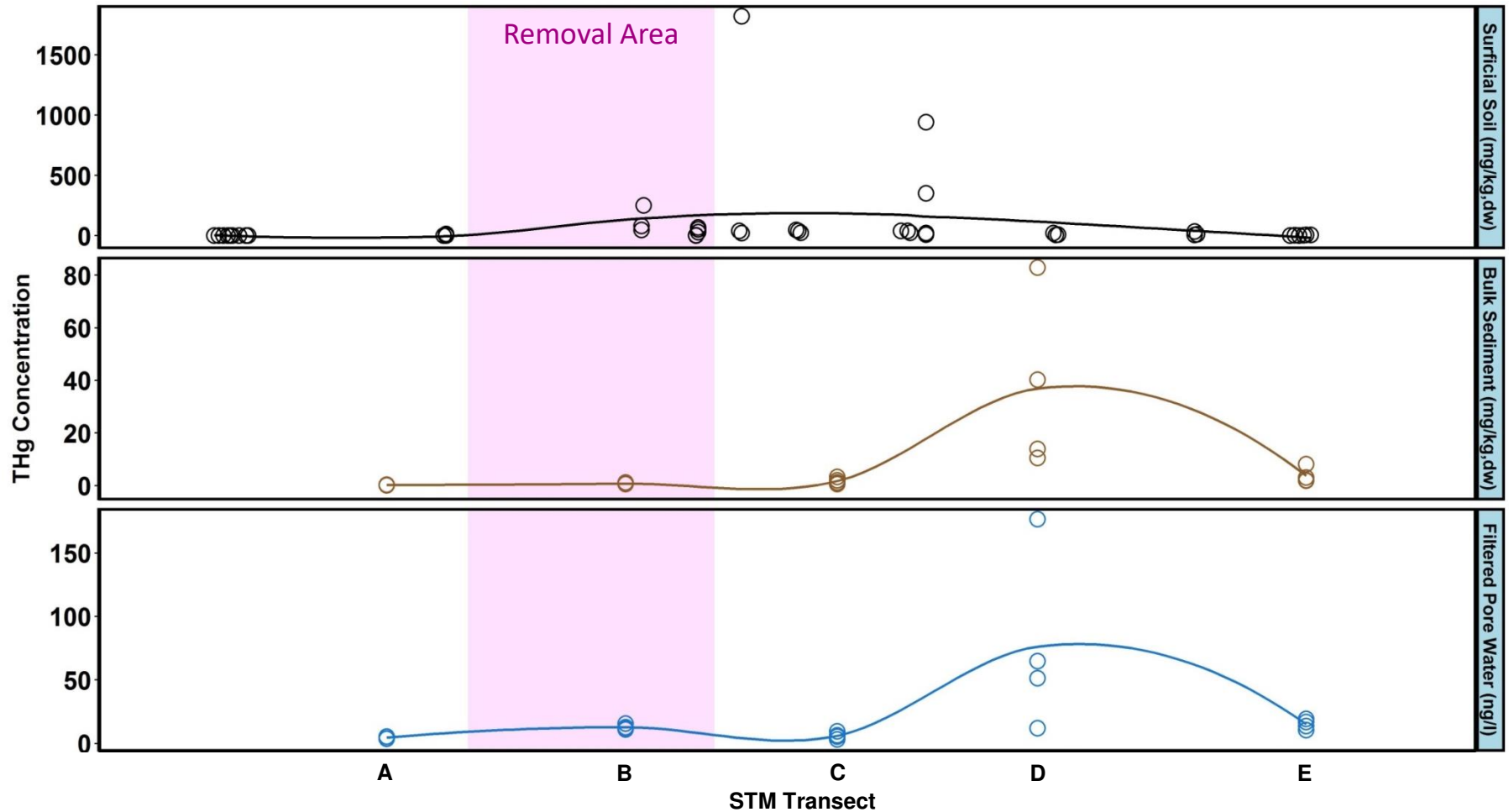
—Mercury in biotic and abiotic media:

- Follow established spatial and temporal trends
- Locally influenced by elevated mercury in bank soils

