Tiered Framework for Data Integration

Julie Vastine

Integrated Monitoring Networks Meeting

January 20, 2016
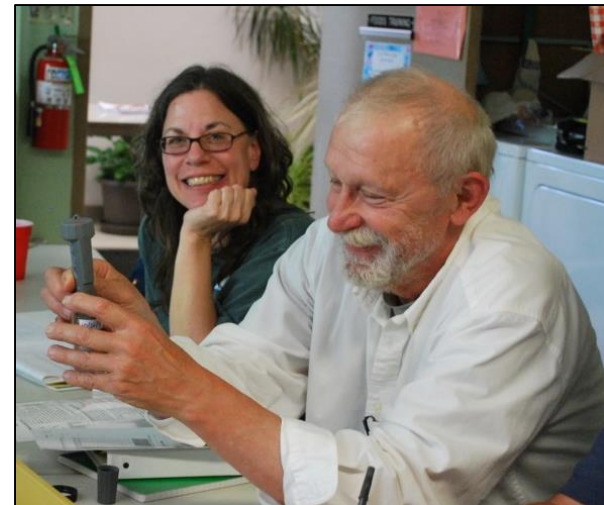
Project Partners

Framework Introduction

- First non-traditional data integration project at the federal level.

- Look to states for models of data integration (thank you Virginia, Missouri, Michigan, Alabama, and Indiana).
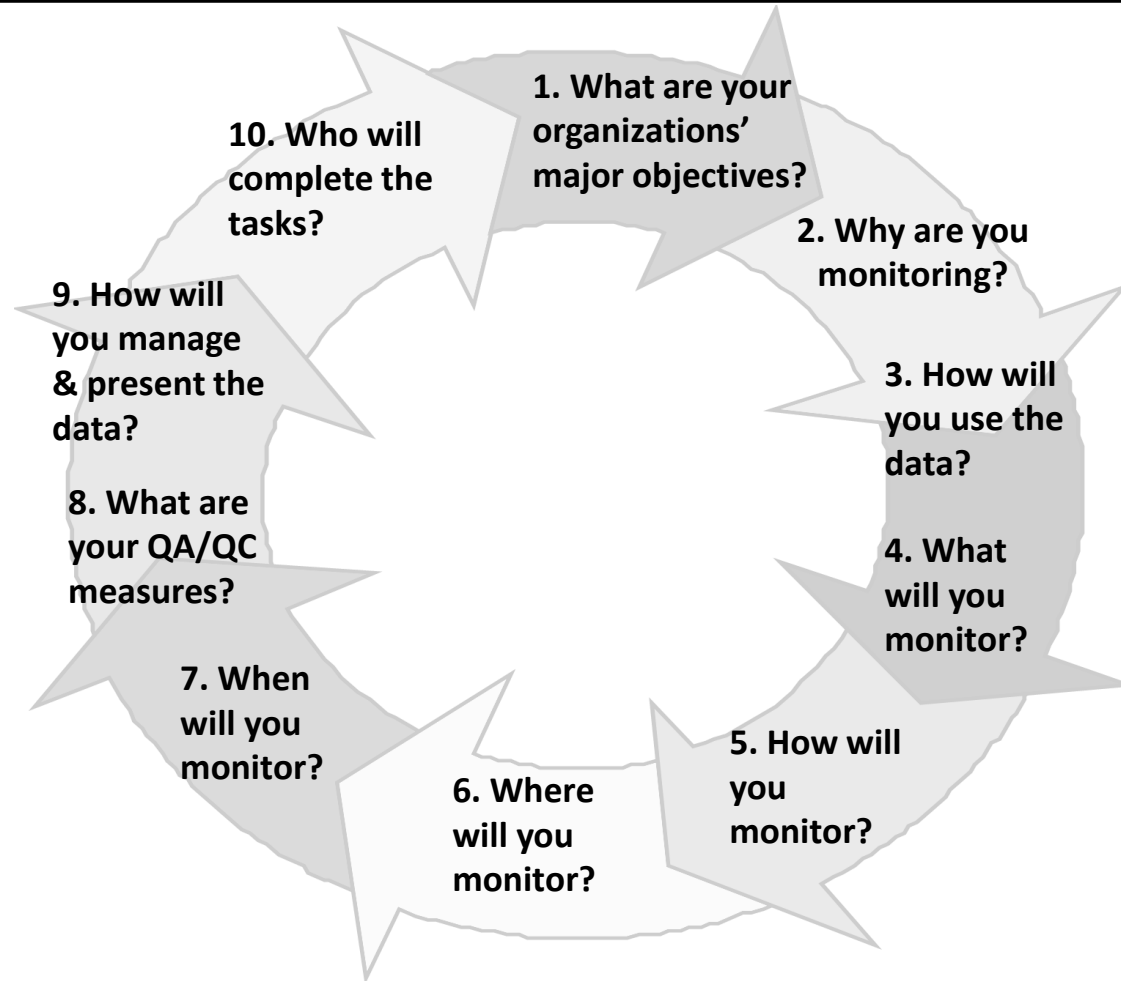
Framework

