Caleb Jones

From: Caleb Jones
Sent: Thursday, June 18, 2026 8:56 AM
To: Jon Richards; Brianne Martin; Susan Fulmer ; Heather Cathcart; Duke Taylor; Gregg O'Quinn; Joseph Martina; Crystal Robertson; Emma G. Downing ; Hannah Herlong ; alyssa.raynor@des.sc.gov; Sarah Steeple; Tabatha Corley; MORROW, KAREN D; BAKER, MATTHEW R; COFFMAN, APRIL K; fletcher@srel.uga.edu; Kelsey Holcomb; Thelesia Oliver; Shelia Mcfalls; Amy Meyer; Kimberly Price; J Ross; Sadika O'Quinn; Katie Davis; Ryan Mcdaniel; Bette Ross; Regina Marquez; Caleb Jones
Subject: 2025 Periodic Report on the Bioassessment of Savannah River Site Streams Field Visit Recap & Presentation
Attachments: MBPresentationFinal.pdf

SRNS-OS-2026-00238

DOE, EPA, SCDES, and SRS met on 05/20/2026 to complete a walkdown of Meyers Branch as recommended in the 2025 Periodic Report on the Bioassessment of Savannah River Site Streams (SRNS-RP-2025-01200). The final walkdown presentation slides are attached. The Core Team (i.e., representatives from USDOE, USEPA, and SCDES) agreed that further sampling and observations are necessary to identify potential trends in ash-related metals constituent concentrations and erosion in Meyers Branch and its headwaters as it relates to the PAB remedy and WADB. Beginning in FY2027, EC&ACP and SREL will conduct semiannual winter/summer metals analysis of surface water at three locations (mb0/mb1/MB2) with the potential to add a fourth sampling location upstream of MB2. SREL will evaluate the proposed area for appropriateness. Beginning in FY2027, EC&ACP and SREL will also conduct an annual early-spring walkdown of potential erosional areas on the north side of the WADB and Meyers Branch headwaters.

EC&ACP will evaluate trends after two years of data collection and will report the data and findings to EPA and SCDES in FY2029 via an email. Substantial negative changes (i.e., progression of deep soil erosion in WADB) or average metals constituent concentrations above MCLs/AWQC and historical or background concentrations will trigger a follow-up Core Team meeting to discuss a path forward. The results and findings will be documented in the next Bioassessment Report (FY2032).

Walkdown Attendees:
SREL: Dean Fletcher
SRNS: Jeffrey Ross, Sadika O'Quinn, Kimberly Price, Maggie Dercole
DOE: Matthew Baker, April Coffman
EPA: Jon Richards, Brianne Martin
SCDES: Heather Cathcart, Duke Taylor, Susan Fulmer, Crystal Robertson, Emma Downing, Hannah Herlong, Joseph Martina, Alyssa Raynor, Sarah Steeple

Attachment:
Meyers Branch Walkdown for the 2025 Periodic Report on the Bioassessment of Savannah River Site Streams 05/20/2026 (SRNS-STI-2026-00228)

Please contact me for any additional information.

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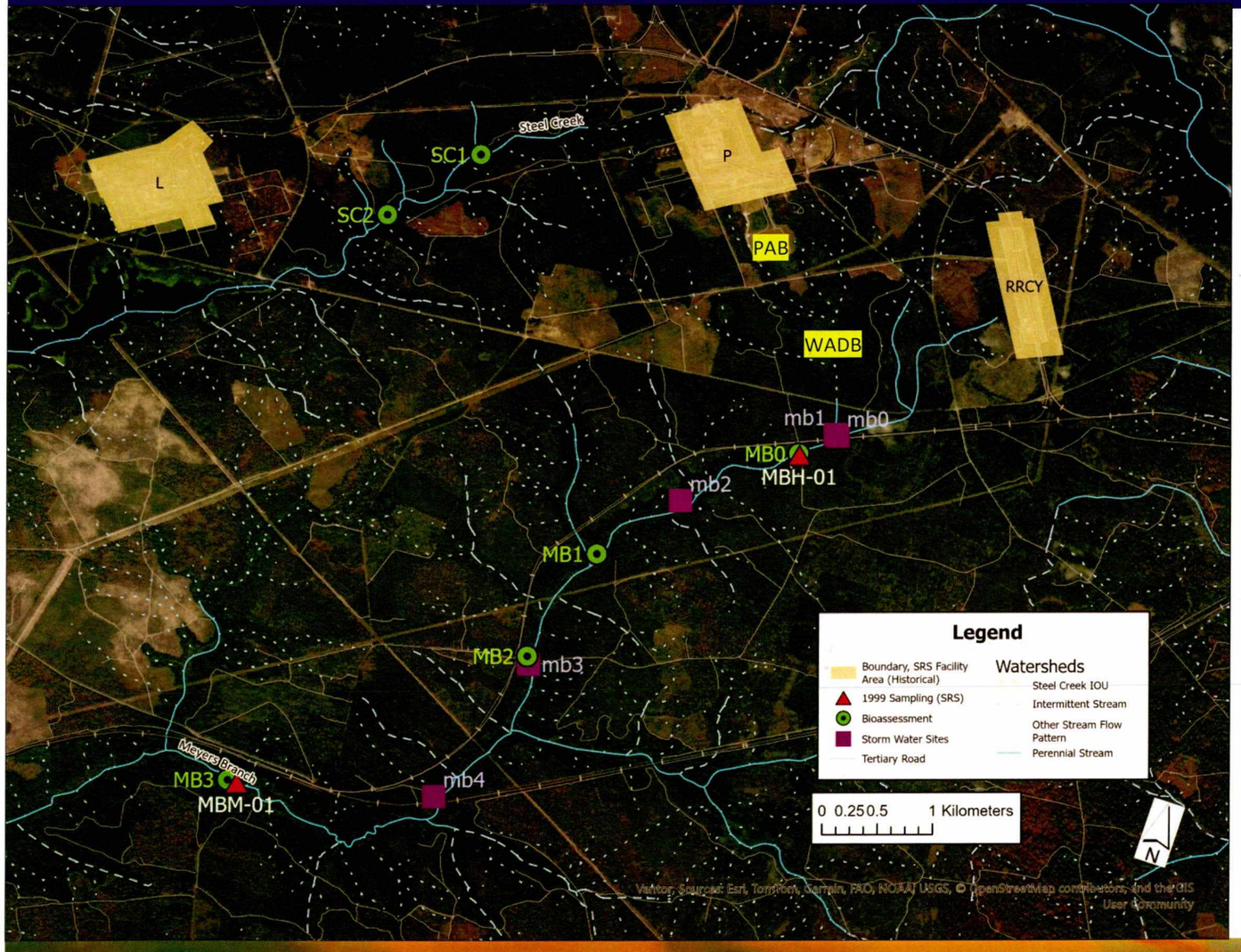
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Meyers Branch Walkdown for the 2025 Periodic Report on the Bioassessment of Savannah River Site Streams 05/20/2026