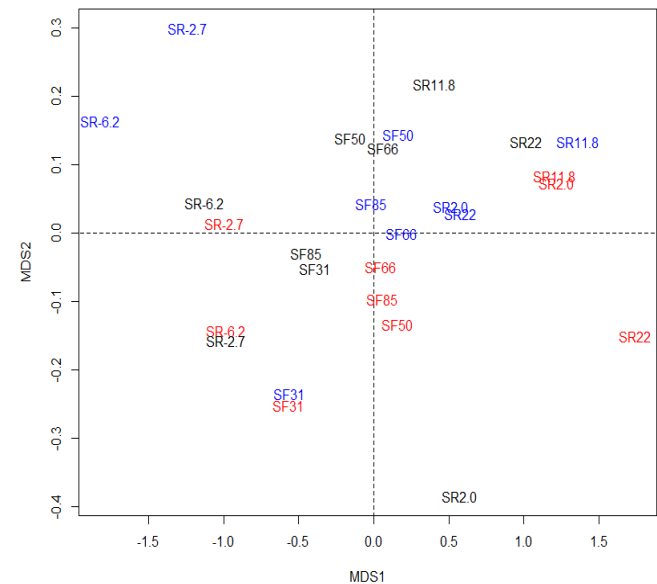
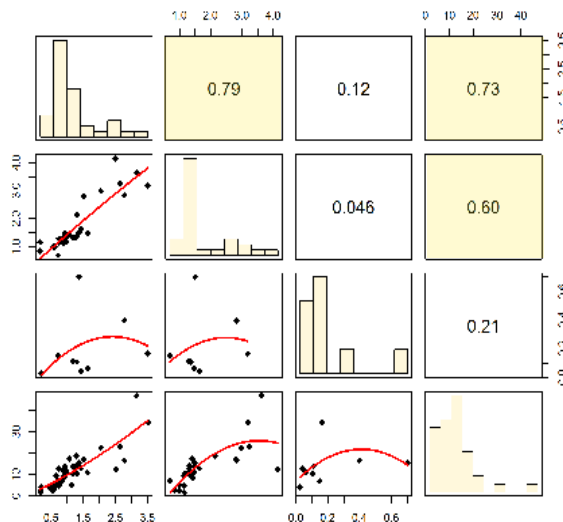


STM Update

— Example: STM-01 Pre-remediation conditions



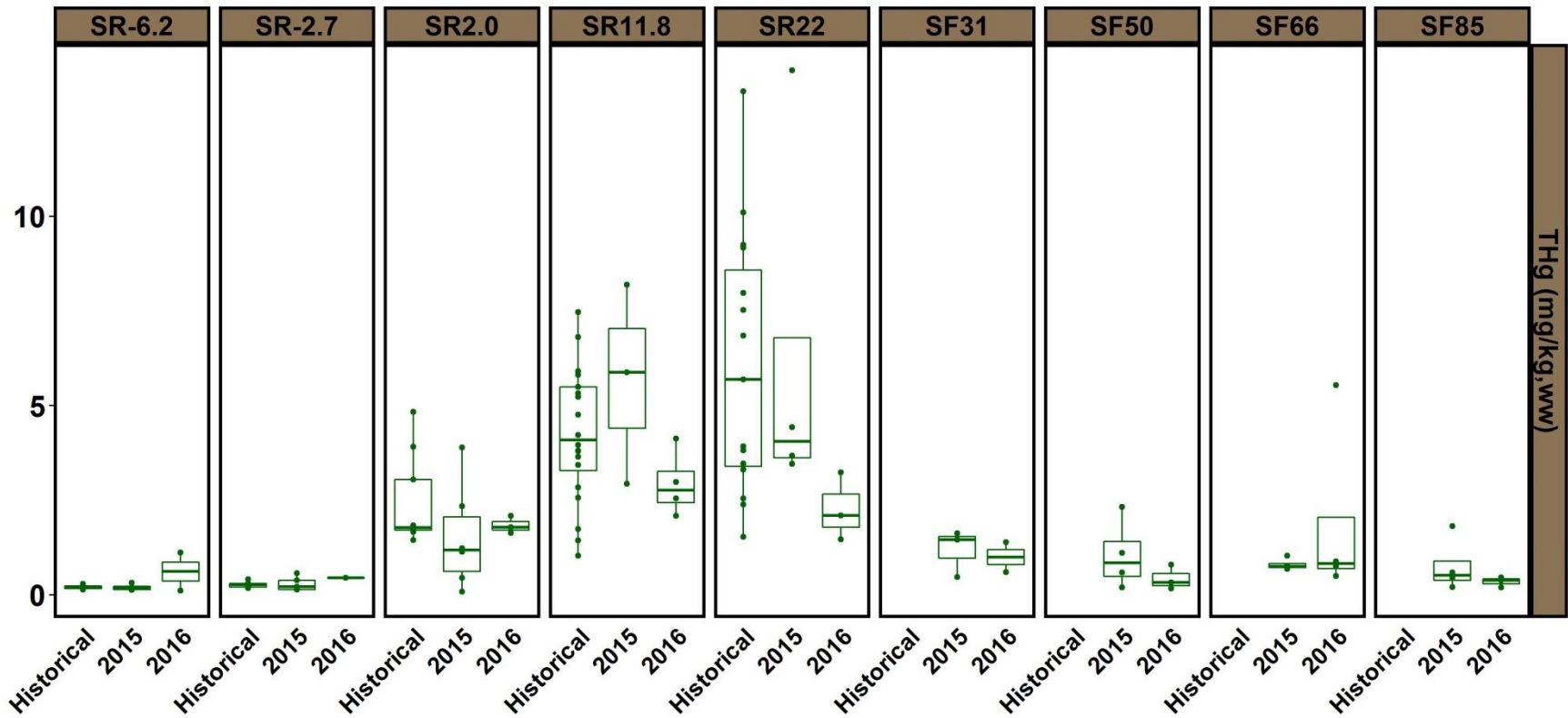
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LTM Update

