

AOC 4 Monitoring Program Spring 2018 Data Review

Former DuPont Waynesboro Site, Virginia

Area of Concern (AOC) 4



July 24, 2018

AECOM

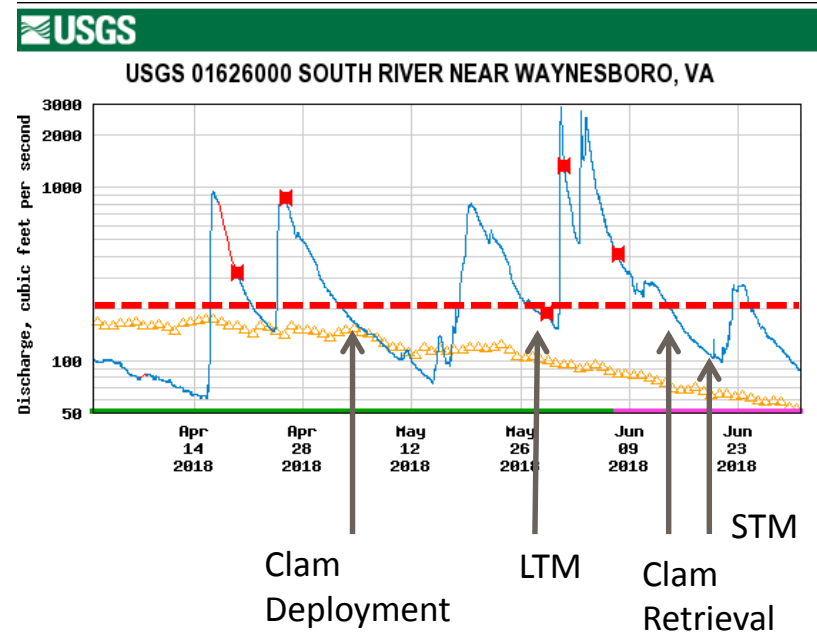
Agenda

- Spring Monitoring Challenges
- Long-term Monitoring Program Revisions
- Long-term Monitoring Data
 - Aquatic
 - Terrestrial
- Short-term Monitoring Data
 - Post IM analytical data
- Fall Monitoring Activities



Spring 2018 Storm Events

- Flooding associated with heavy spring rain events delayed sampling
- Loss of clam data at:
 - Pilot Bank – Mid-channel seeded
 - STM-05 – Near-bank seeded
 - SF-26.6 – Caged
- Extended clam exposure periods
 - SF-48 7-week exposure
 - All other sites 6-week exposure



Long-term Monitoring

- Monitoring Program Revisions
- *Provisional* Data Review
- Path forward

LTM Program Revisions

– Revised LTM plan approved April 2018!

- Media
- Analytes
- Frequency/Locations



Human Health

- Adult Bass
- Snapping Turtle
- Mallard Duck



Aquatic Ecological

- Sediment
- Mayflies
- Clams
- Benthic Comm.
- Periphyton

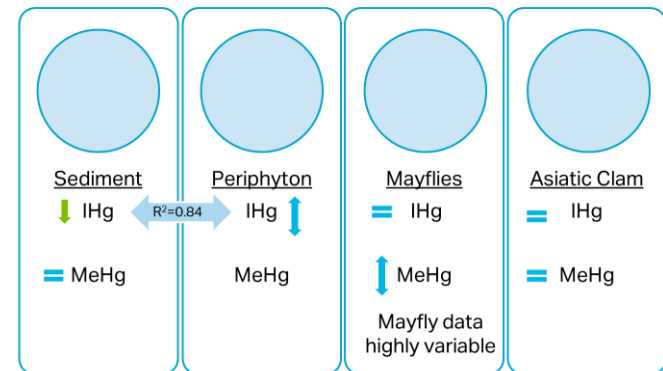
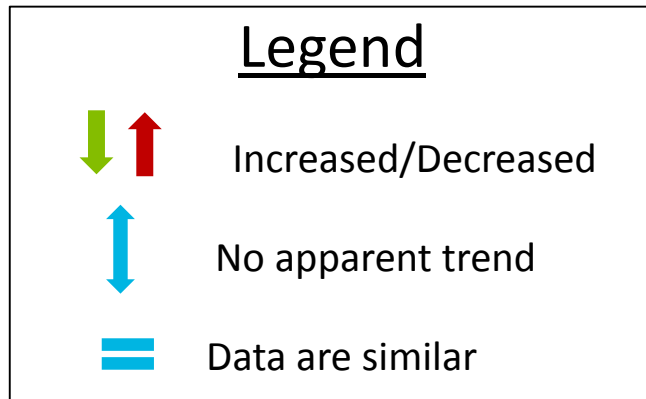