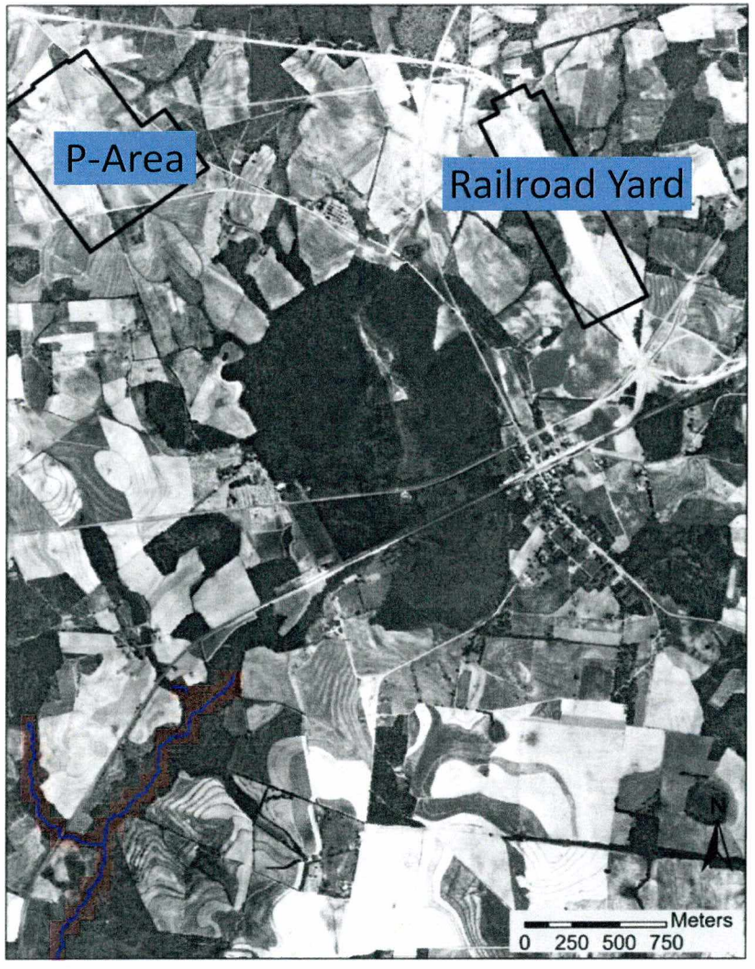
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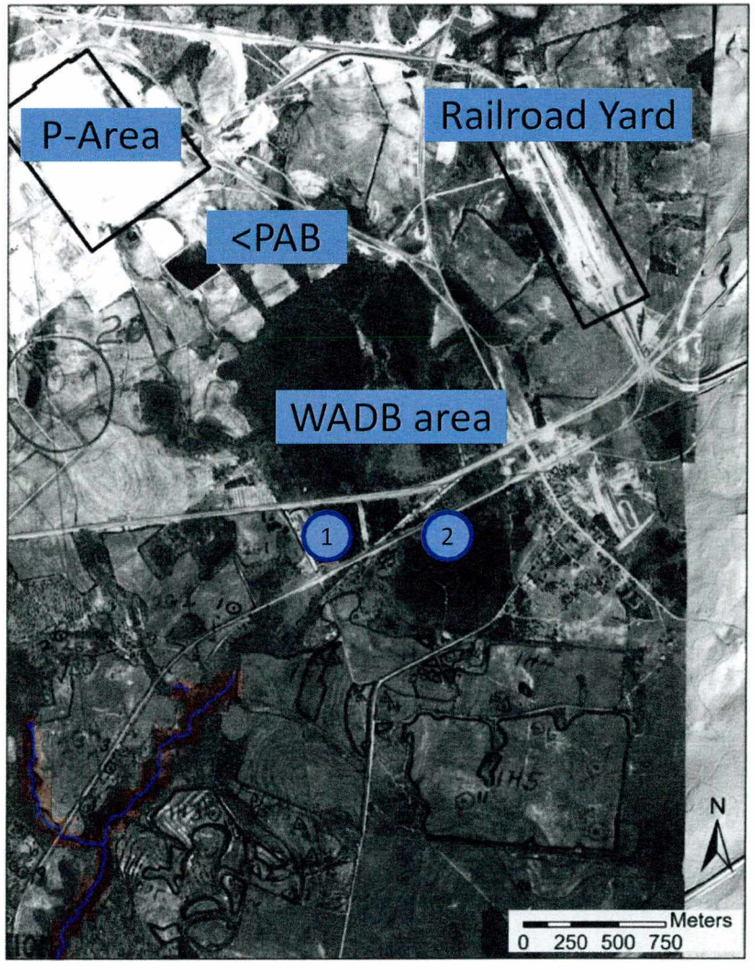
Potential Problem Identification



Based on the results and recommendations included in the 2025 Bioassessment Report, the potential for adverse impacts from the P-Area Operable Unit (PAOU) closure to Meyers Branch should be evaluated.

1951 Pre-SRS condition of Meyers Branch and 1956 Early Construction





1951- Both Meyers Branch riparian and Dunbarton bays are forested.

1956- Ditches were excavated to channel runoff from P Area (1) and the Railroad Yard (2)

The perennial portion of Meyers Branch is highlighted in blue.

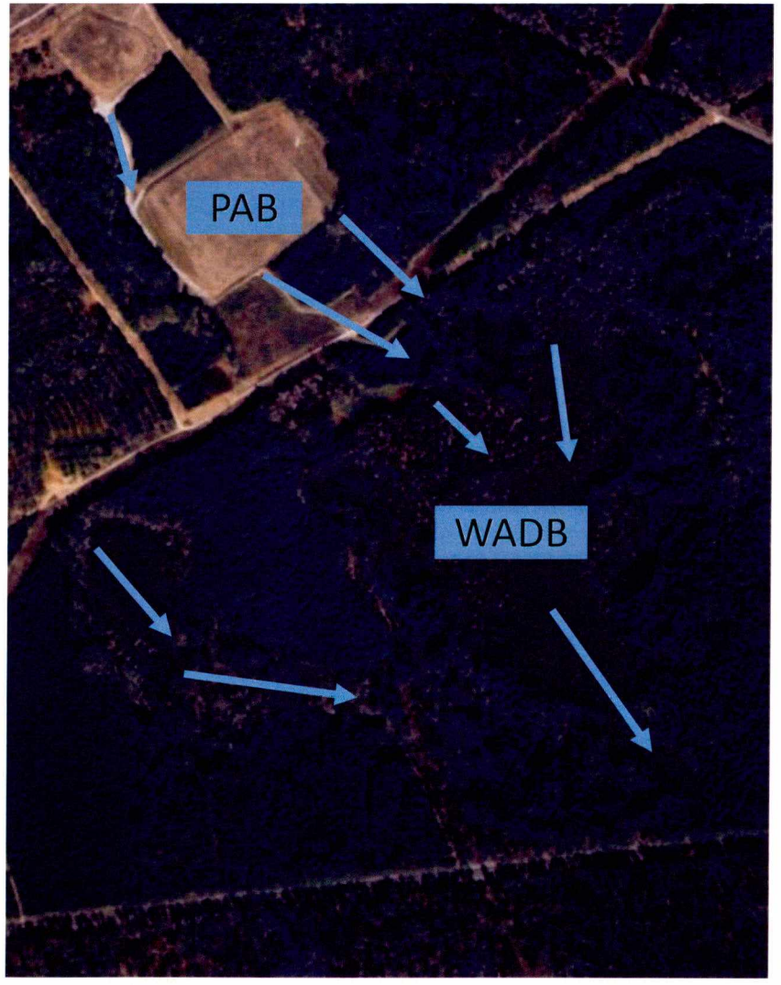
P-Area Ash Basin (PAB)

