MONITORING CAPACITY AND VOLUNTEER MONITORING CONTRIBUTIONS: WHAT IS NEEDED FOR NEXT STEPS

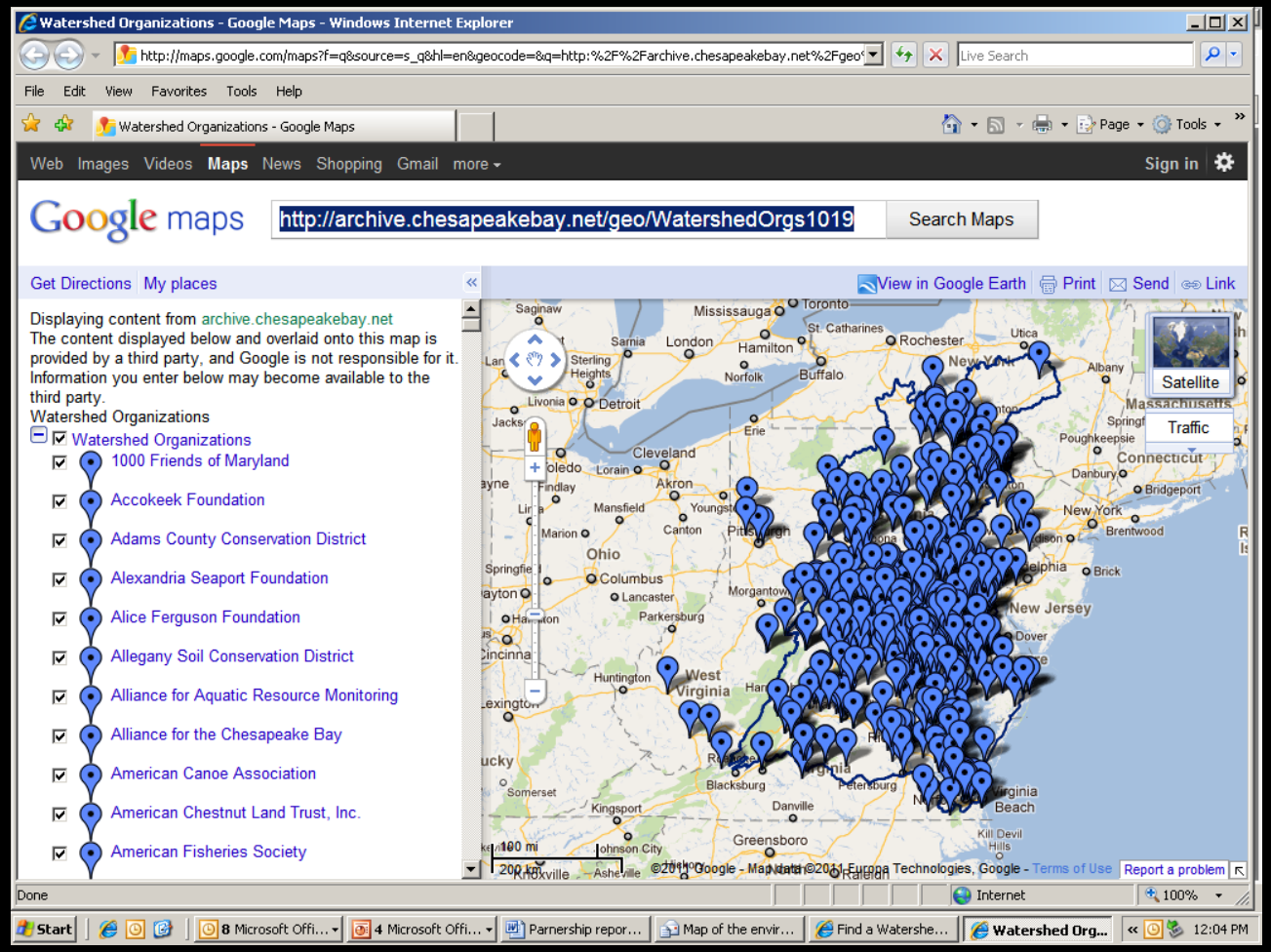
Peter Tango

STAR Coordinator, IMN WG Coordinator

IMN WG Meeting

June 21, 2017

What we have today:

