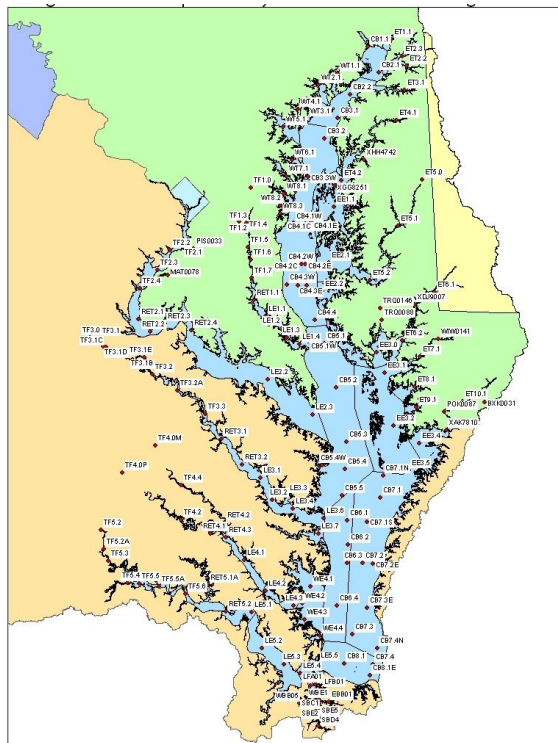# BASINs: Customer survey of expectations regarding what they need from the Chesapeake Bay monitoring (and Modeling) programs

Peter Tango with Lea Rubin and Amanda Pruzinsky

Modeling WG meeting

July 22, 2014

BASINs = Building and Sustaining Integrated Networks
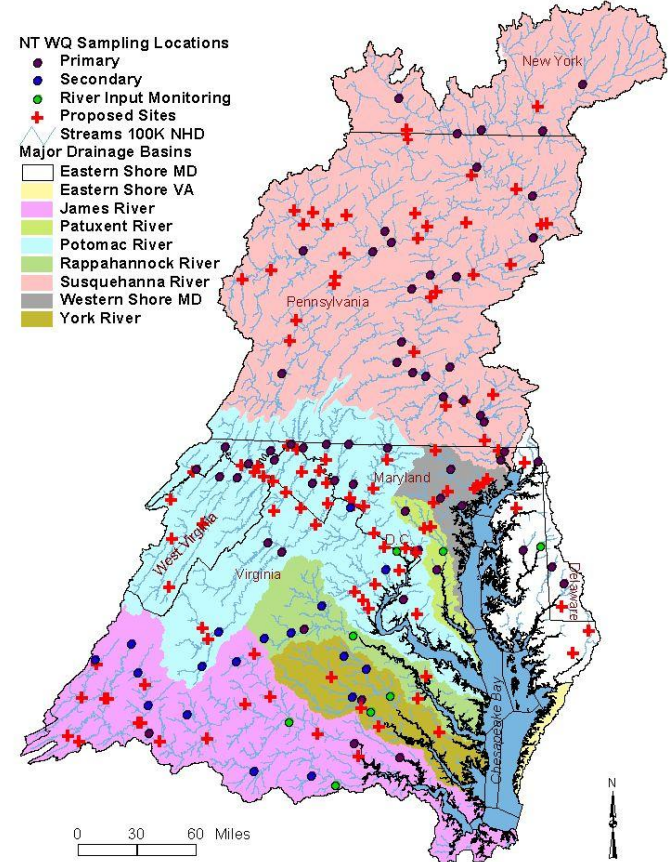

Shallow water

Living resources

Long term water quality

Tidal Monitoring Network

Active and proposed non-tidal water-quality monitoring network sites in the Chesapeake Bay Watershed

NT WQ Sampling Locations
- Primary
- Secondary
- River Input Monitoring
- Proposed Sites
- Streams 100K NHD

Major Drainage Basins
- Eastern Shore MD
- Eastern Shore VA
- James River
- Patuxent River
- Potomac River
- Rappahannock River
- Susquehanna River
- Western Shore MD
- York River

Watershed Monitoring Network

BASIN Overview – Three Phase Process (May 2013-Feb 2015)