2005



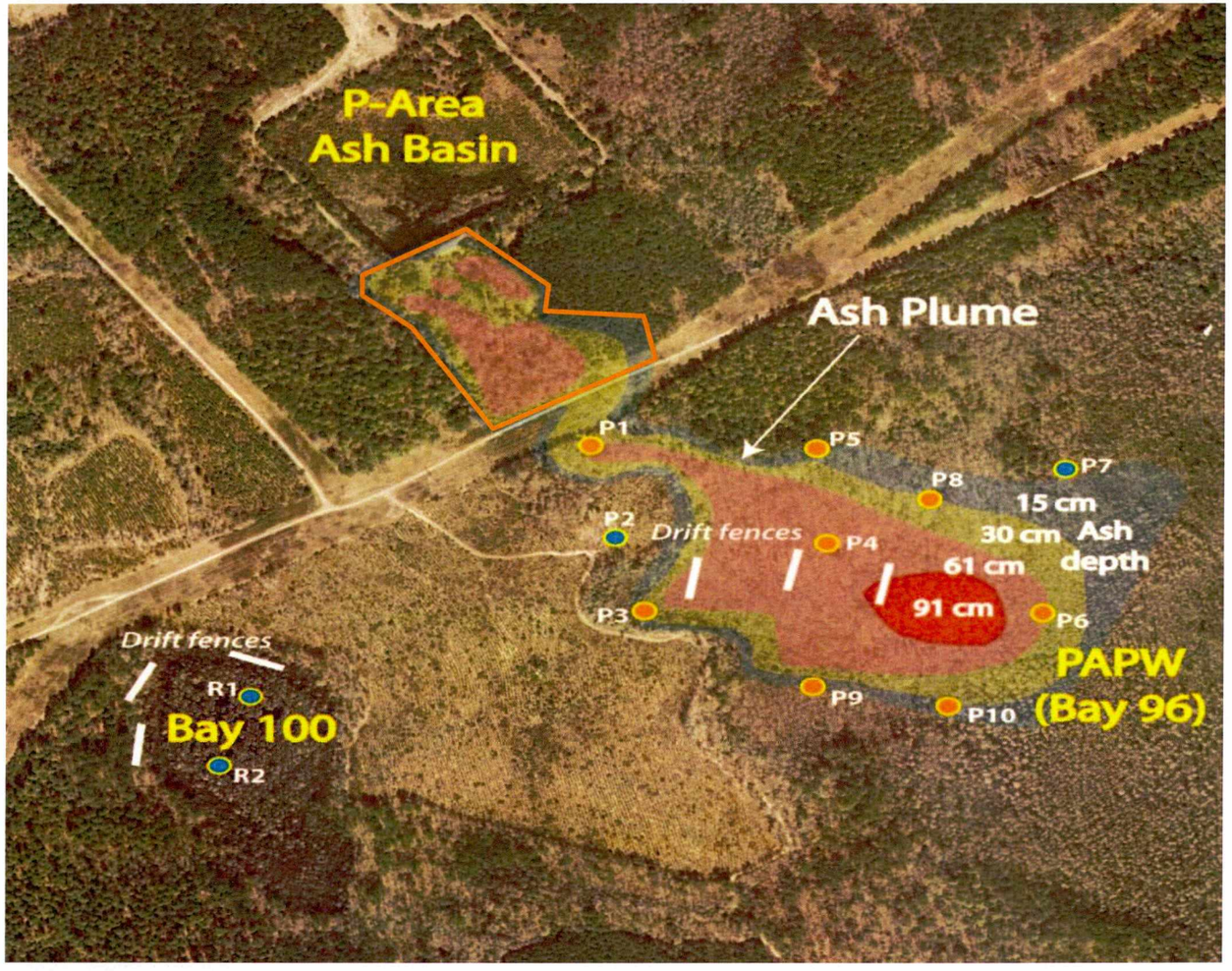
2013





- 2005: the P-Area Ash Basin (PAB) was forested
- In preparation for a remedy, vegetation was cleared.
- 2013: a soil cover was implemented as part of the preferred remedy for the PAB
- Soil cover has contributed to runoff from PAB to Wetlands Area at Dunbarton Bay (WADB) and to Meyers Branch

WADB Ash distribution



The remedy for WADB, a wetland environment, left coal ash in place (Land Use Controls).

Ash was successfully excavated from the area outlined in orange.

Runoff Related to Rain Events









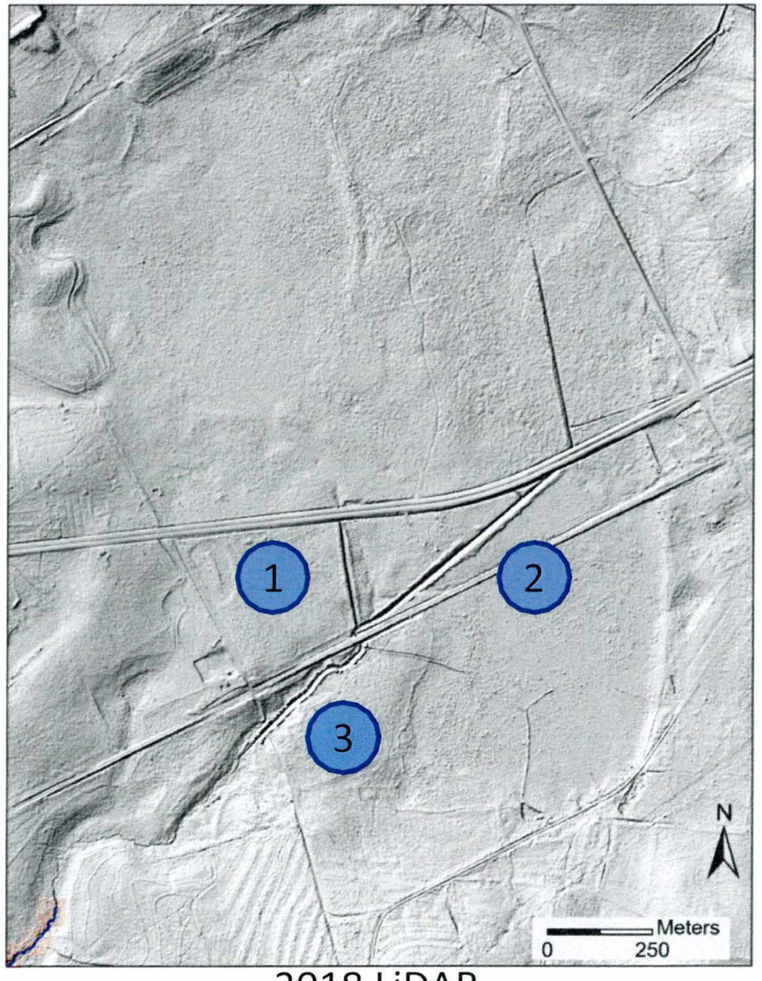
Observations taken 3/16/26 (SREL)