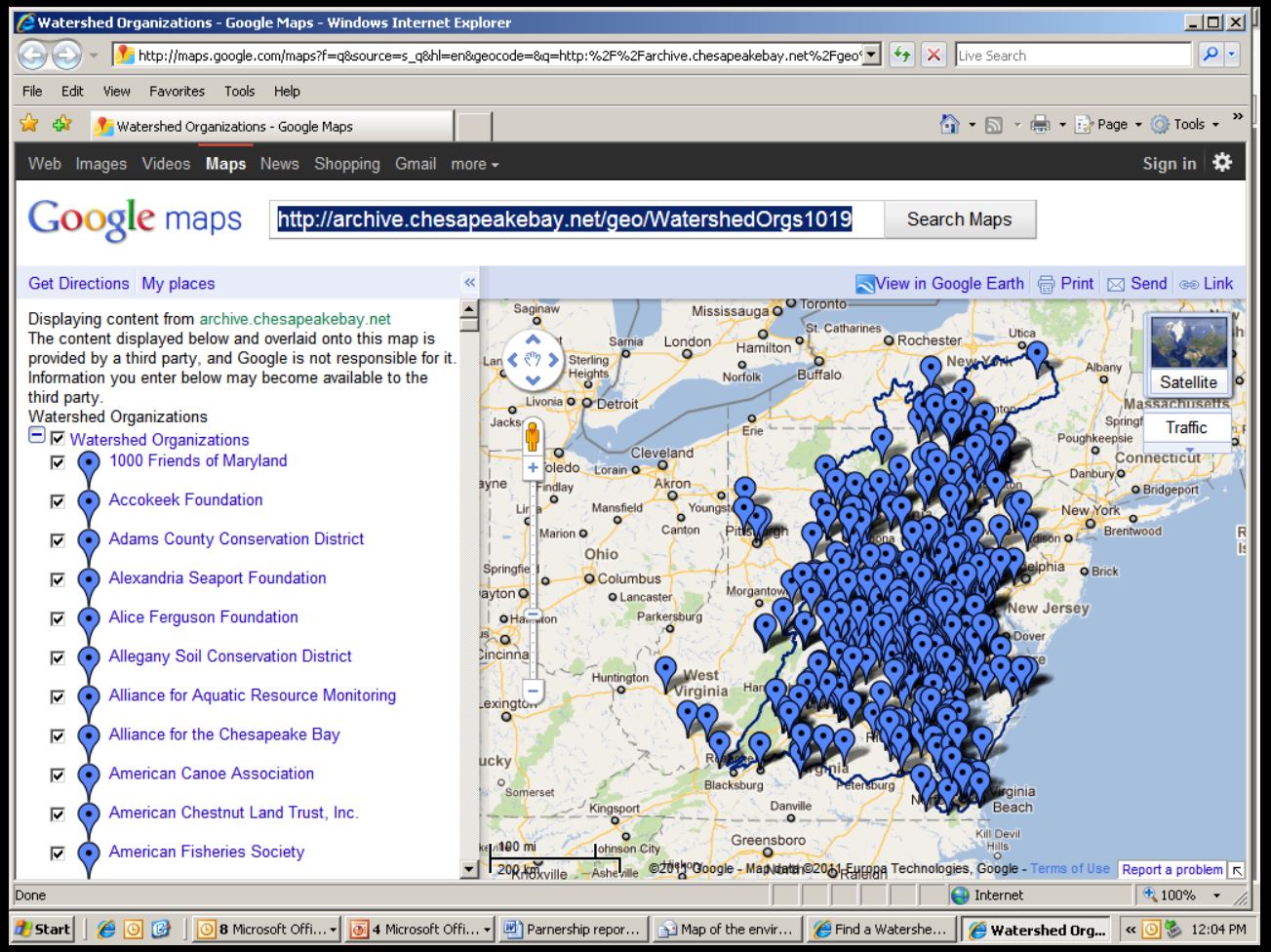


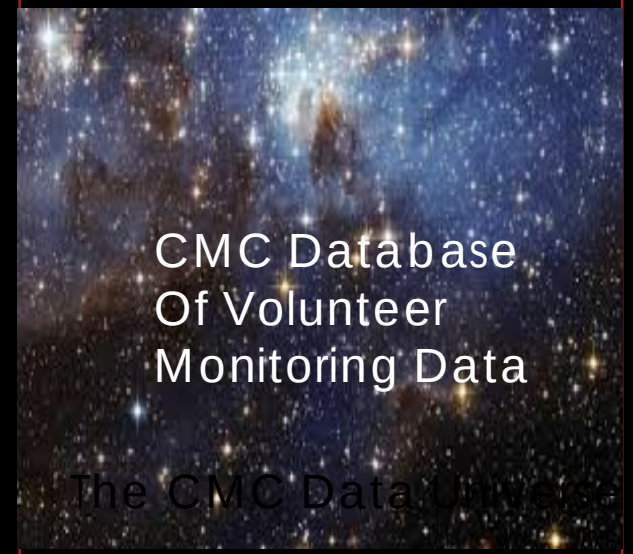
Volunteer monitors

The Chesapeake Monitoring Cooperative

CMC