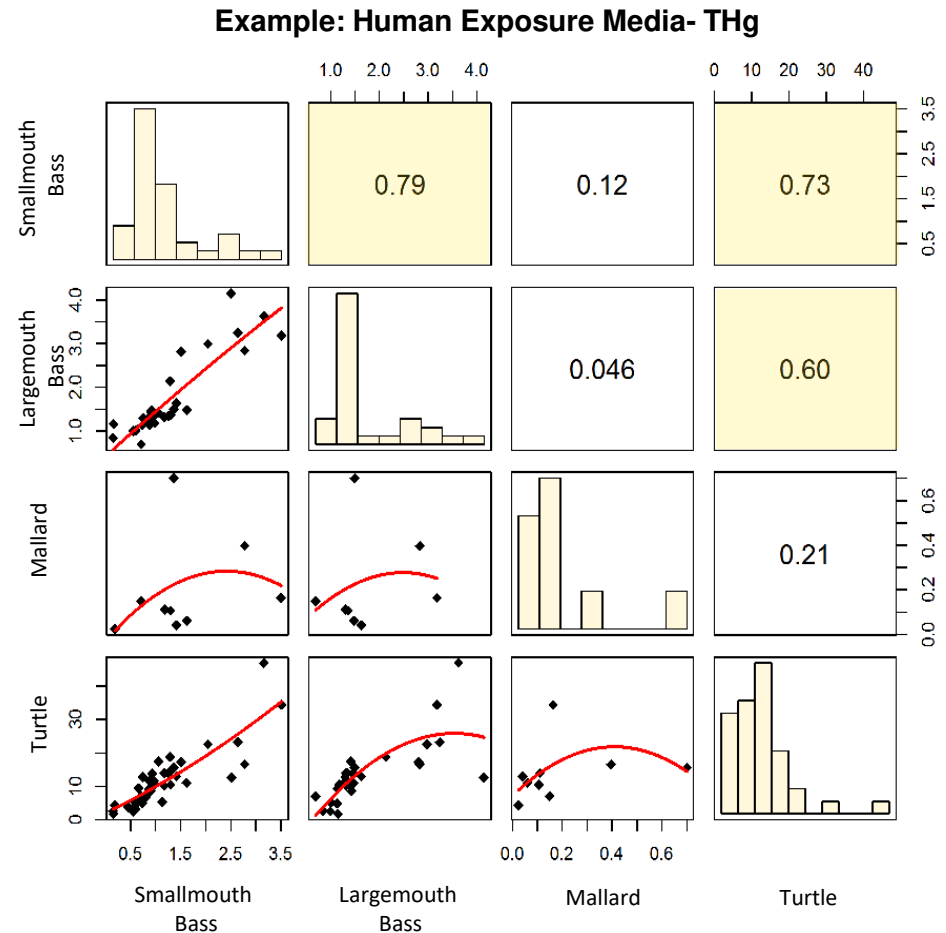
- Baseline data consistent with historical data (spatial and temporal)