- Recent Rainfall
  - 0.54 in rain fell 3/13/26
  - 0.40 in rain fell 3/16/26
  - 1.06 in rain fell 3/17/26
- Lower end of stormwater drainage system overflows into the woods when full (orange circle) then flows across WADB to Meyers Branch headwaters
- Designed to reduce scouring/erosion above WADB rather than act as stormwater retention basin
- Will not prevent potential scouring and erosion downstream of the ditch; channels are forming from overflow

1956 Early Construction and 2018 LiDAR of the Excavated Ditches



1956 Early Construction – Ditches



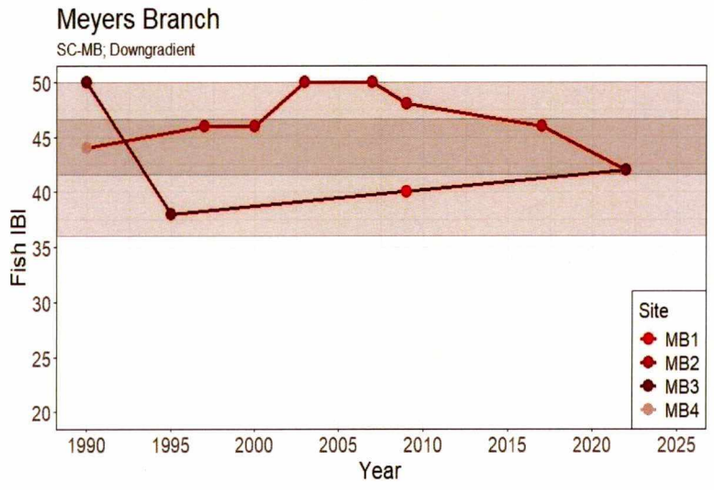
2018 LiDAR

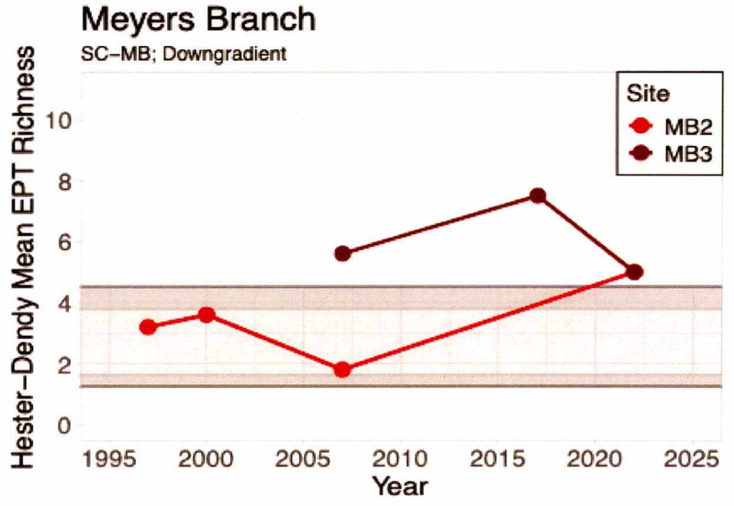
These manmade excavations still exist and are visible on the 2018 LiDAR images.

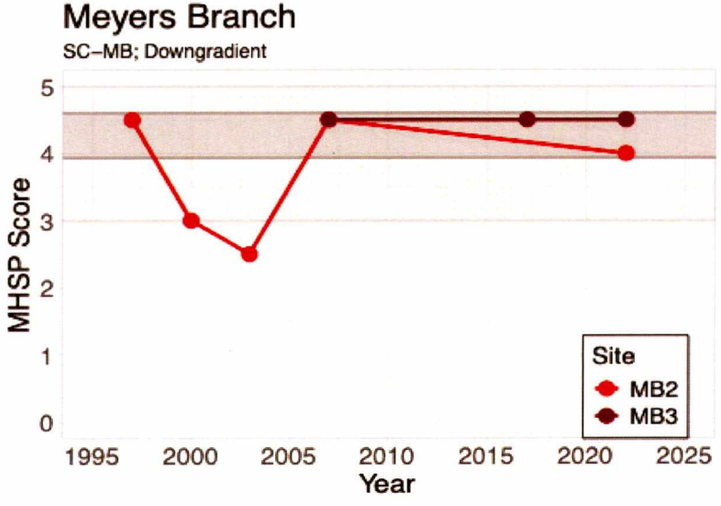
1- Ditch which receives inputs from P Area and WADB
2- Ditch which receives inputs from the Railroad Yard
3- Ditch connecting the two ditches with Meyers Branch headwaters

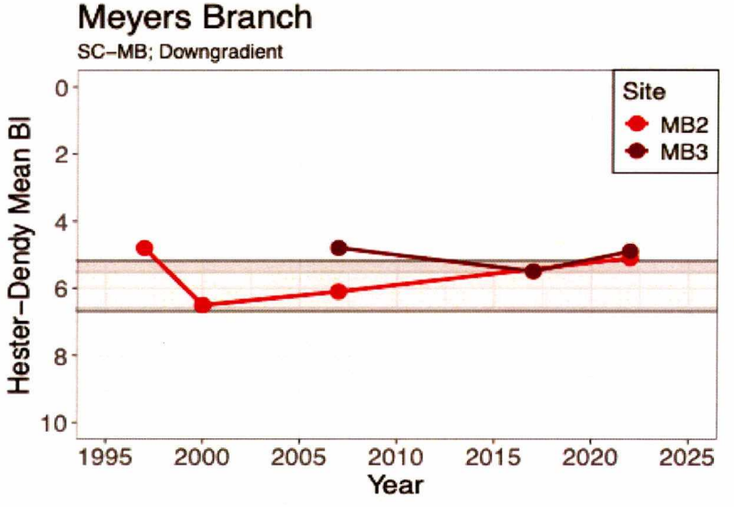
2025 Bioassessment Report Results

- **Bioassessment values do not indicate overall declines**
  - Fish and macroinvertebrate communities bioassessment scores have remained within the upgradient range over the past eleven years
  - Slight declines in MB2 (Fish IBI) scores since 2007 *not* out of upgradient range; increases in MB3 (Fish IBI) scores from 1995
  - Hester-Dendy Mean Biotic Index (BI) and EPT Richness shows values consistent with/higher in quality than the upgradient 95% confidence interval (BI scores represent pollution tolerance such that higher values indicate lower biotic integrity)
- **Potential impacts on Meyers Branch noted by recent water sampling: flow/contaminants**
  - Runoff flows from P Area, through the WADB and into Meyers Branch during and after rainwater events.
  - Previously, WADB constituents not found to have a negative ecological impact