- **Phase I (*complete*)** – Monitoring Review: Sustaining the Monitoring networks under a Federal Funding Gap in Program Support

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☐ **Phase II (*in progress*):**

Panel reviews completed   1. Evaluation of a sustainable business model to support Chesapeake Bay and basin monitoring programs,

In Progress   2. Considering alternative approaches to the operation and design of the tidal and nontidal monitoring networks, and

Under development   3. **Assess the primary products that the monitoring program is expected to deliver to its customers.**

☐ **Final Product of Phase II** – BASINs Report (Feb 2015)

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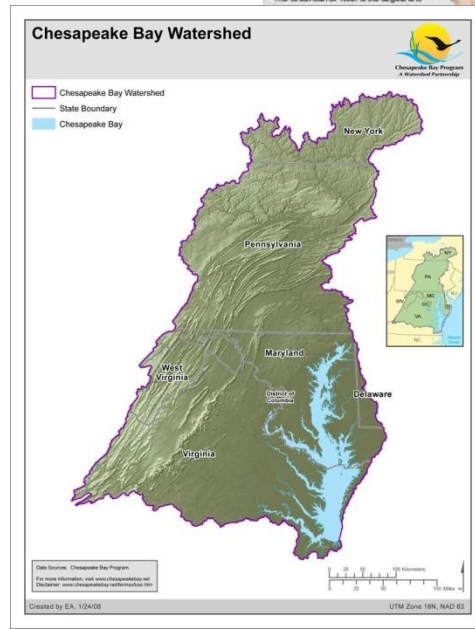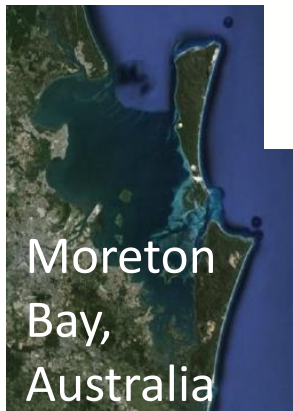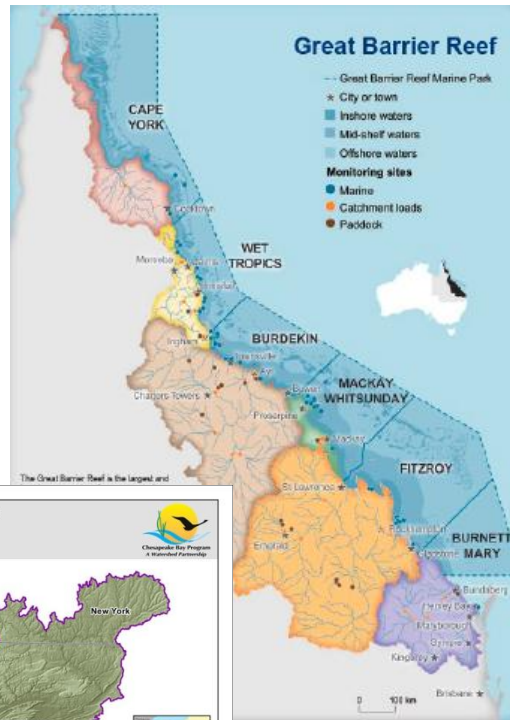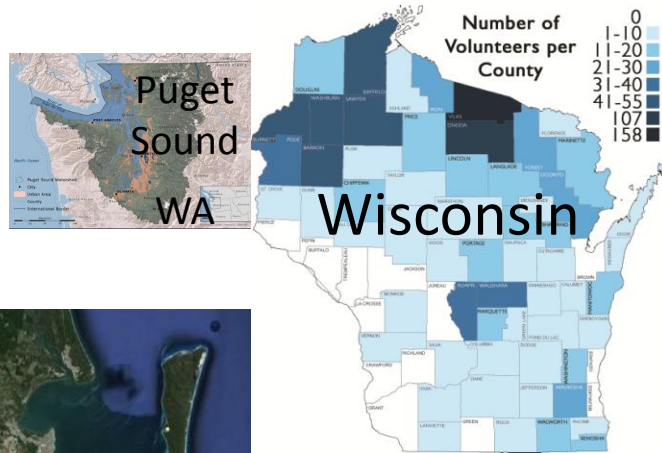
☐ **Final Product of Phase II** – BASINs Report (Feb 2015)