TIERS	Intended Data Use
TIER 1	Education, Environmental Health Screening
TIER 2	Environmental Health Report Cards, Environmental Health Screening, Targeting of Management Actions
TIER 3	Regulatory Assessments of Water Quality Standards Attainment

Hidden Tier Zero – there are data requirements that must be met to be included in this project.

Tier 1 – Education & Environmental Health Screening

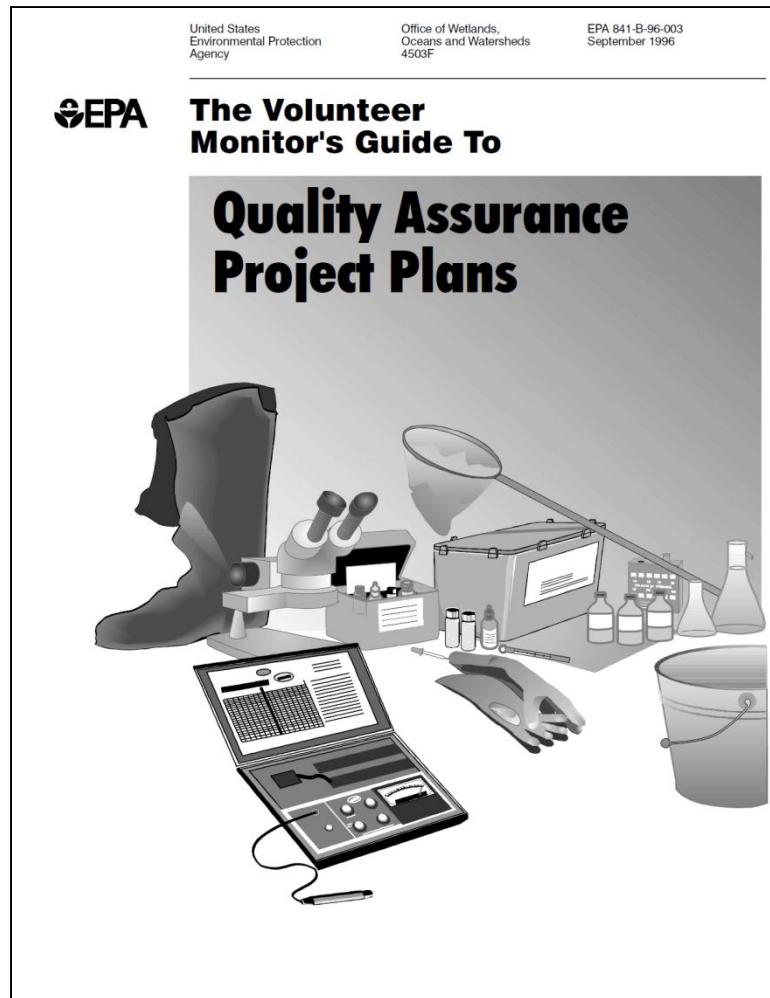| Definition	Data do not meet Tier 2 or 3 but are of known quality and can contribute to understanding
Data Uses	• Provide location information on where monitoring is taking place; • Provide on-the ground information for future site development; • Indicate potential pollution hot spots; • Prioritize sites for follow-up monitoring; • Target restoration projects; • Inform sub watershed report cards; and • Highlight local, community projects that are implemented to improve the health of the Bay watershed.
Data Requirements	Clearly documented monitoring methodology, site locations, and written study designs (which document basic QA/QC measures).

Tier 1: Tool – Study Design

1. What are your organizations' major objectives?

2. Why are you monitoring?

3. How will you use the data?

4. What will you monitor?

5. How will you monitor?

6. Where will you monitor?

7. When will you monitor?

8. What are your QA/QC measures?

9. How will you manage & present the data?

10. Who will complete the tasks?

www.rivernetwork.org

Tier 2 – Report Cards, Screening, Targeting of Management Actions

Definition	Data have clearly defined and approved methodology (using EPA Volunteer Monitoring QAPP guidelines) but don't meet Tier 3.
Data Uses	• Be used for Bay Program report cards; • Be used to help target stream segments for water quality standards attainment assessments and Clean Water Act 305(b) reports; • Be used for screening for Clean Water Act 303(d) stream segments; • Target new priority agency sites; • Track the performance of Total Maximum Daily Load (TMDL) implementation projects; and • Be used for all uses identified in Tier 1.
Data Requirements	At minimum, has an approved EPA Volunteer Monitoring QAPP.

