

Integrated Monitoring Network Meeting May 18, 2016, 1 – 3 PM
Integration of Citizen-based and Nontraditional Monitoring into the Chesapeake Bay Program Partnership

Assessing current monitoring groups for integration and prioritizing areas for new monitoring efforts

The Citizen-based and Nontraditional integration project is currently conducting a census of water quality monitoring groups throughout the Chesapeake Bay Watershed in order to create a better understanding of where people are monitoring and what parameters they are monitoring. Results from the census provide a suite of data that will be used to assist in prioritizing areas to establish new or expand current monitoring programs. The census data are also the first step in identifying established monitoring groups whose data can be incorporated into the project database. Established groups will undergo a review process in order to determine at what tier level their data can be incorporated. Tiers are based on data use, equipment used (accuracy and precision), QA/QC protocols and documentation (QAPP, calibration, field and lab QC checks, etc.).

The following rubric is based off of requirements from the project's tidal Tier I & Tier II QAPP which is currently under review. This rubric does not cover basic programmatic questions already answered in the census, but instead it will be used to identify what tier data that established monitoring groups currently collect based on the documentation they provide about their program and follow-up questions.

Question: Are there any additional criteria you would like to see added to an initial review of a monitoring program for project inclusion?

Tier Assessment of Current Monitoring Groups			
Group Name:			
Contact Name:		Contact Email:	
Contact Phone:		State:	
Programmatic			Notes or Comments
Written Study Design?	Yes	Tier I or II	
	No	Do not include	
Documented Site locations w/ coordinates?	Yes	Tier I or II	
	No	Do not include	
Program QAPP?	Yes	Tier II	
	No	Tier I	
Sampling Location			

Sampling Location	Boat mid channel	Tier II	
	Wade in mid channel	Tier II	
	Bridge/Dock mid channel	Tier II	
	Shore line	Tier I	
Sampling Frequency	Monthly	Tier I or II	
	Bi-monthly	Tier II - report card	
QA/QC			
Field replicates (10% or more)	Yes	Tier II	
	No	Tier I	
Duplicate Sampling (10% or more)	Yes	Tier II	
	No	Tier I	
Winkler Titration Duplicate	Yes	Tier II	
	No	Tier I	
Field blanks (10% or more)	Yes	Tier II	
	No	Tier I	
Parameters			
Conductivity	Probe	Tier I	
	Calibrated Probe	Tier II	
Dissolved Oxygen	Winkler Titration	Tier I	
	Winkler Titration (standardized)	Tier II	
	Electronic probe	Tier II	
Nitrate- Nitrogen	Lab Analysis	Tier II	
	Colorimetric Kit	Tier I	
Orthophosphate	Lab Analysis	Tier II	
	Hanna Checker	Tier II	
	Colorimetric Kit	Tier I	
pH	ColorpHast Strips (2-9)	Tier I	
	Probe	Tier I	
	Calibrated Probe	Tier II	
	Colorimetric Kit	Tier II	
Salinity	Refractometer	Tier I	
	Probe	Tier I	
	Calibrated Probe	Tier II	
TDS	Calibrated Probe	Tier II	
Turbidity	LaMotte Kit	Tier I	
Water Clarity	Secchi Disk	Tier I	
	Turbidity Tube	Tier I	
Water & Air Temperature	Thermometer	Tier I	
	Verified Thermometer	Tier II	

	Thermistor on multiprobe (verified)	Tier II	
Bacteria	Lab Analysis	Tier II	
	Coliscan Easygel	Tier I	
Alkalinity	Titration Kit	Tier I	
	Hanna Digital Checker	Tier I	
Ammonia	Lab Analysis	Tier II	
Chlorophyll	Lab Analysis	Tier II	
Nitrite-Nitrate	Lab Analysis	Tier II	
Phaeophytin	Lab Analysis	Tier II	
Silicate	Lab Analysis	Tier II	
Total Nitrogen	Lab Analysis	Tier II	
Total Phosphorus	Lab Analysis	Tier II	

Tier Assessment of Current Benthic Monitoring Groups			
Group Name:			
Contact Name:		Contact Email:	
Contact Phone:		State:	
Programmatic			Notes or Comments
Written Study Design?	Yes	Tier I or II	
	No	Do not include	
Documented Site locations w/ coordinates?	Yes	Tier I or II	
	No	Do not include	
Program QAPP?	Yes	Tier II	
	No	Tier I	
Sampling			
Identification Level	Family	Tier II	
	Order	Tier I	
Sampling Frequency	Once a year	Tier I	
	Twice a year or more	Tier II	
QA/QC			
Field replicates (10% or more)	Yes	Tier I or II	
	No	Do not include	
Preserve all for QC check (10%)	Yes	Tier I or II	
	No	Do not include	

Location Prioritization for creating or expanding monitoring programs

The Integrated Monitoring Network Workgroup can provide valuable input on areas where there is a need for higher density data or where there is a data gap. The citizen-based and nontraditional integration project will be creating a report this summer that will prioritize working with monitoring groups in good standing (based on the Tier I, II & III requirements) to be incorporated into the Chesapeake Bay Program Monitoring Networks.

The worksheet below is designed to solicit your feedback on what areas the CBP or your state could benefit from having more water quality or benthic macroinvertebrate data collected by volunteer and non-traditional monitoring groups. Your responses will help inform and design a workshop with the INWG and the Citizen-based and Nontraditional Monitoring Project Team to better establish the Chesapeake Bay citizen-based and nontraditional monitoring network.

The Citizen-based and Nontraditional Monitoring Project Team proposes the following criteria for prioritizing Tier I and Tier II data integration to be considered by each state when evaluating waterbodies/watersheds:

Criteria for Consideration	Rating (<i>i.e. Strong Yes, Yes, No, Strong No</i>)
Waterbody/area under consideration:	<i>example: Choptank River</i>
Is the waterbody in a selected under-represented source sector: urban, suburban or agriculture?	
Are there unexplainable hypoxic or anoxic events that more frequent monitoring could help explain?	
Are there BMP implementation plans in the near future? Could volunteer or nontraditional monitoring data help support baseline assessment prior to BMP implementation?	
Has a BMP recently been implemented and your state is interested in water quality progress due to that management action?	
Is there a suspected nutrient or sediment “hot spot” without agency resources to support the continual monitoring of it?	
Has a fixed monitoring station or monitoring parameter recently been retired based on limited resources, but there is still interest in monitoring that waterbody or parameter?	
Are there monitoring stations at prominent input sites from streams and major tributaries?	
Would additional data contribute to a small watershed study?	
Does the waterbody have high public interest?	
Is the waterbody being considered as a sentinel site for climate change research?	

Is the region undergoing change and development?	
Is it an area without focused state monitoring efforts, but citizen and nontraditional monitors could serve as a “watch dog” for significant changes in water quality?	
<i>INWG input</i>	
<i>INWG input</i>	
<i>INWG input</i>	

Questions:

1. Which of these criteria could best serve as indicators of priority areas for citizen-based and nontraditional monitoring?
2. What additional information would be necessary for prioritization?
3. How should we rate/score the water bodies/ areas using these criteria?