The Chesapeake Monitoring Cooperative

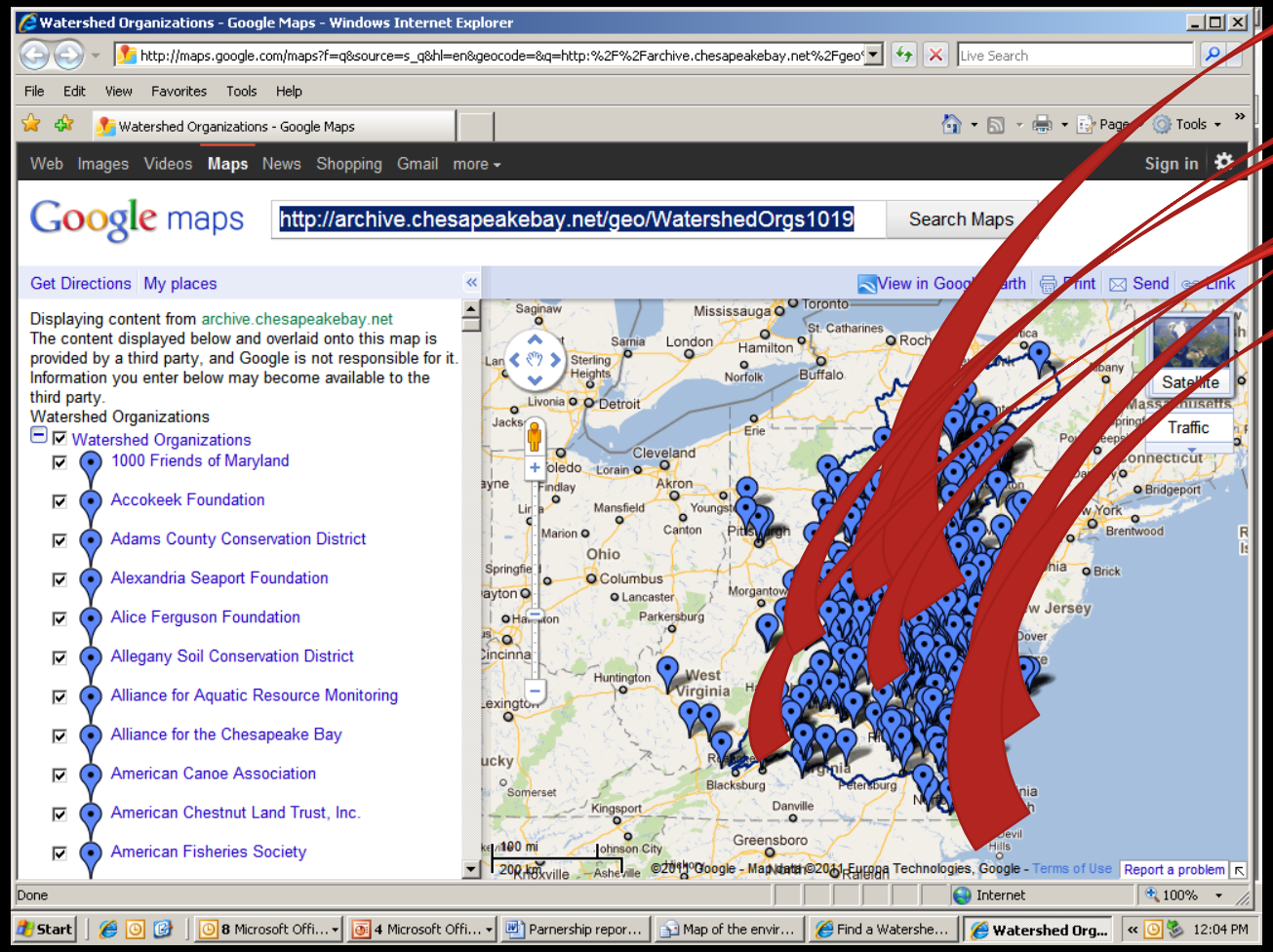




CMC

CMC Services:
QA/QC guidance
Monitoring Methods
FAQs
Training

The Chesapeake Monitoring Cooperative