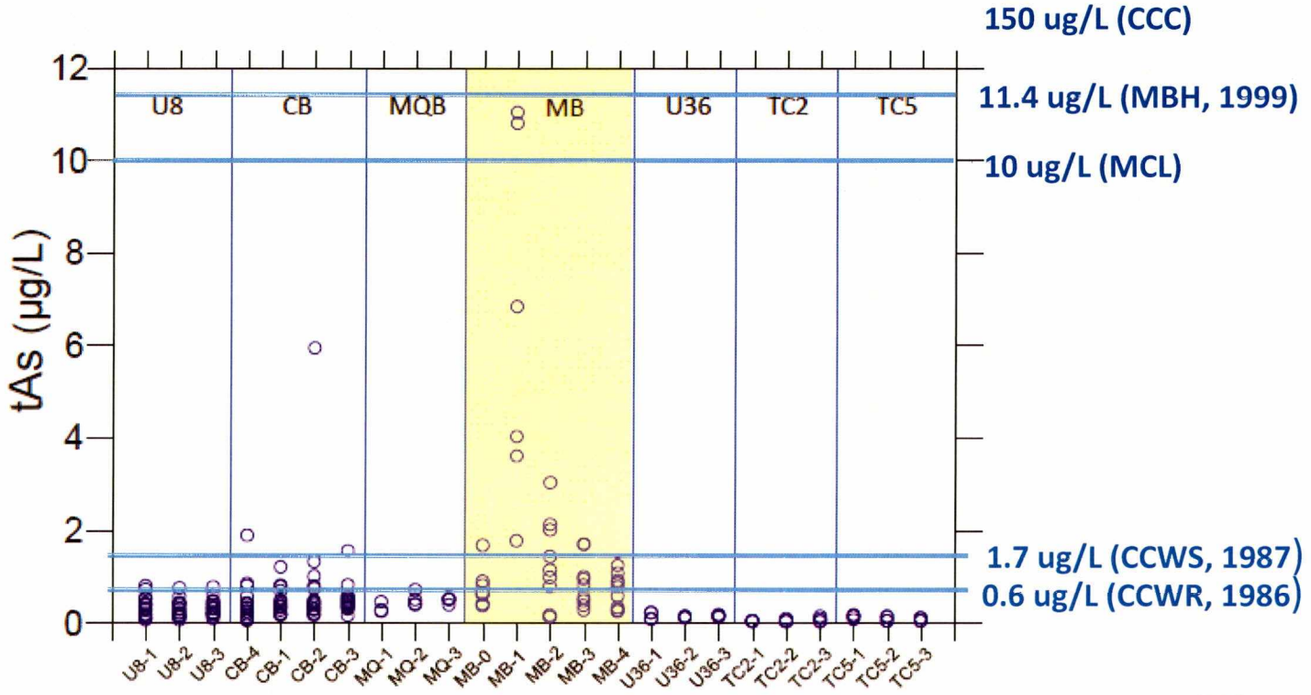








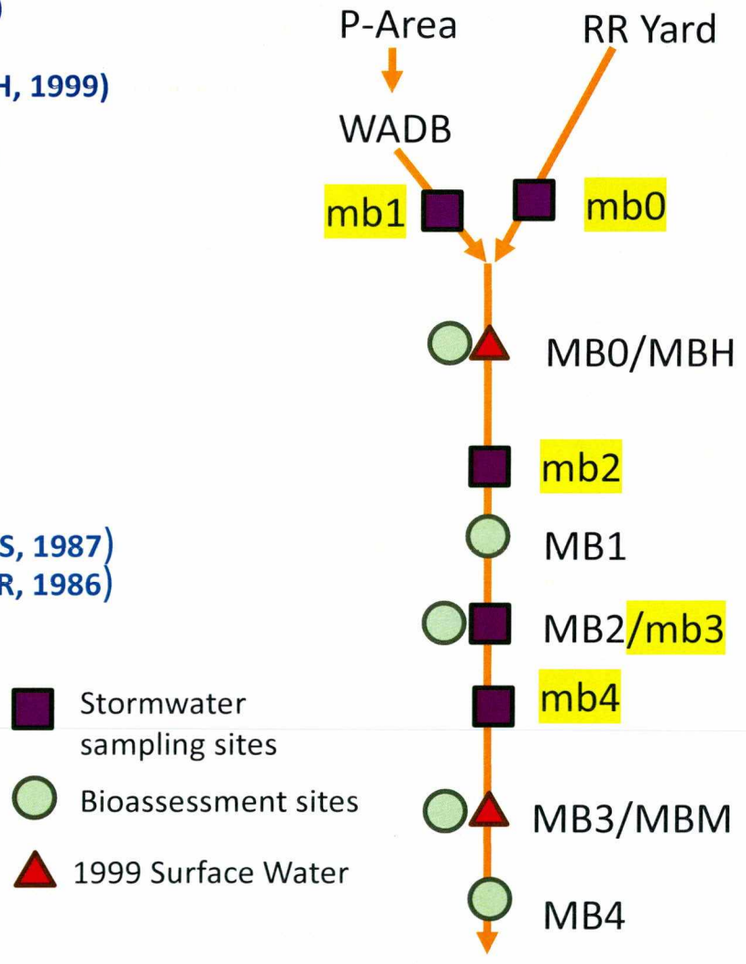
2022-25 Stormwater Sampling in Meyers Branch (Arsenic)



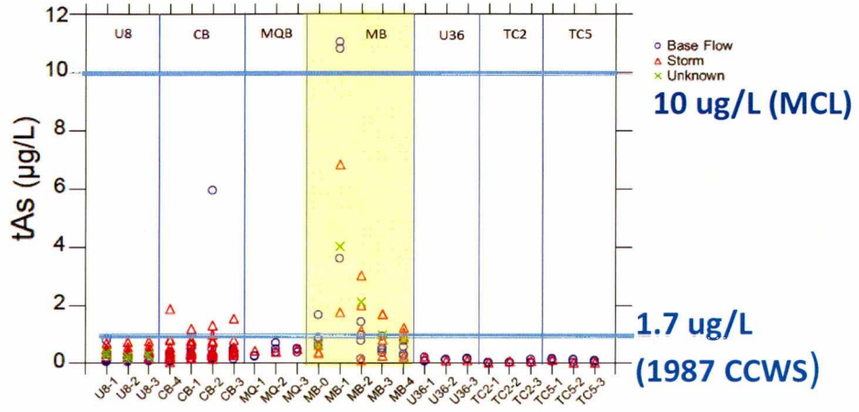
The graph displays the total arsenic concentration (ug/L) sampled at the stormwater sampling sites (MB-0 through MB-4 corresponds to mb0 through mb4 in the diagram to the right).