Tier 2: Tool – EPA VolMon QAPP

Tier 3 - Attainment

Definition	Tier 3 data are regulatory, decision-making, legally defensible data.
Data Uses	• Attainment purposes, Clean Water Act 305 (b) reports, Clean Water Act 303 (d) listing and delisting; and • All uses identified in Tier 1 and Tier 2.
Data Requirements	United States Environmental Protection Agency (EPA) or CBP approved QAPP and field/lab standard operating procedures.

Non-Traditional Data Producers

- Watershed Inventory (550+ entities):
  - Communities (50%)
    - Watershed Associations
    - Trout Unlimited chapters
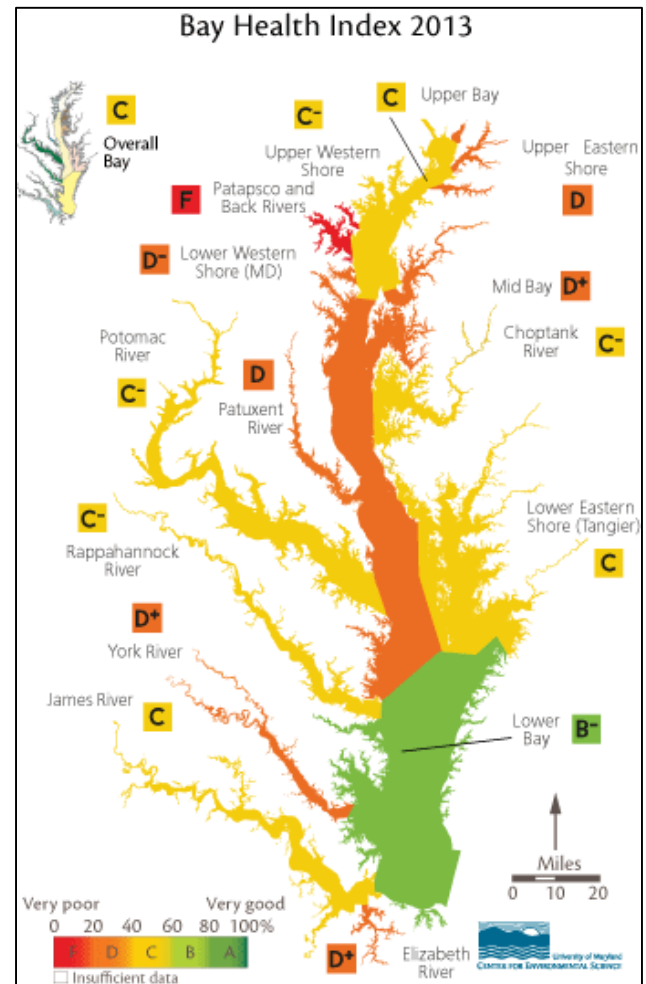   - Senior Environmental Corps
    - Izaak Walton League chapters

Tier 1 & 2: Types of data collected

- Water quality/chemistry
- Biological – macroinvertebrates and submerged aquatic vegetation
- Physical – habitat and stream bank assessments

Potential Data Uses

- Bay Program report cards;

- Help target stream segments for water quality standards attainment assessments and Clean Water Act 305(b) reports;

- Screening for Clean Water Act 303(d) stream segments;

- Target new priority monitoring sites;

- Track the performance of Total Maximum Daily Load (TMDL) implementation projects; and

- Be used for all uses identified in Tier 1.

Bay Health Index 2013

http://ian.umces.edu/ecocheck/images/2013_bhi_map.png

Approval Requested

The Project Team is seeking STAR approval on the Tiered Framework document by COB February 15th.

Please send comments to Julie Vastine at vastine@dickinson.edu.

Contact Information

Alliance for Aquatic Resource Monitoring
(ALLARM)
Dickinson College
717.245.1565
allarm@dickinson.edu
www.dickinson.edu/allarm

Alliance for the Chesapeake Bay
804.775.0951
Amathis@allianceforthebay.org
www.allianceforthebay.org

Izaak Walton League
301.548.0150
leah@iwla.org
www.iwla.org

UMCES Integration & Application Network
410.330.3330
cdonovan@ca.umces.edu
ian.umces.edu