

# Pooled Monitoring Forum – *Update: Work in the Wet Versus Work in the Dry for Stream Restoration: A Comparison of Downstream Turbidity and Sediment Loads*

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# Research Question(s) and Hypothesis(es)

***What is the difference in effects on water quality (turbidity) and total sediment load delivered downstream between stream restoration work “in the wet” (construction without diverting the stream) vs work “in the dry” (construction accomplished through diversion of the water flow)?***

What we expect(ed) to find

H1A. The observed average Turbidity (Average NTU) will be higher during the Wet Construction Period.

H1B: The estimated hours exceeding Maryland’s turbidity standards for Wet Construction are less than 50% greater than the exceedance time for Dry Construction.

H2. The suspended sediment load associated with Dry Construction will not be meaningfully different than the load associated with Wet Construction, such that absolute difference between total suspended sediment loads (lbs) is less than 25% of the average suspended sediment load between the two methods.

H3. The sediment load associated with the Construction in the Wet or Construction in the Dry will be significantly less than the sediment load associated with the 1-year storm for the watershed.

# Update on Progress

- **Three (3) sites have been identified, approved, and permitted**
  - Difficult to find sites that had all the required attributes, site 3 is a 1<sup>st</sup> order stream.
- **Monitoring is complete at 2 of 3 sites. Site 3 monitoring will be complete in early July.**
- **Data collection includes**
  - Turbidity- Continuously using automated loggers
  - TSS- collected at 1 pt during a range of turbidities
  - Flow- collected continuously using pressure transducers at surveyed cross section, velocity from 5 storm events and baseflow
  - Rain Fall- on site rain gauge
  - Construction time- per activity

# Update on Progress

## *Successes and Challenges*

- Cooperative and Engaged Partners
- Anecdotal crew feedback
- Weather Impacts
- Weir Construction



# Acknowledgments