Terrestrial Ecological

- Wolf Spiders
- Carolina Wren
- Earthworms
- Soil

LTM Dashboard Approach

- Visual inspection of data plots
- Statistical evaluation when appropriate
- Trend analysis will be performed as Post-IM dataset grows



Aquatic Ecological Receptors

Baseline (2014-2016) vs. Post IM (2017-2018)



Sediment

IHg



MeHg



Mayflies

THg



Asiatic Clam

IHg



MeHg



YOY Smallmouth

October

2018

– Data variable and inconclusive at this time

Terrestrial Ecological Receptors

Baseline (2014-2016) vs. Post IM (2017-2018)



Wolf Spider

THg

SR Stations



SF Stations



Ref Stations



Image: www.pinterest.com



Wren

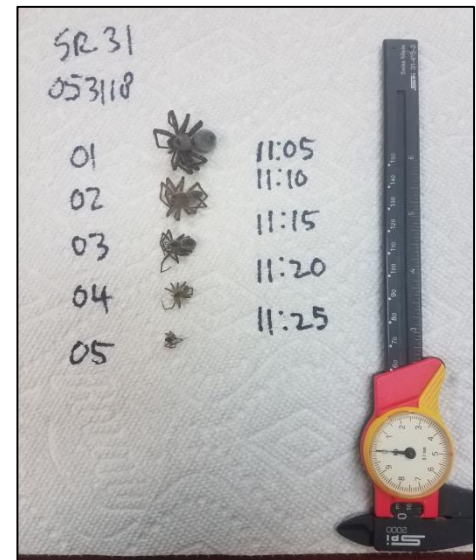
July 2019

Image: www.audubon.org

– Data variable and inconclusive at this time

LTM Summary and Path Forward

- Implemented revised monitoring activities
- Spring/Summer 2018 wetter than average
- Preliminary data consistent with 2017 Post IM
- Fall data collection resumes in September



Short-term Monitoring

- BMA/Monitoring Status
- *Provisional* Data Review
- Path forward

Short-term Monitoring Activities

Post IM Stations

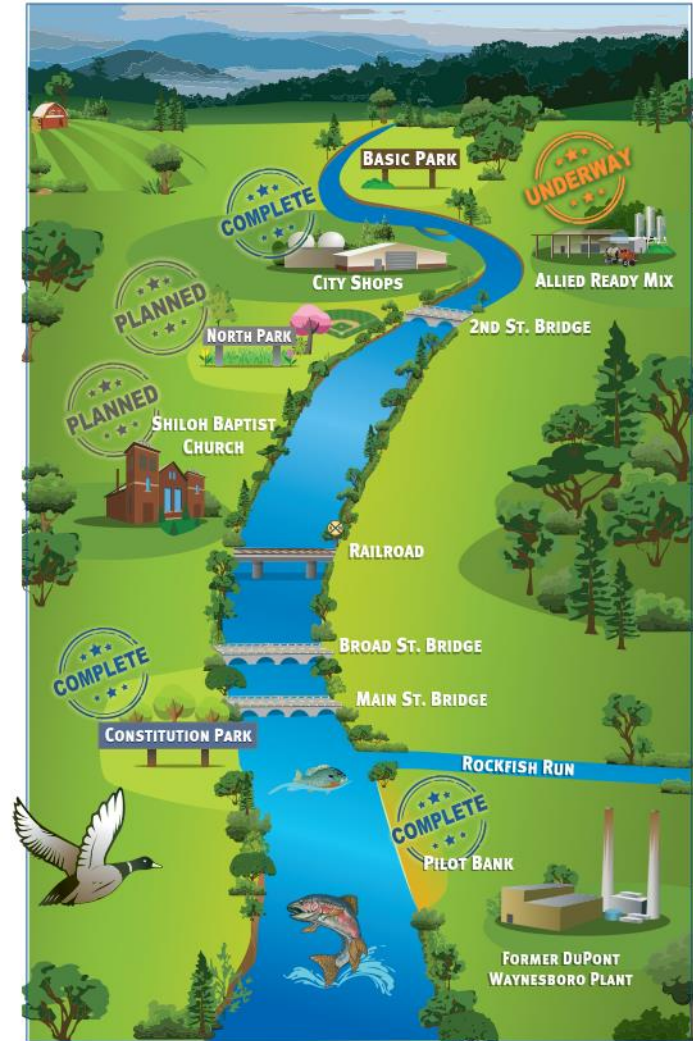
- Pilot Bank
- Constitution Park (STM-01)
- City Shops (STM-07)

