METHODS AND DATA COMPARABILITY BOARD

DAN SULLIVAN

CURRENT WORK EFFORTS

- BIOLOGICAL ASSESSMENT AND COMPARABILITY WORKGROUP
- SENSORS WORKGROUP
  - UNCERTAINTY
  - WEBINARS
- USGS CONTINUOUS MONITORING WORKSHOP REPORT – AWAITING APPROVAL

BIOLOGICAL ASSESSMENT AND COMPARABILITY

- PROPOSED STEP 1: UPDATE NEMI WITH FIELDS PERTINENT TO BIOLOGICAL METHODS*

https://www.nemi.gov/methods/analyte_results/?analy | Inbox (2,586) - pjssully@gmail.... | NEMI Results

RESULTS: Your search returned 24 results. Back to search Show/hide columns

Method ID	Method Source	Method Name	Analyte Name	Detection Level	Detection Level Type	Bias	Precision	Spiking Level
ASTM 10500.B	ASTM	Benthic invertebrate sample collection	Benthic macroinvertebrate community (X00020)	N/A		N/A	N/A	
ASTM 10500.C	ASTM	Benthic invertebrate sample processing and analysis	Benthic macroinvertebrate community (X00020)	N/A		N/A	N/A	
B-9135-00 (Qualitative)	USGS-NWQL	Benthic Macroinvertebrate Sample Processing: Qualitative Visual Sort Method	Benthic macroinvertebrate community (X00020)	N/A		N/A	N/A	
B-9135-00 (Quantitative)	USGS-NWQL	Benthic Macroinvertebrate Sample Processing: Quantitative Fixed-Count Method	Benthic macroinvertebrate community (X00020)	N/A		N/A	N/A	
B-9135-00 (Slide Preparation)	USGS-NWQL	Benthic Macroinvertebrate Slide Preparation	Benthic macroinvertebrate community (X00020)	N/A		N/A	N/A	
B-9135-00 (Taxonomic ID)	USGS-NWQL	Benthic Macroinvertebrate Sample Processing: Taxonomic Identification	Benthic macroinvertebrate community (X00020)	N/A		N/A	N/A	
CAB-EC-1-2001	EnvCanada-	Benthic Invertebrate sample collection; 3	Benthic macroinvertebrate	N/A	N/A	N/A	N/A	

	A	B	C	D	E	F	G	H
1	***Category***	***Data element***	***Examples***					
2	meta	Method Owner		Illinois[1]	Wisconsin[1]	Bioassessment Protocol (RBP)[2]	Kansas[2]	MO DEQ[2]
3	meta	Project or Stream Type					Stream Probabalistic Monitoring Program	
4	meta	Contacts					Elizabeth Smith, elizabeth.smith@ks.gov	
5	meta	Assemblage	*aquatic macroinvertebrates, fish, algae*	inverts	inverts	inverts	inverts	inverts
6	meta	Waterbody type	*Wadeable stream, nonwadeable stream*					
7	general	**Index period**				Not specified	Apr 15-Sep 30	Mar-15-Apr and Sep 15-((approx)
8	general	Sampling method based on another method?	*EPA RPB, EPA NRSA, USGS NAWQA...*			N/A	EPA RBP with modifications	Custom semi method
9	general	Number of people sampling					2 (each samples half of the reach)	
10	general	How many times sampled in a year?					Once	Twice: once i once in fall
11	general	Replicates collected?		No	Varies			
12	general	**Field or lab pick**		Lab	Lab	Lab	Field	Lab

BIOLOGICAL ASSESSMENT AND COMPARABILITY

- NEXT STEPS
  - WORKGROUP MEMBERS ADD METHOD INFO FOR LOCAL METHODS
  - CONTINUE TO REFINE DATA ELEMENTS
  - GET OUTSIDE REVIEW – FROM WHO?
  - ENTER INFO INTO NEMI

SENSORS WEBINARS

- BASIC STATS
- ANALYSIS OF LARGE DATASETS
- APPLICATIONS
  - FIRST ONE: “WALTZ ACROSS TEXAS – CONTINUOUS MONITORING IN THE LONE STAR STATE”
  - APRIL 20, 2018

SENSORS - UNCERTAINTY

Analyte	Probe type	Uncertainty #1	Uncertainty #2	Uncertainty #3	Uncertainty #4	Uncertainty #5
temp	thermistor	Calibration Standard /	Temperature of the			
	optical(?)					
pH	electrochemical (?)	Calibration Standard /	Drift of the Reference	Degradation of pH Bulb	Noise from electronics	
DO	galvanic					
	polarographic					
	optical	Linearity of the sensor across pressure & temperature	Calibration Standard / Reference Accuracy	Abrasion/Hydration of the Foil	LED Temperature	Electronic Noise
SC						
NO3	optical					
	ion selective electrode	Calibration Standard /	Drift of the Reference	Degradation of electrode	Noise from electronics	
	wet chem (include?)					
DOP	wet chem (include?)					
Turbidity	optical	Calibration Standard / Reference Accuracy	Linearity of the sensor across concentration	Linearity of the sensor across temperature	External Light interference	Electronic Noise
	other?					

USGS CONTINUOUS MONITORING WORKSHOP SUMMARY

- REPORT IS APPROVED AND WILL BE PUBLISHED SOON
- USGS OPEN-FILE REPORT **2018-1059**
- "U.S. GEOLOGICAL SURVEY CONTINUOUS MONITORING WORKSHOP—WORKSHOP SUMMARY REPORT"