Dissolved oxygen

bacteria

bugs

Conductivity

pH

Temperature

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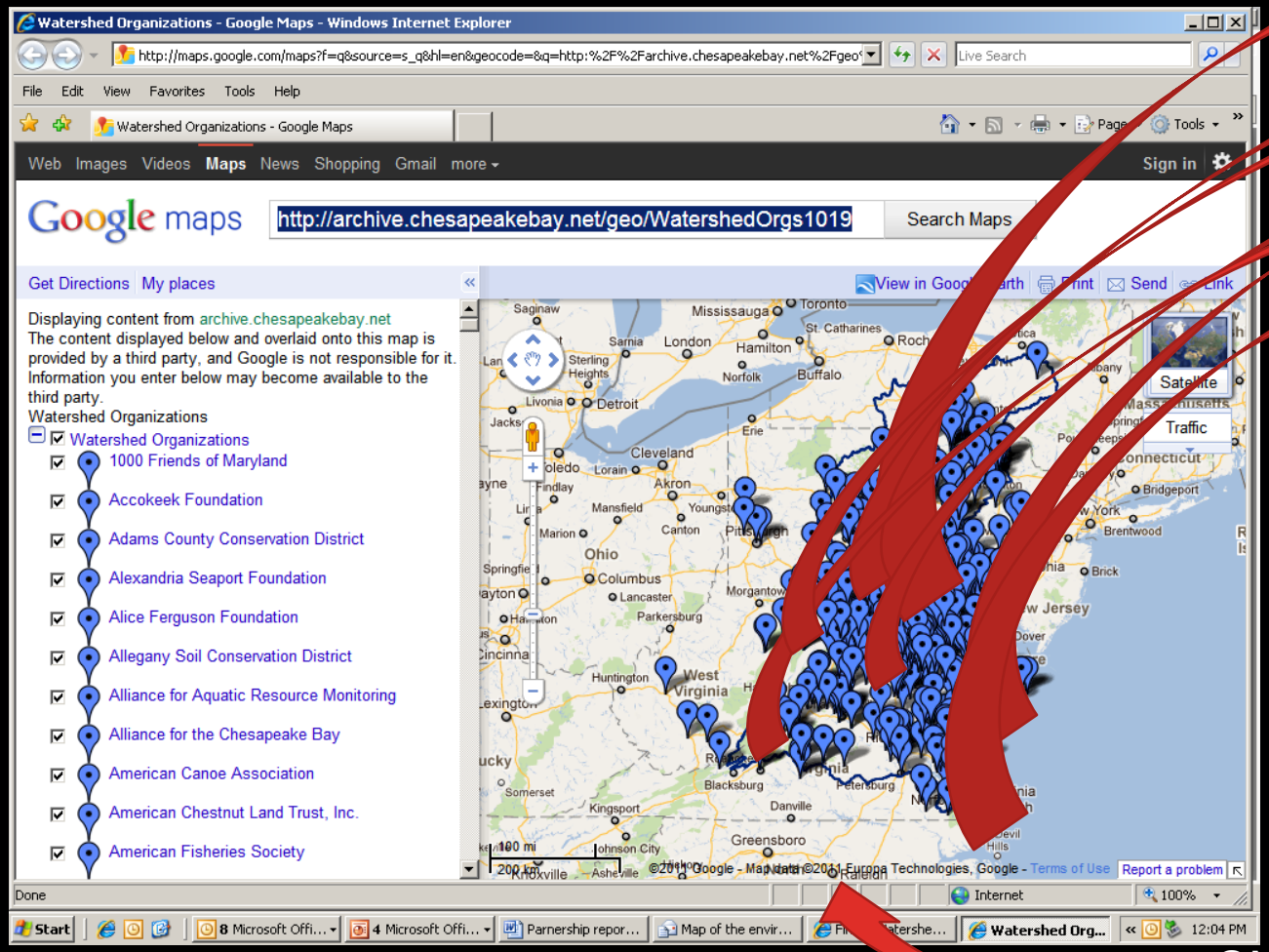