“Baseline” Stations

- Shiloh Baptist (STM-03)
- North Park (STM-05)

Not Sampled

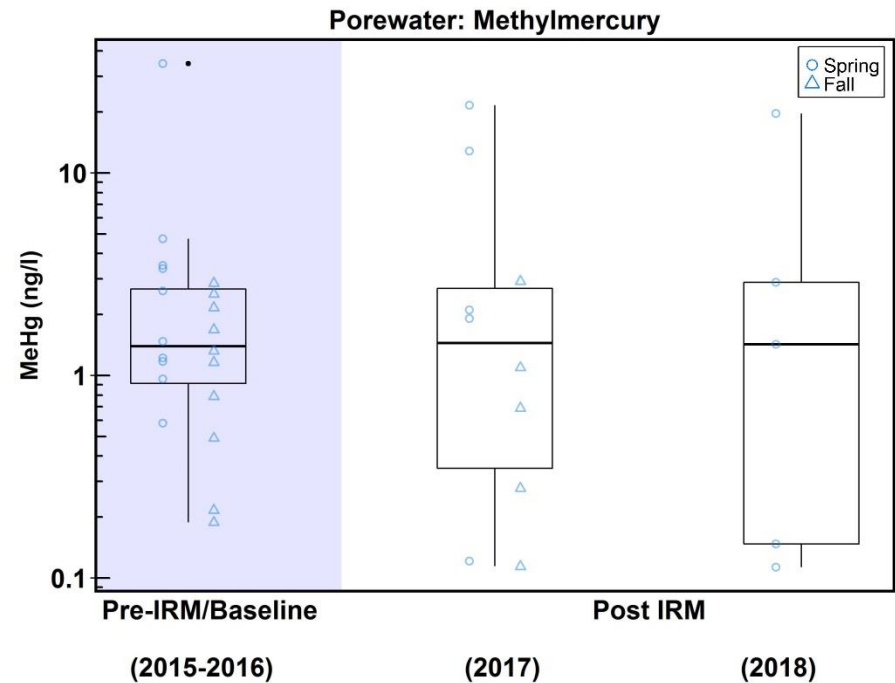
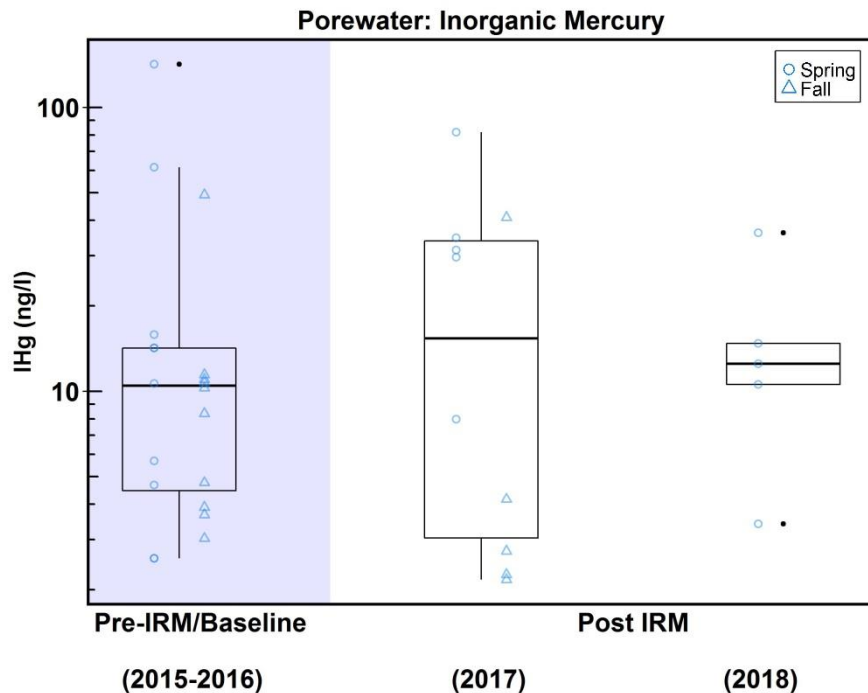
- Allied Ready Mix (STM-08)



