

## South River Science Team

January 24, 2018

### Meeting Notes

The meeting was a half day meeting, conducted by webinar.

#### Update on monitoring results for 2017 field season: *Josh Collins, AECOM*

- Abiotic data tends to mirror bank soils data adjacent to and just upstream of collection
- Short-term Monitoring Summary
  - Improvement of Constitution Park Post-IM pore water and sediment data
  - Consistent data at “transitional” monitoring stations
  - Spring 2018 monitoring will include 1<sup>st</sup> Post-IM data for City Shops
- Long-term monitoring data presented in “dashboard” format; format like this have been proposed to use on the SRST website to communicate trends to the public.
- Long-term Summary
  - 2017 wetter than average spring/summer
  - Lower MeHg concentrations in surface water
  - Apparent in lower trophic level media (YOY SMB, clams, mayflies, periphyton)
  - First year of Post-IM data is consistent with baseline dataset
  - Trend analysis will be performed as Post-IM dataset grows
  - Identified potential program modifications
- At the end of the presentation, there are 15 slides showing trends for data collected for the STM and LTM programs.

#### Discussion of 2018 monitoring program; elements that may not be needed any longer: *Josh Collins, AECOM*

- DuPont/AECOM presented to DEQ a plan to modify the LTM program to reduce frequency of sampling and eliminate media that are not satisfying the data quality objectives. The changes include the following:
  - Eliminate from program
    - Epilithic Periphyton (IHg results redundant with sediment data and MeHg highly responsive to seasonal conditions)
    - Floodplain soil and earthworms (not likely to respond to Interim Measures)
    - Mallard Duck (Poor correlation with other media, variable data possibly due to migrations and not likely to respond to IRM)
  - Analyzing for THg only in mayflies, YOY SMB, wolf spiders and snapping turtles, because there good correlation with MeHg in biota.
  - Reducing frequency for mayfly, wrens, bass, snapping turtles, and benthic community.

- Dropping some locations on South Fork and mainstem Shenandoah for bass and turtle sampling due to access and habitat issues.

**Design and results from City Shops/WWTP construction: *Mike Liberati, DuPont***

- Pictures of City Shops BMA in presentation
  - Construction almost complete. Final planting to be completed Spring 2018.
- Allied Ready Mix BMA – Next to be constructed
  - 90% design submitted to DEQ
  - Permit submittal – December 2017
  - Regulatory Approval – February 2018
  - Easements
  - Construction – following completion of City Shops and seasonal high waters.
  - Note design technique different in that instead of using launchable stone toe, stone toe will be dug into stream bed, therefore less stone will be showing above water. Also, there will need to be a storage/dewatering area constructed to allow sediment from river to dewater before hauling away.
- Shiloh Baptist Church BMAs
  - 30% Design Package to be submitted to DEQ February 2018
  - Designs to incorporate City’s Greenway Trail
  - Plans for stakeholder engagement
  - Plans to be “highly engineered” due to incorporation of a trail, steepness of the banks, narrow area to work in.
- North Park next BMA on list.

**Discussion of the proposed surface water pilot work with BioChar Now: *Bill Reese, AECOM***

- DuPont/AECOM has proposed a pilot study looking at using biochar to remove/reduce Hg from surface water seasonally during peak methylation periods. A “side channel” area downstream of the Augusta Forestry Center has been chosen to conduct the pilot. The idea is similar in concept to Dr. Brent’s mesocosm experiments but this time on a larger scale. A mat containing biochar with sacks of biochar above will be placed in the side channel to uptake MeHg coming out of the sediment and to treat surface water flow. Then the sacks of biochar are removed from the river, the idea is to then apply the biochar to the floodplain soils where it can be used as a soil amendment but also be used to stabilize Hg in the floodplain soil. Deployment/monitoring to begin April/May 2018.

**Plans for 2018 meetings: *Ralph Stahl, DuPont***

- Summer meeting planned for July 25<sup>th</sup> (full day) at the Harrisonburg DEQ office.