CMC Services:
QA/QC guidance
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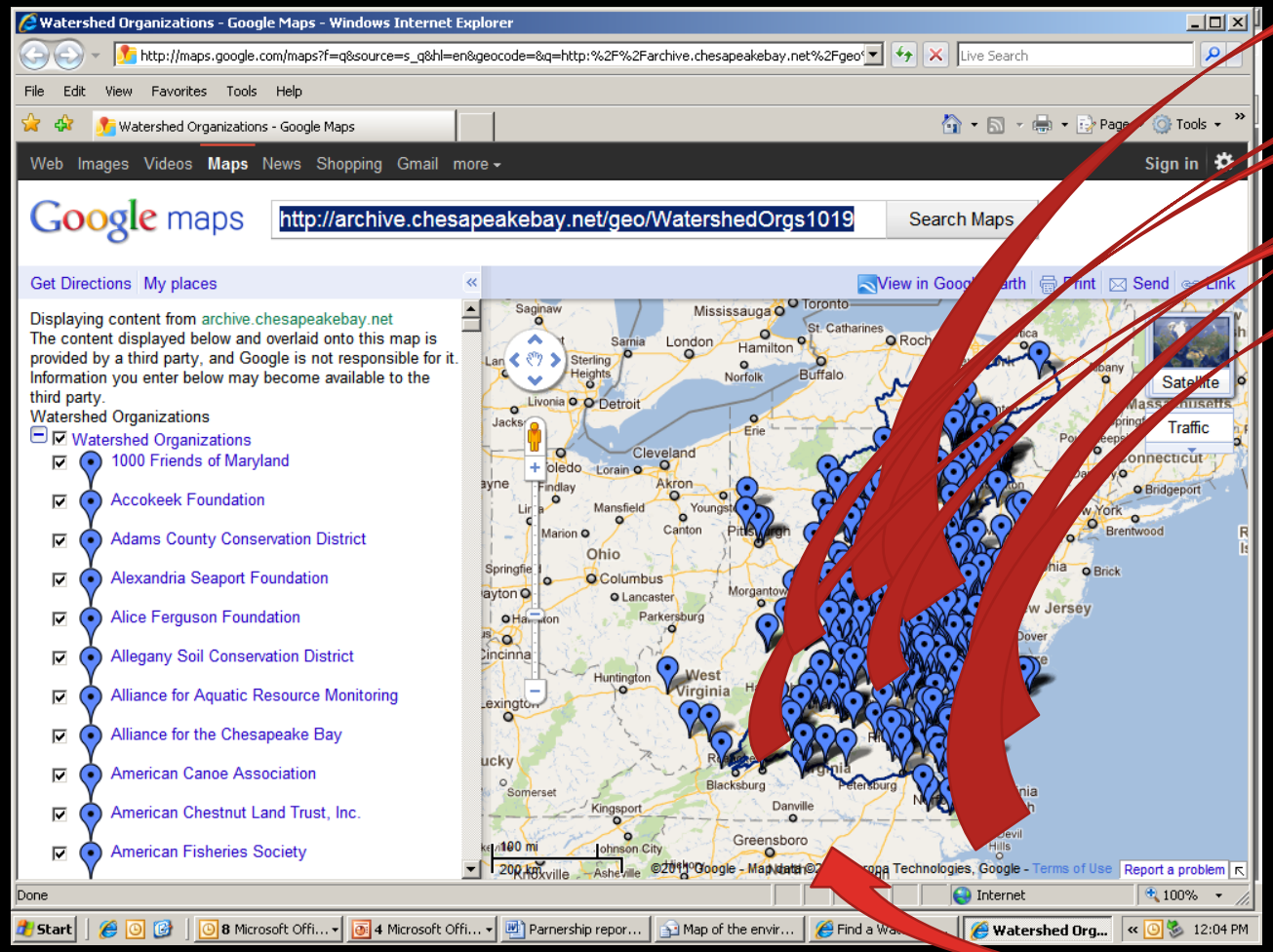
CMC Feeds back to monitoring individuals & groups

Issue?

Our platform provides the tools to do the work, but not specific directions on specific work needed to supports management decisions.