Constitution Park (STM-01)

Pore Water

- Decreased Spring IHg pore water concentrations



Constitution Park (STM-01)

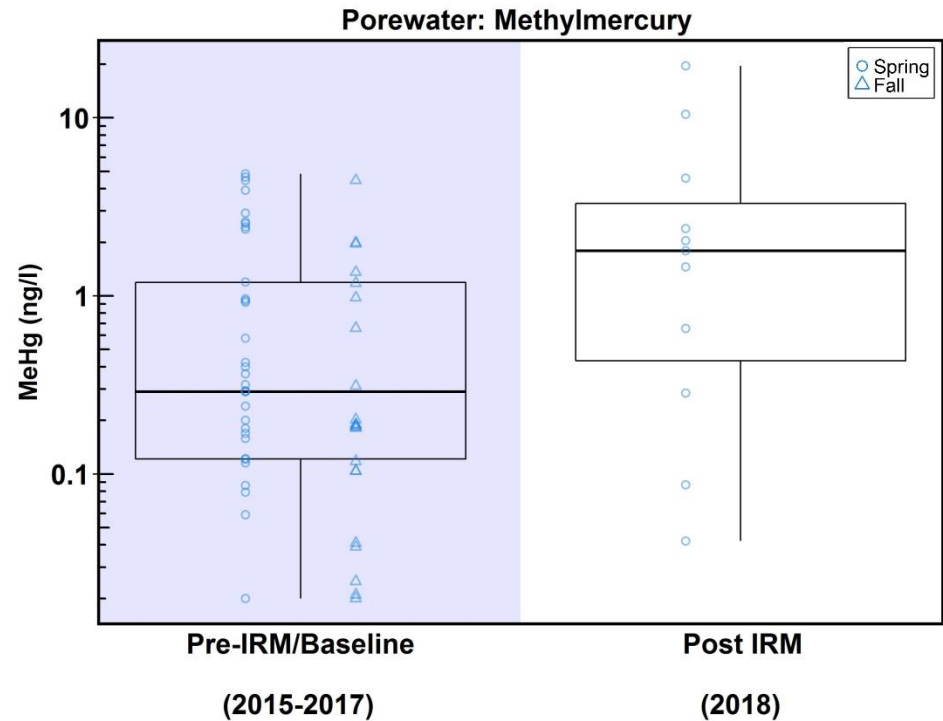
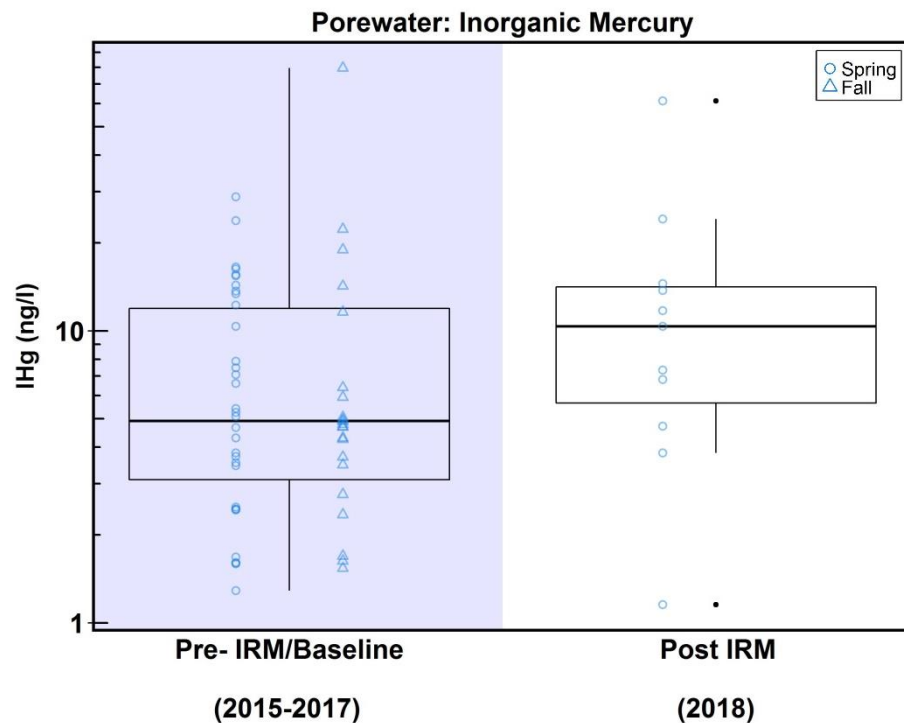
- No discernable differences in Post-IM clam concentrations
- Effective invasive species management
- Fall re-planting planned