• **Phase III (*timeline TBD*)** – Expanded Monitoring in Support of the New Chesapeake Bay Agreement beyond Water Quality goals

Recap: Phase II BASINs Case Studies

Scale=(1/10 to 20X the Chesapeake)

Great Lakes

Great Barrier Reef

Puget Sound WA

Wisconsin

Moreton Bay, Australia

Ireland

Upper Mississippi River Basin

Recap: Operations models across programs, including innovations and communications

- **Chesapeake:**

  – Highly evolved reporting, report cards

- **Case studies:**

  – Technical capacity through agencies (all)

  – Citizen scientists engaged (all)

  – Vital Signs – Progress of Recovery Efforts (Puget Sound)

BASINs Phase II:
Customer Expectations Assessment

- The Chesapeake Bay Program (CBP) is reviewing approaches to ensure the long-term sustainability of its monitoring networks.

- As part of the process, STAR is researching customer expectations of the monitoring networks.
  - The survey could be useful for the Modeling WG to gain feedback on its products as well.

- STAR requests input from the Modeling WG on how to include modeling related questions to this survey and a specific intended audience list.

# Goals of the Customer Expectations Discussion:

- To gain feedback on the usefulness of the products derived from the CBP Monitoring Networks.

- Gain a better understanding of the Goal Team decision making process in order to better tailor our monitoring products to fit their needs.

- To ascertain what the perceptions of the broader CBP community has regarding the utility of monitoring data in guiding the restoration efforts of Chesapeake Bay.

Audience

- *Tier 1 – Key Audience*
  - WQ Goal Team – state and federal water-quality managers responsible for improving quality of Bay and Watershed Waters
  - GIT Chairs
  - State Agency Resource Managers (contact one or two representatives from each organization MDE, MDNR, PA DEP, VADCNR, etc.)

- *Tier 2 – Secondary Audience*
  - STAR (including WGs), CBP Communication Team
  - STAC, LGAC, and CAC
  - Academic Partners
  - Watershed groups (CBF, Riverkeepers Network, Blue Water Baltimore, Alliance for the Chesapeake Bay)

Customer Expectations Survey outline

- Use, relevance, needs evaluated regarding Bay and Watershed Health Indicators in your work.

- Chesapeake Bay Water Quality Synthesis Products use, relevance, needs supporting your work.

- Evaluating use and needs of Monitoring Networks in the Chesapeake Bay and Basin.

- Request their directions for monitoring funding priorities on any future funding available

- Provide a sense of the desired role for using Nontraditional Partner data in decision-making.

- For each of the new Bay Agreement goals how can the Chesapeake Bay Program monitoring network and synthesis products be improved to help draft the management strategies, track the progress, and meet the goal?

Indicators

Synthesis

Networks

Funding

Decision support

New 2014 Bay Agreement
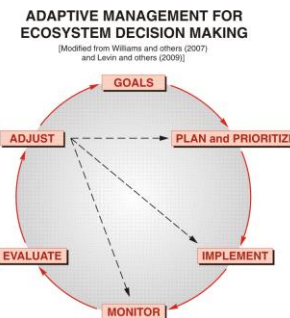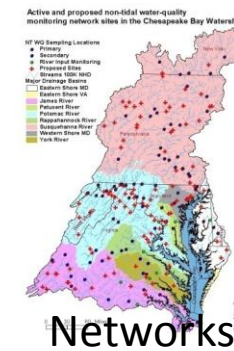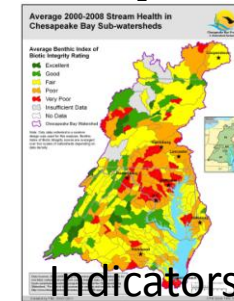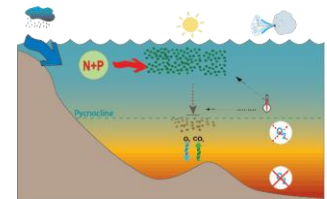
Customer Expectations Survey outline:
Potential Expansion Opportunities

- Use, relevance, needs evaluated regarding Bay and Watershed Health Indicators in your work.