Criterion continuous concentration (CCC) = chronic (long-term) effects limit for organisms (freshwater)

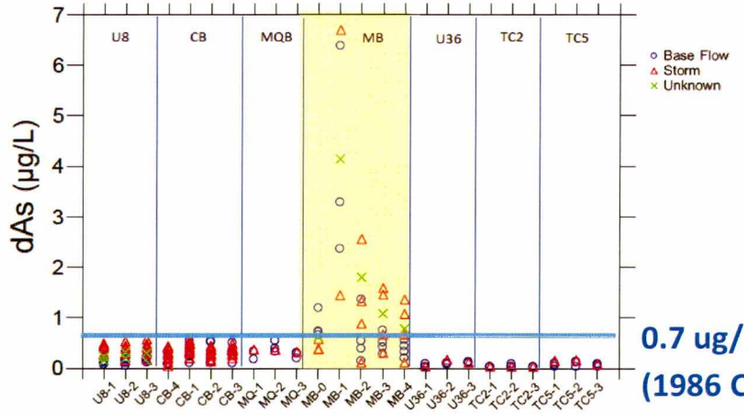
SREL Ongoing Research-Stormwater Sampling sites



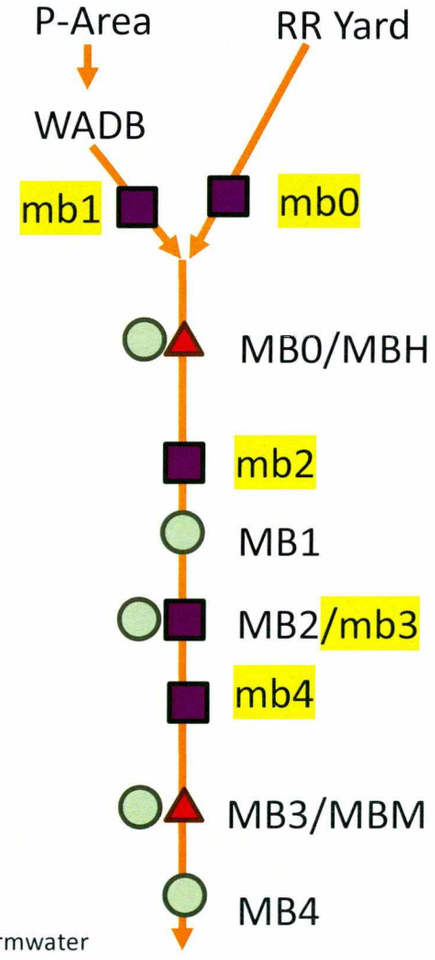
2022-25 Stormwater Sampling in Meyers Branch (Arsenic)



SREL Ongoing Research-Stormwater Sampling sites



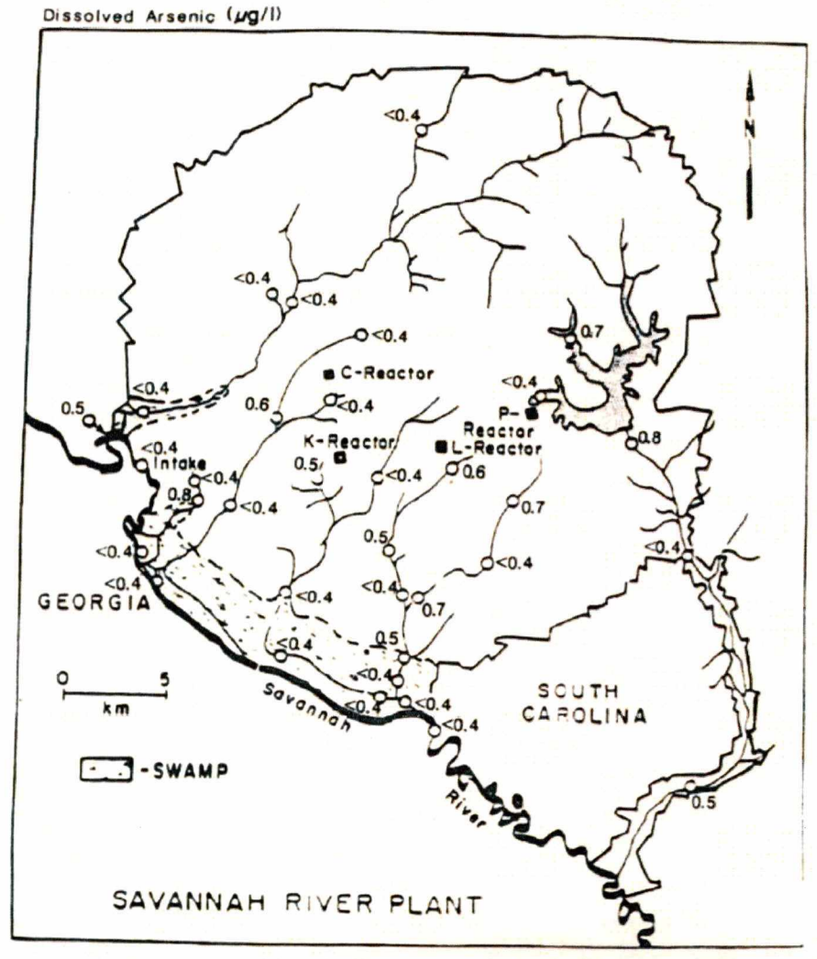
The graphs display the total/dissolved arsenic concentration (ug/L) sampled at the stormwater sampling sites (MB-0 through MB-4 corresponds to mb0 through mb4 in the diagram to the right).



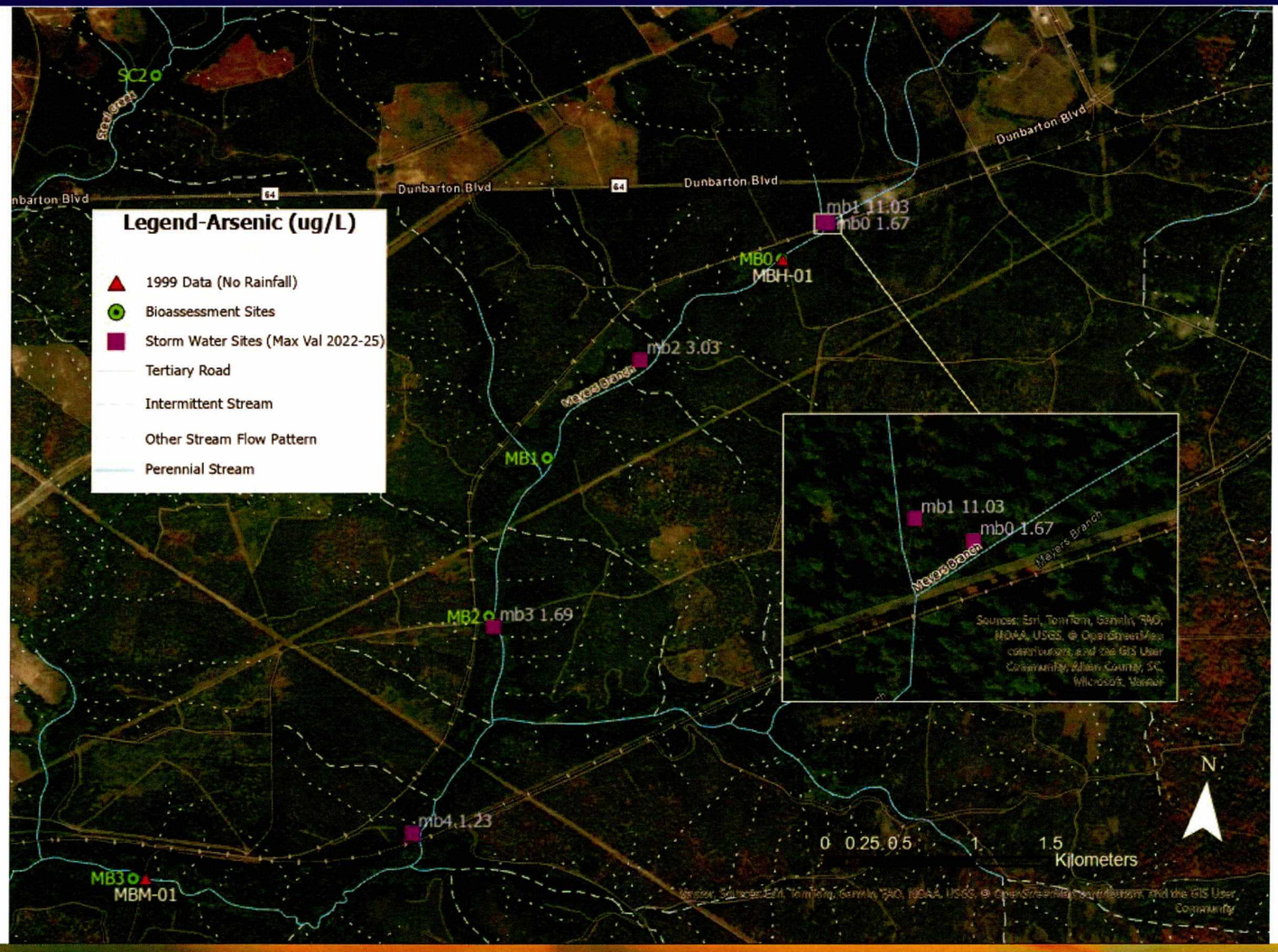
- Elevated total and dissolved arsenic and other coal-related constituents associated with Meyers Branch, particularly mb1, which receives runoff from P Area and WADB. Lower concentrations associated with the site receiving inputs from the railroad yard (mb0).
- Arsenic not found to exceed SC Freshwater Aquatic Life water quality numeric criteria (150 ug/L). Total arsenic measured at mb1 exceeded the Human Health MCL (10 ug/L) twice.