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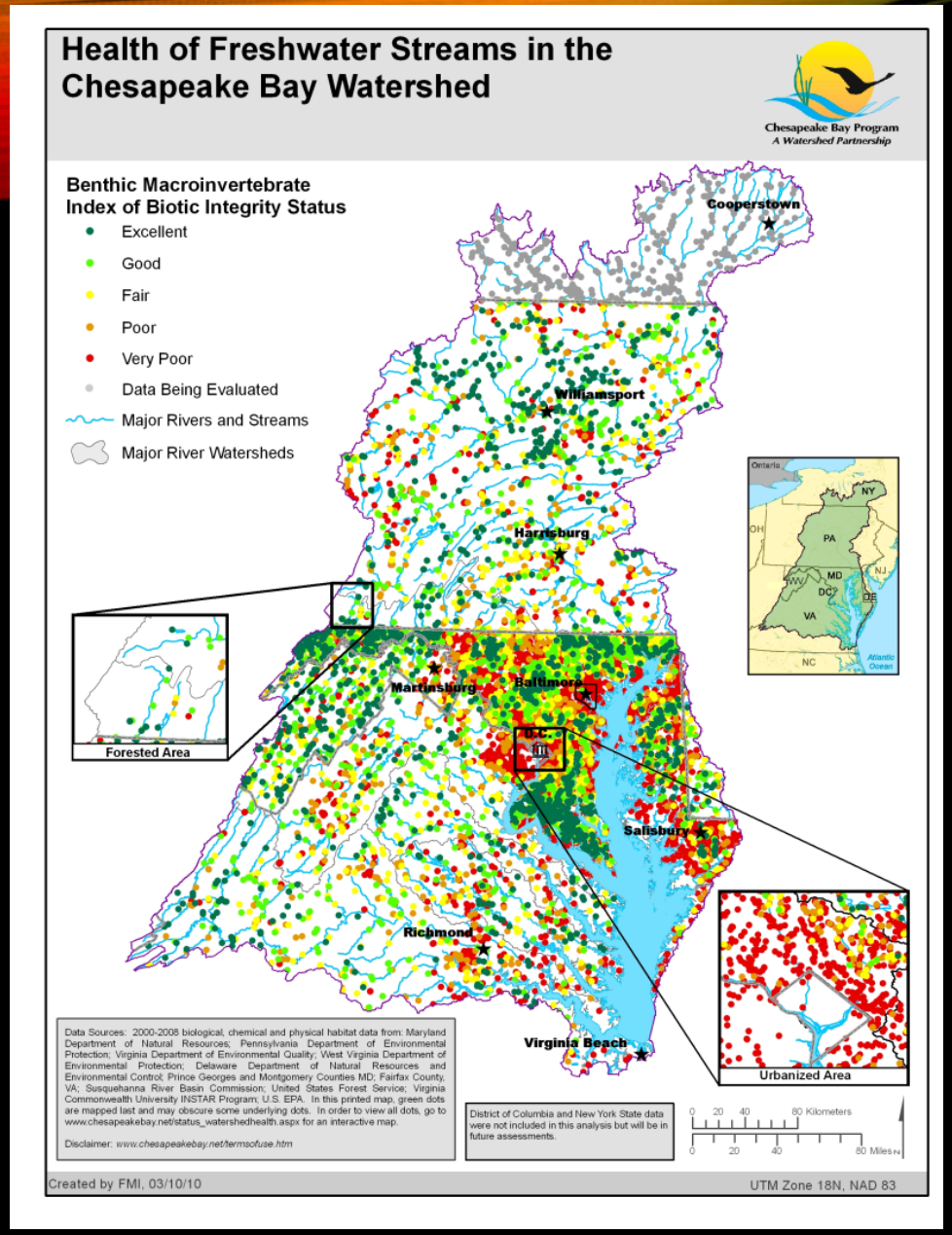
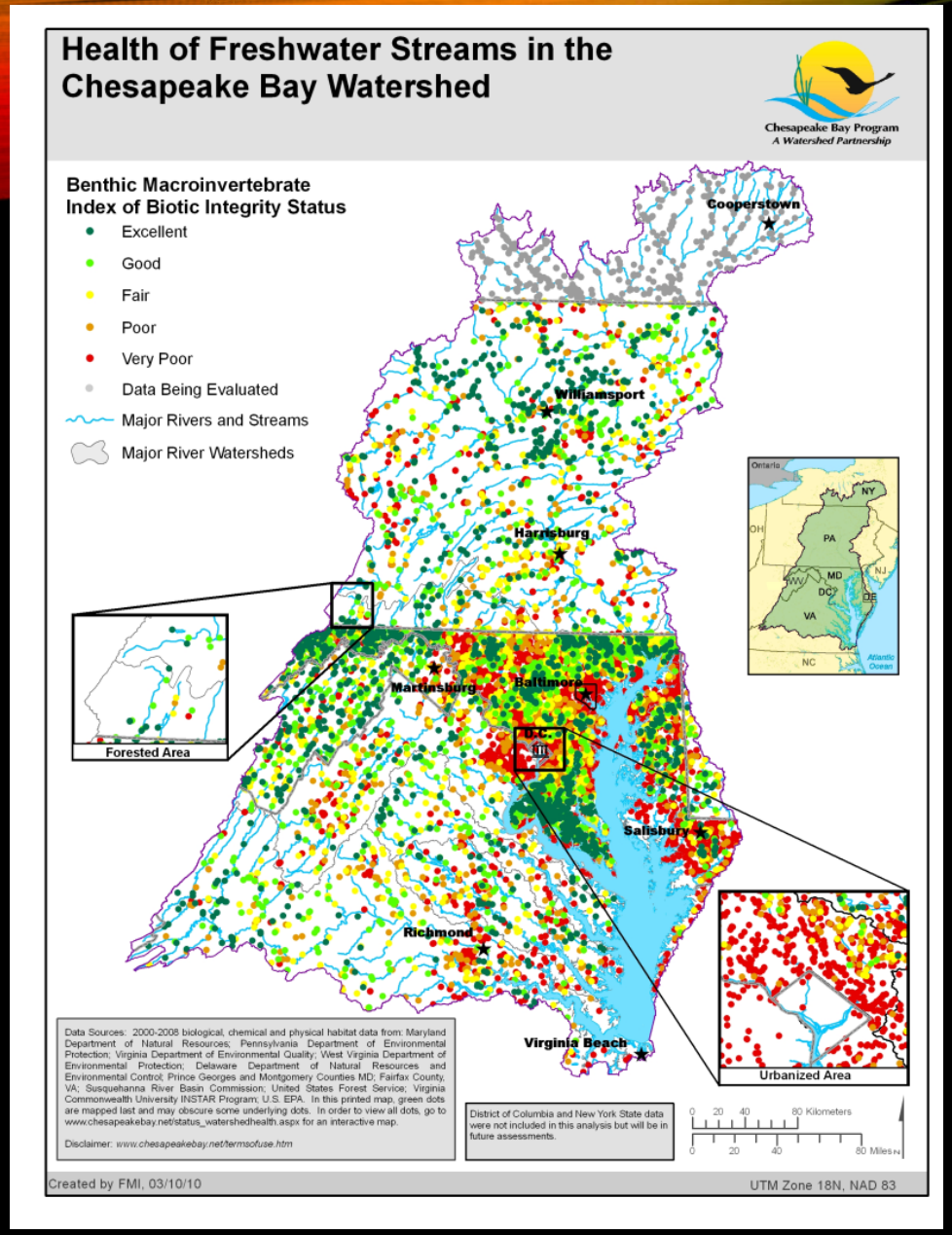