- Chesapeake Bay Water Quality (and modeling) Synthesis Products use, relevance, needs supporting your work.

- Evaluating use and needs of Monitoring Networks in the Chesapeake Bay and Basin.

- Request their directions for monitoring (and modeling) funding priorities on any future funding available

- Provide a sense of the desired role for using Nontraditional Partner data in decision-making.

- For each of the new Bay Agreement goals how can the Chesapeake Bay Program monitoring network and (monitoring and modeling) synthesis products be improved to help draft the management strategies, track the progress, and meet the goal?

Thank you ☺

Insights from Recent Publications: e.g. Roy et al. 2012

UK Environmental Observation Framework

Understanding Citizen Science and Environmental Monitoring

Final Report on behalf of UK Environmental Observation Framework by:
Roy, H.E., Pocock, M.J.O., Preston, C.D., Roy, D.B. & Savage, J.
NERC Centre for Ecology & Hydrology

Tweddle, J.C. & Robinson, L.D.
Natural History Museum

November 2012

Centre for Ecology & Hydrology
NATURAL ENVIRONMENT RESEARCH COUNCIL

NATURAL HISTORY MUSEUM

- 234 projects evaluated
- 30 selected for case studies

"Citizen science has vital roles in scientific research and engagement/education, but it also has the potential to help meet the demands of environmental/biodiversity monitoring, giving it clear relevance to policy. "

Insights from Recent Publications: e.g. Green et al. 2013

- 103 respondents
- 41 states
- 94 unique programs

ASSESSING THE NEEDS OF
VOLUNTEER WATER MONITORING PROGRAMS

Survey Results & Implications

A product of the Extension Volunteer Monitoring Network

www.usawaterquality.org/volunteer

Program Objectives Then and Now

These monitoring programs were initiated primarily to increase community involvement and to create long-term data sets. Today, program goals are similar, but developing long term data sets has become the primary goal of the majority of programs.
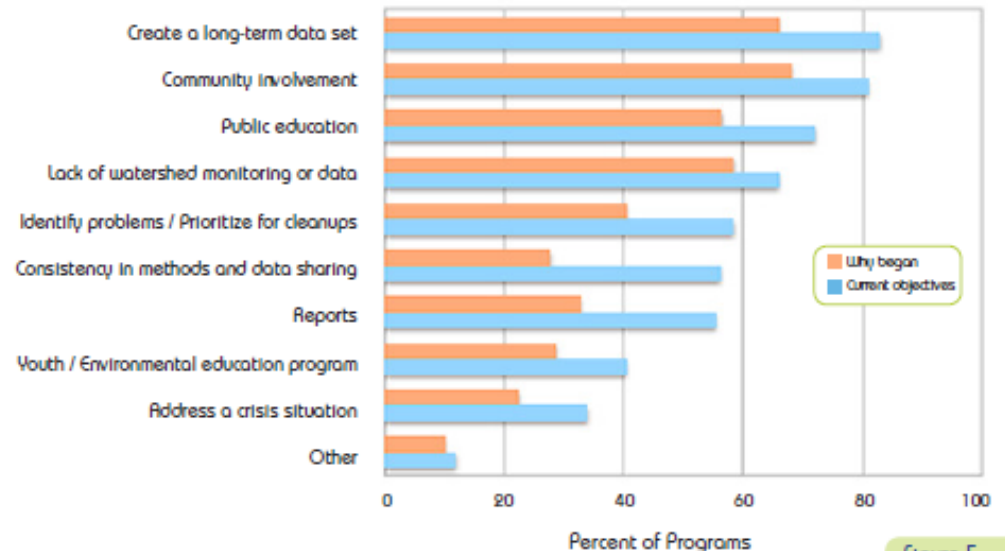
Create a long-term data set
Community involvement
Public education
Lack of watershed monitoring or data
Identify problems / Prioritize for cleanups
Consistency in methods and data sharing
Reports
Youth / Environmental education program
Address a crisis situation
Other

■ Why began
■ Current objectives

Percent of Programs

Figure 5.