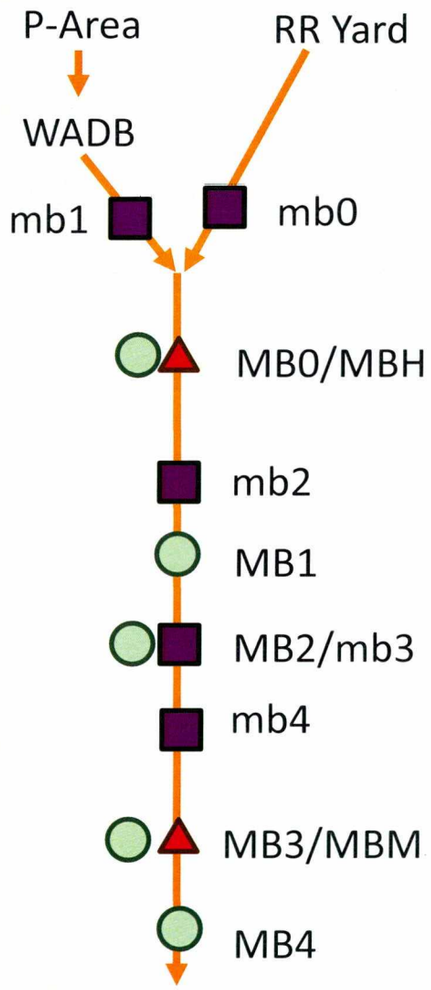
Historical Meyers Branch Sampling (Arsenic)

- It is not known when ash entered WADB and subsequently Meyers Branch (likely prior to P-Area powerhouse shutdown in 1991).
- 1986 Comprehensive Cooling Water Report (CCWR) indicated average dissolved arsenic values as between <0.4 and 0.7 ug/L (ppb) in Meyers Branch.
- 1999 sample taken in the upper portion of Meyers Branch (at MBH-001 or MB0 of the bioassessment report) had 11.4 ug/L (ppb) arsenic. This elevated level may be typical and potentially from WADB runoff.
- Limited historical water samples available.
- Higher measured levels of arsenic and other coal related constituents are currently associated with Meyers Branch from PAB/WADB runoff.



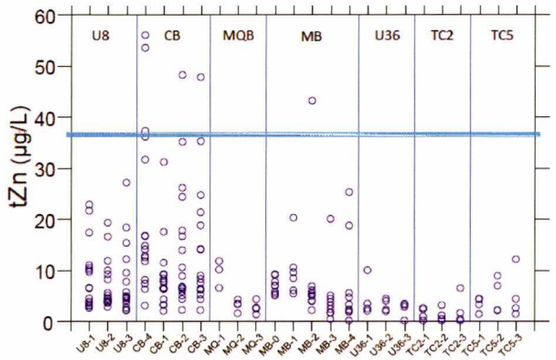
Max Arsenic Concentrations-Meyers Branch (1999, 2022, 2023, 2025)



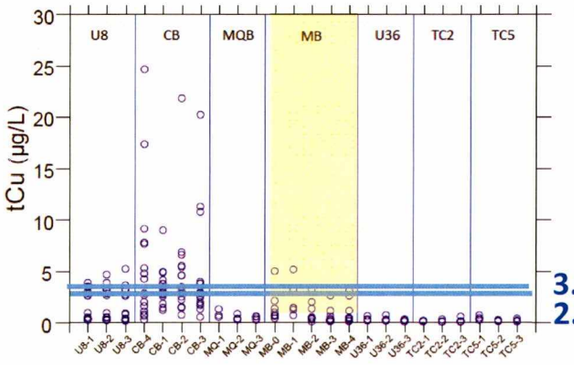


2022-25 Stormwater Sampling in Meyers Branch (Other Constituents)