Example of the issue:

- There are over 25,000 macrobenthic invertebrate samples in our database.
- There is a 2014 Bay Agreement goal of improving the health of 10% of the stream miles in the watershed by 2025.
- How many of these samples are providing information for evaluating progress towards that goal?



- How many of these samples are providing information for evaluating progress towards that goal?

Survey says…**MAYBE NONE**.

Why? ***Because this is an amalgamation of data, not data collected under a pre-determined study design to address a specific management question.***

HOW DO WE OVERCOME SUCH MISMATCHES BETWEEN DATA COLLECTED AND DATA USED?

GAP ANALYSIS!

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Oh, wait, we have that.

CBP Gap Analysis output (Source: Laura Free, Status and Trends WG)

Topic Area/Outcome	Status	Needs
Water Quality	• Established CBPO monitoring program • Other monitoring programs occurring (not incorporated)	• Increases in spatial and temporal scale for use in CBPO Water Quality Standards • Collaboration/data quality assurance between various water quality collectors
SAV	Aerial surveys & ground surveys	Continuation of sampling and possible collaboration
Fisheries (Fish Habitat/Forage Fish/Oysters)	• Oyster restoration projects and monitoring • Forage Fish and Fish Habitat metrics are TBD • Some data collection occurring	• Oysters: Continuation of surveying in future • Increased sampling to populate metrics of Forage Fish & Fish Habitat (what, where, when?)
Toxic Contaminants	• Various samples taken/analyzed	• Increased spatial and temporal sampling of fish toxic sampling • Database
Stream Health	• Benthic sampling	• Additional parameters to be considered for stream health

GAP ANALYSIS II

- CMC: Prioritization Report on State/DC jurisdictional data needs.

WHAT ARE THE PIECES OF OUR PROGRAM?

Volunteers

(Data Collectors)

GITs

(Monitoring Information Needs – Gap Analysis Guide)

Chesapeake Monitoring Cooperative

(Data Harvesters Trainers)

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QA)

WE NEED PROJECT DIRECTIONS TO MAKE THE PIECES FIT TOGETHER

Volunteers

(Data Collectors)

Project Instructions

- What data to collect
- How to collect it
- Where to collect it
- When to collect it
- How often to collect
- Duration of data collections

GITs

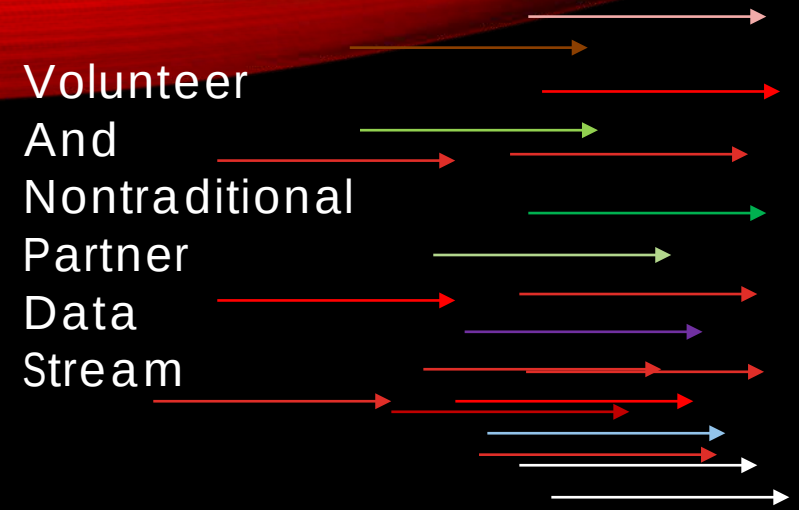
(Monitoring Information Needs – Gap Analysis Guide)