Example: Carolina Wren Blood



LTM Update

- Correlated IHg/THg among media
 - Bass and Turtles
 - Aquatic exposure media
 - Terrestrial exposure media
 - Mayflies and Spiders
- Fewer MeHg correlations
- Linear vs. non-linear relationships



*Highlighted R² values indicate a significant regression model ($p < 0.05$; two-tailed F-test)

LTM Update

– Seasonal differences

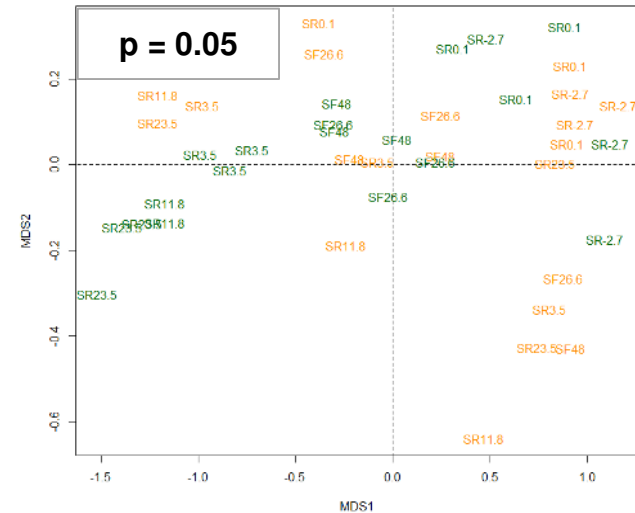
- MeHg – Aquatic exposure
- THg- Smallmouth bass
- Benthic community