Emerging Monitoring Concerns

Monitoring the effects of climate change and stormwater topped the list of potential endeavors for programs. To facilitate resource and knowledge sharing, a table identifying programs that address the topics listed in below is available at:
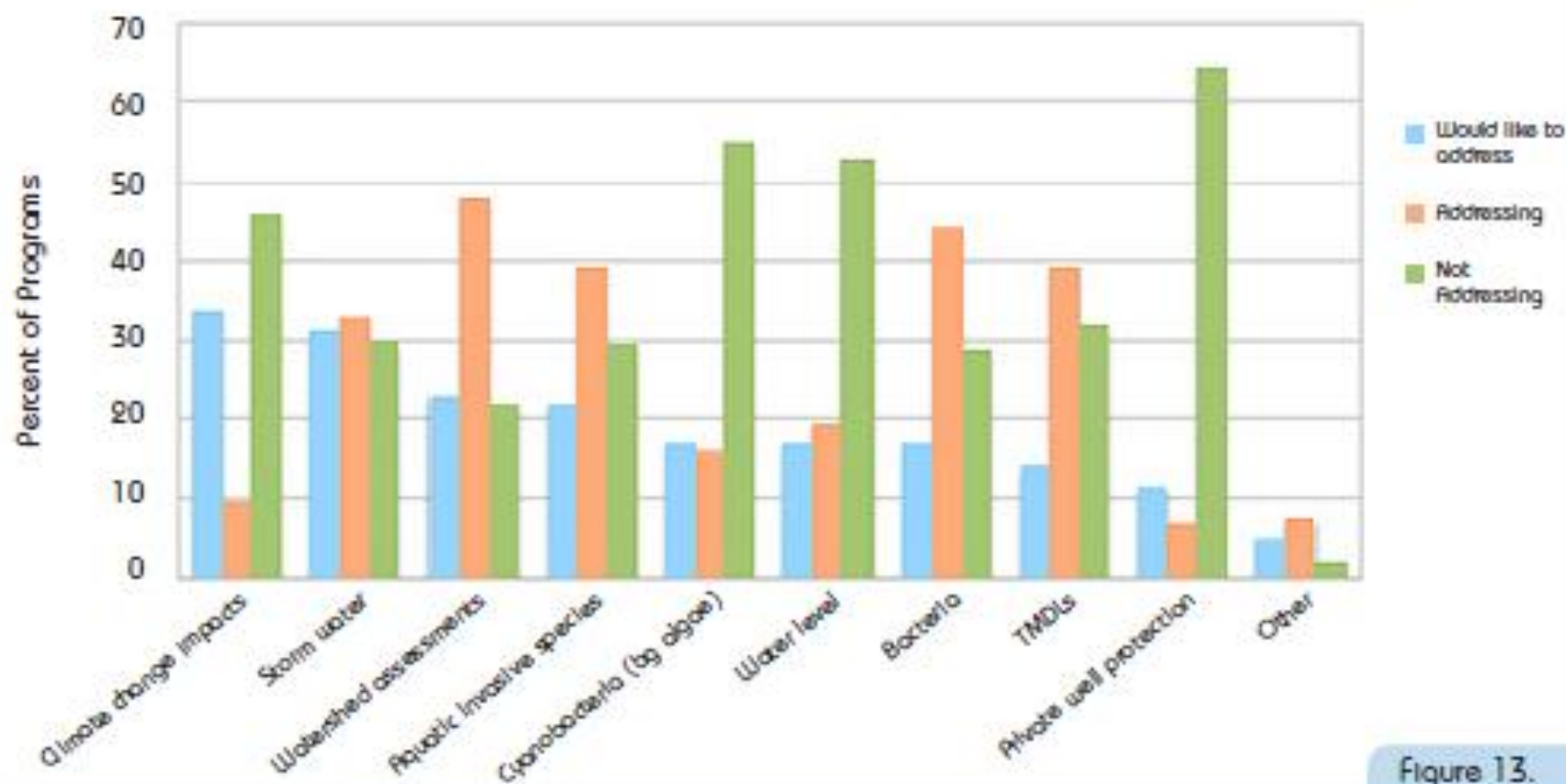
http://www.usawaterquality.org/volunteer/

Figure 13.