City Shops (STM-07)

Pore Water

– Post remediation ‘bump’



City Shops (STM-07)

- No discernable differences in Post-IM clam concentrations
- Planted vegetation thriving
- Maintenance Activities Planned



Short-term Monitoring Summary

- Declining trend in Pore water concentrations at Constitution Park
- Similar response to remediation observed in City Shops concentrations
- Concentrations at ‘baseline’ monitoring stations consistent
- Fall 2018 monitoring will include 1st Post-IM data for Allied Ready Mix BMA



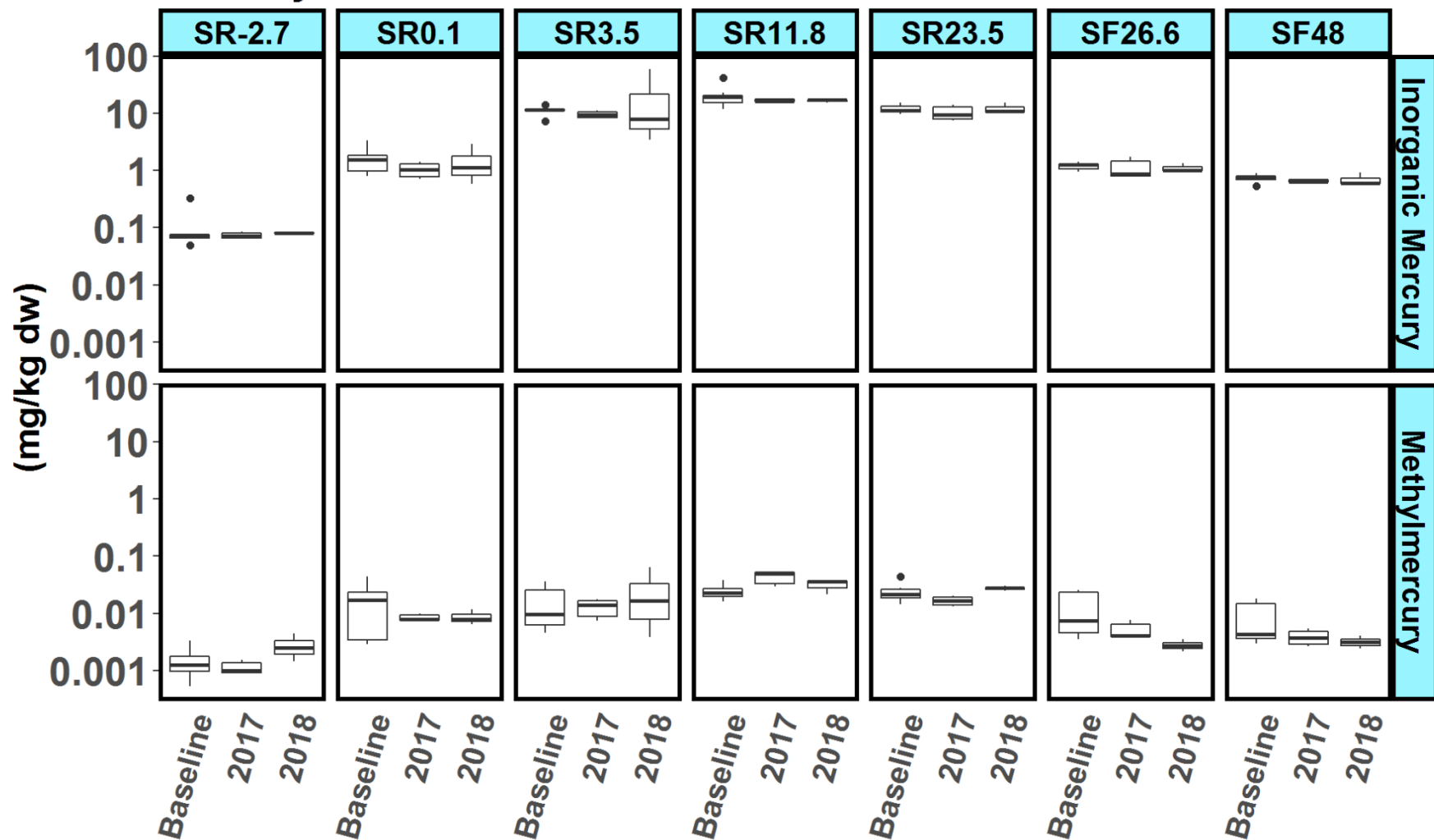


Thank You

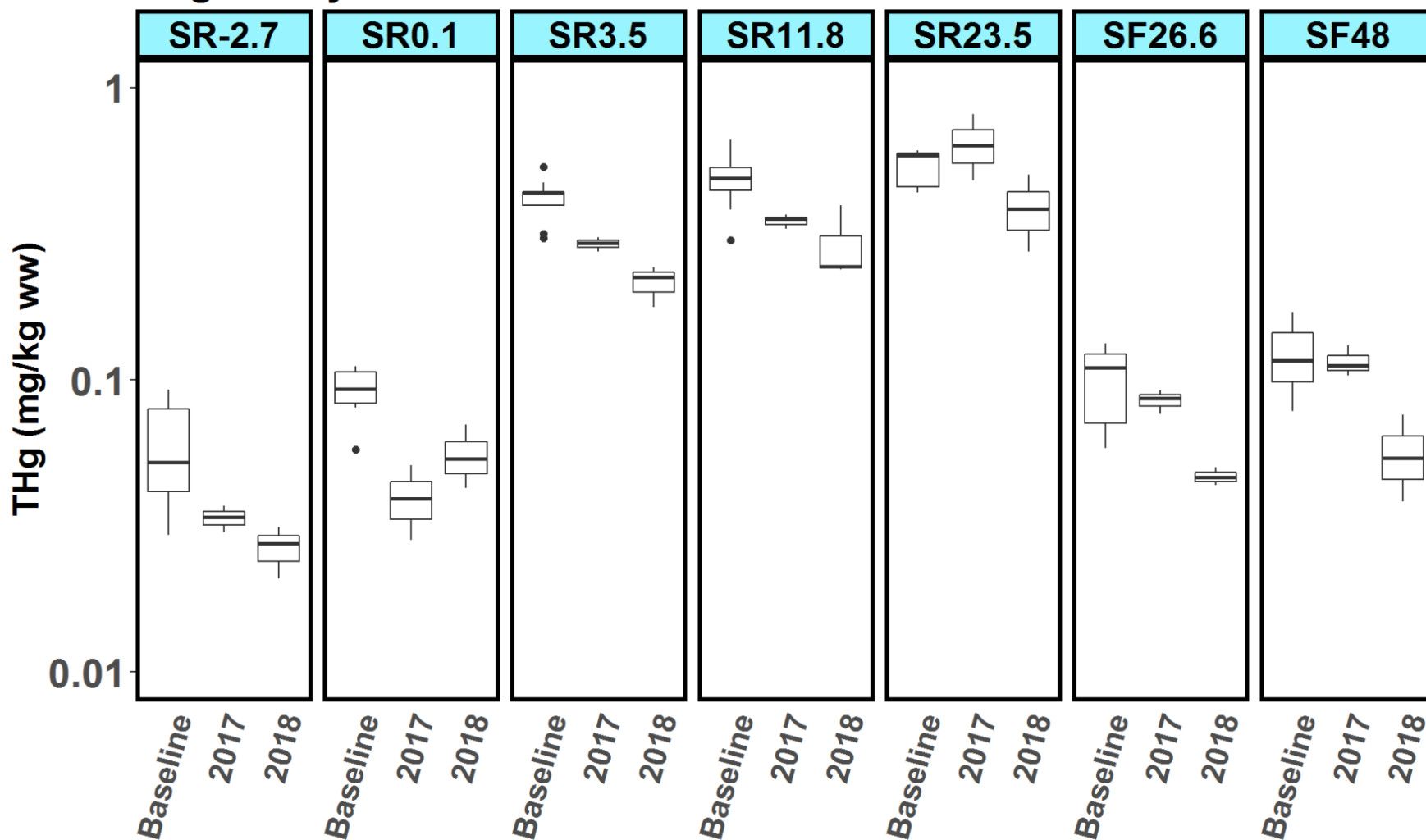
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Data Slides