– Annual differences

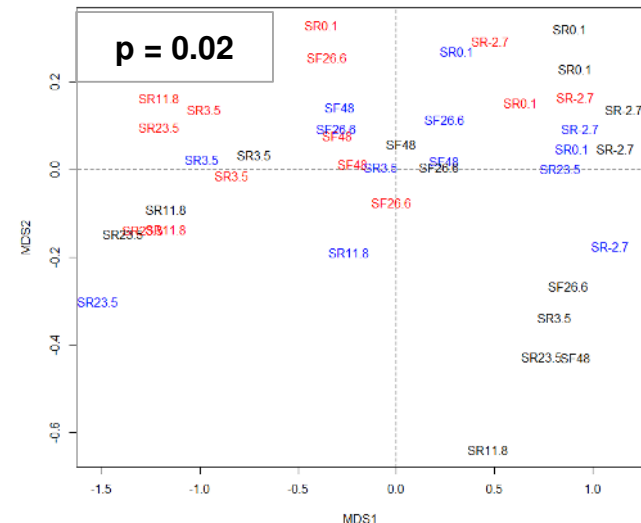
- MeHg- Aquatic exposure media

Spring
Fall

Methylmercury

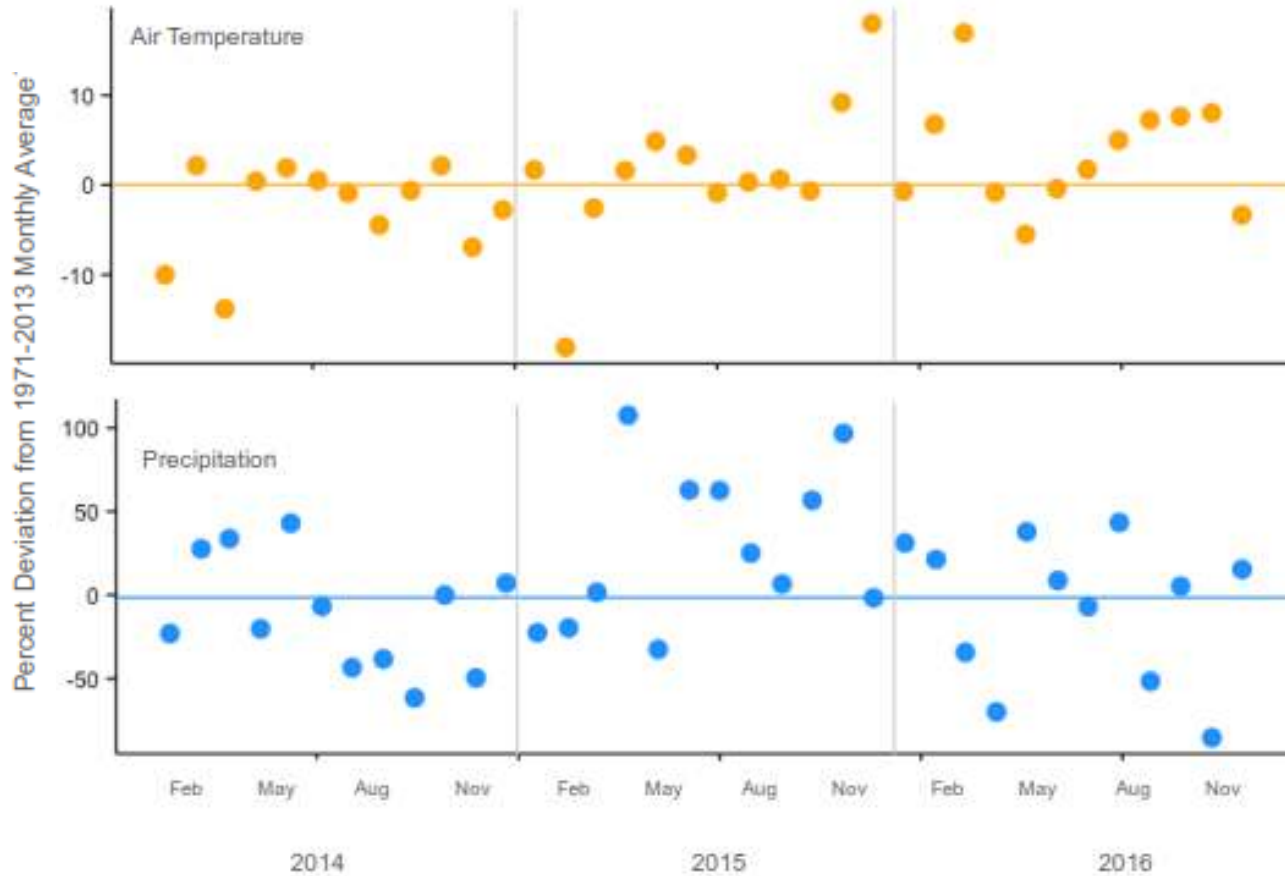


2014
2015
2016

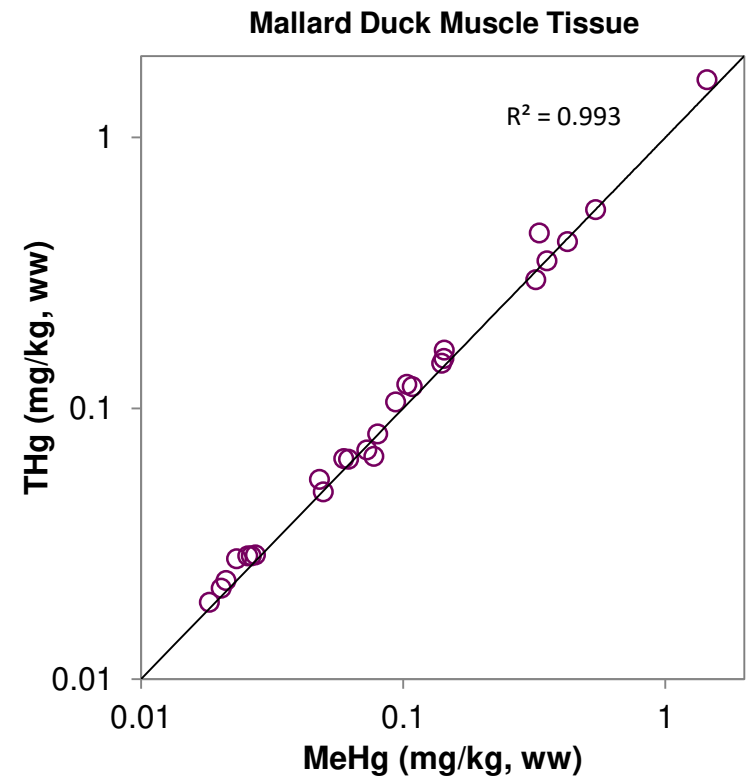
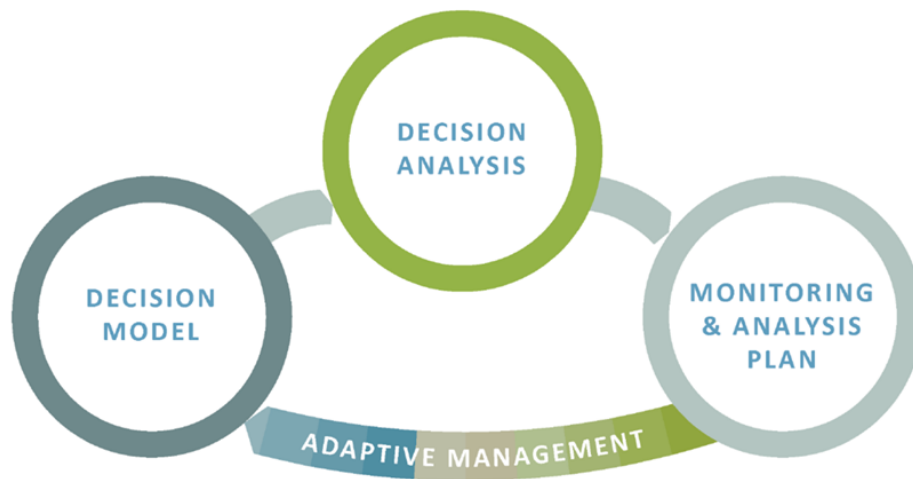