SREL Ongoing Research-Stormwater Sampling sites

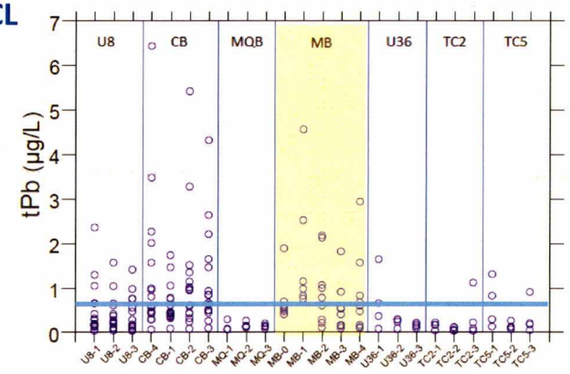


37 ug/L CMC/CCC



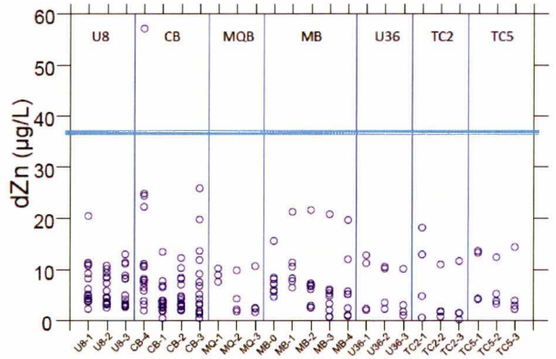
1300 ug/L MCL

3.8 ug/L CMC
2.9 ug/L CCC

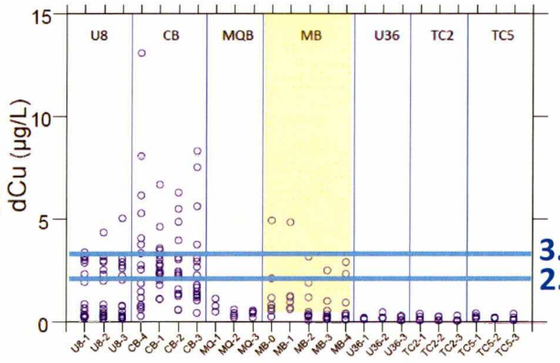


10 ug/L MCL

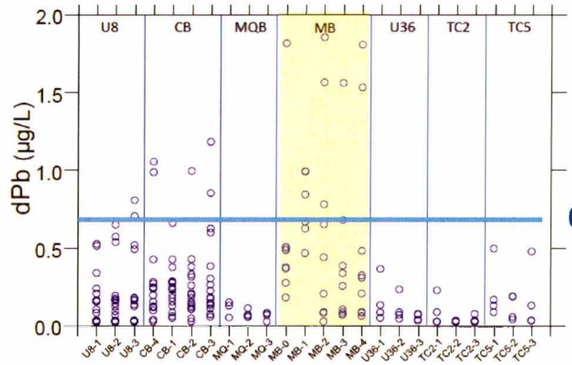
0.54 ug/L CCC



37 ug/L CMC/CCC



3.8 ug/L CMC
2.9 ug/L CCC



0.54 ug/L CCC

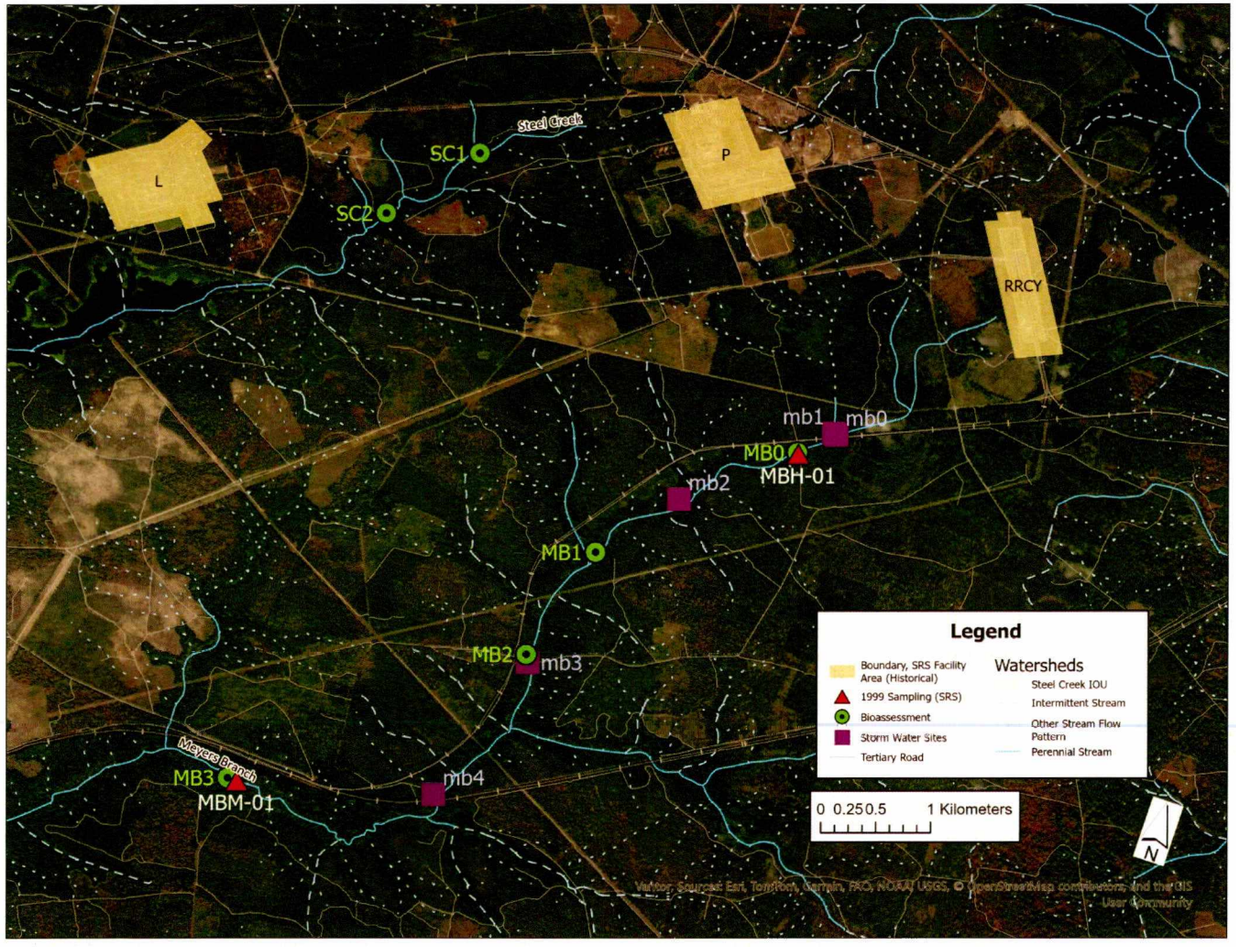
Few metals exceedances are noted (Pb, Cu, Zn). Arsenic shows clearest difference between mb1 (PAB/WADB ditch) and mb0 (railroad yard ditch) related to coal ash.

Criterion maximum concentration (CMC) = acute (short-term) effects limit for organisms (freshwater)
Criterion continuous concentration (CCC) = chronic (long-term) effects limit for organisms (freshwater)

Conclusions

- **The 2025 Bioassessment Report results are inconclusive with respect to potential declines in ecological stream health in Meyers Branch.**
  - Additional bioassessment samples taken at consistent locations (MB1, MB2) would improve the interpretation of these results.
- **Coal-related constituent concentrations associated with the PAB/WADB ditch (mb1) are elevated compared to other measured streams on SRS, and to inputs from the railroad yard.**
  - Sampling does not indicate regular exceedances of National or SC Aquatic Life Water Quality Criteria or MCLs.
    - *The maximum recorded concentration of total arsenic at mb3 (MB2 in the bioassessment report) was 1.69 mg/L, below the freshwater aquatic life Criterion Continuous Concentration (150 ug/L) and below human health consumption/MCLs (10ug/L).*
  - Occasional "snapshot" exceedances of SC freshwater Aquatic Life Water Quality Criteria for lead, copper, and zinc recorded.
- **Further sampling is recommended to establish baseline constituent concentrations in Meyers Branch.**

Recommendations:



- **Annual EC&ACP/SREL early-spring walkdown of potential erosional areas on north side of the WADB and Meyers Branch headwaters.**
- **Semiannual winter/summer metals analysis at three locations (mb0/mb1/MB2).**
- **Evaluate trends in metals data and erosion after two years of data collection.**
- **Substantial negative changes in either will trigger a follow-up core team meeting to discuss a path forward.**
  - If no substantial changes, then results will be evaluated and documented in the next Bioassessment Report.