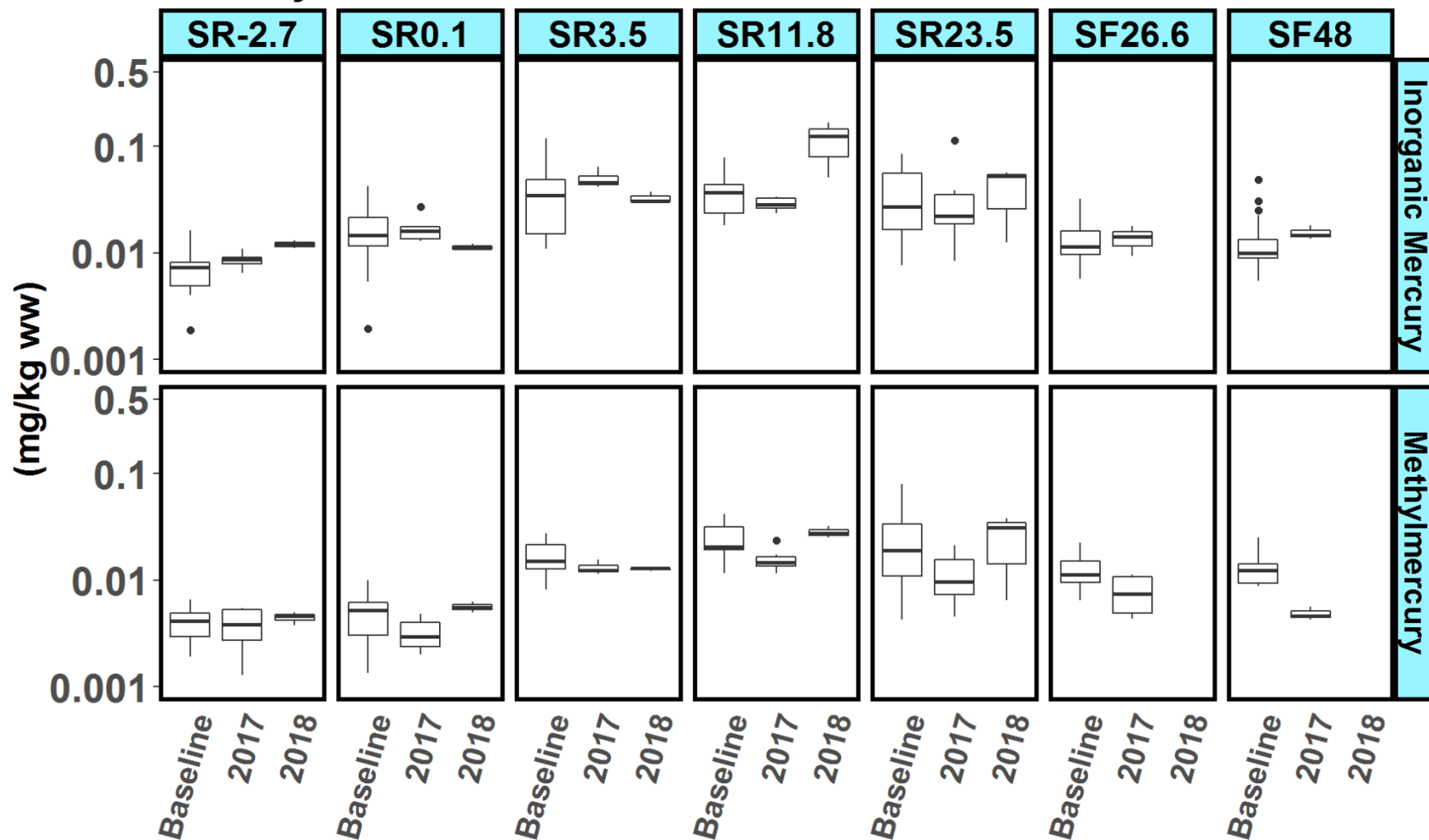
Mercury in Sediment



THg in Mayflies



Mercury in Clams



THg in Spiders