LTM Update

- Effect of regional climatic conditions on MeHg concentrations in biotic media



Monitoring in an Adaptive Management Framework



2017 Field Schedule- STM

—Spring event (early June)

- Post-remediation
 - STM-01 (Constitution Park)
- Pre-remediation (transitional)
 - STM-05 (North Park)
 - STM-07 (WWTP)
 - STM-08 (Eagle Corporation)



2017 Field Schedule- LTM

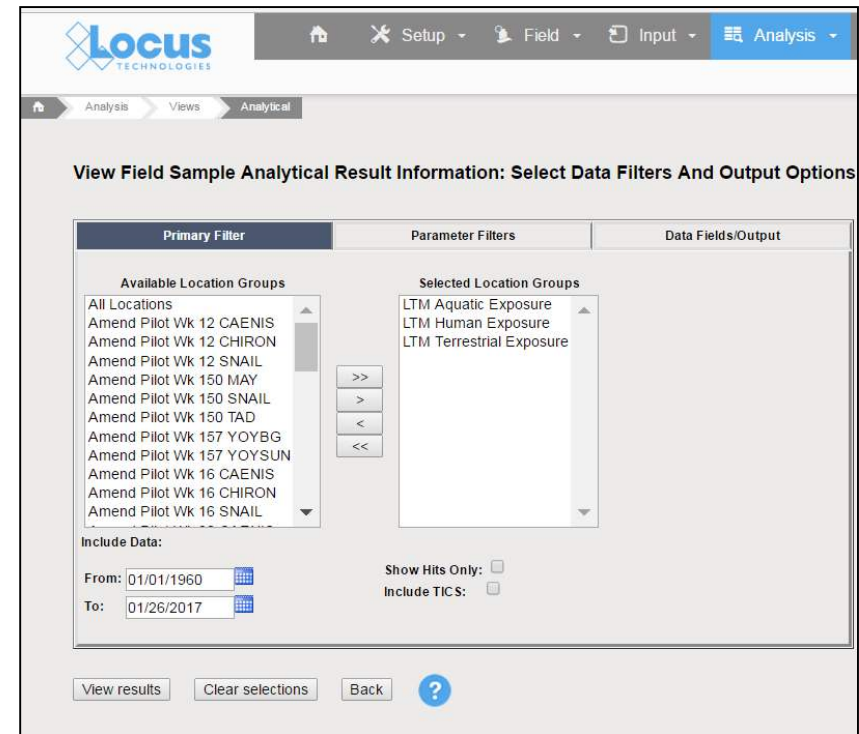
- Mallard sampling completed
- Spring/Summer events (May/June)



- Aquatic exposure media, Bass, Turtles, and Terrestrial exposure media
- Bass sampling- Paired with VDEQ/VDGIF monitoring

Database Update

- On-going integration of researcher data and biological data
 - ~ 13,000 records have been updated/added
 - ~ 6,000 records are in upload processing
 - ~ 5,000 to be added/updated
- Locus Mobile data collection platform tests successful
 - Anticipate rolling out program-wide in 2017





Thank You

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AECOM