Chesapeake Monitoring Cooperative

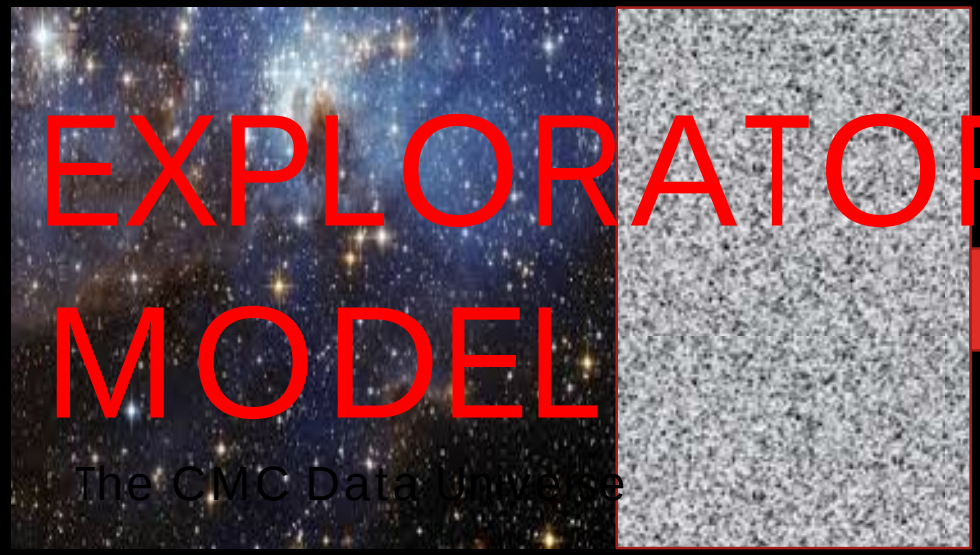
(Data Harvesters
Trainers
QA)

Present Model

Volunteer And Nontraditional Partner Data Stream

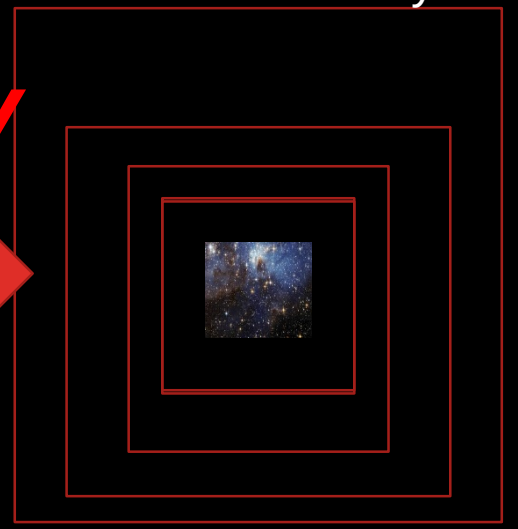


The Data Vortex



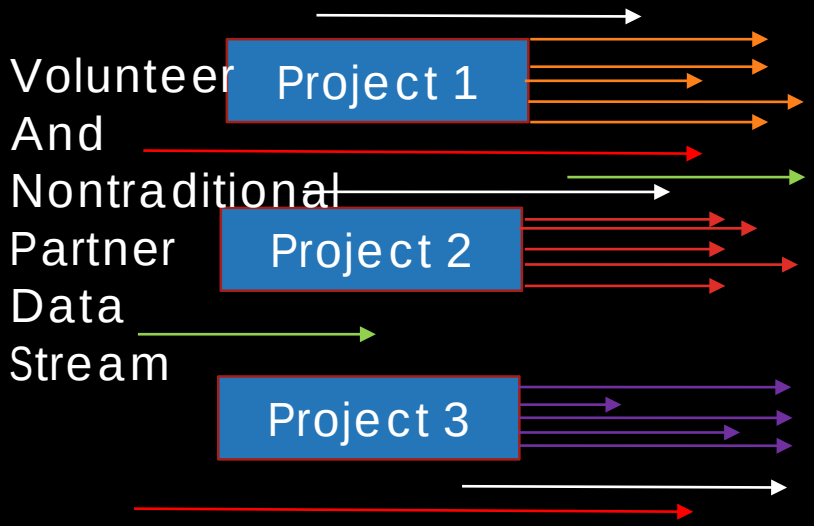
The Data Filter

Filtered Data Set
Size depends on how well the data meet analyst needs



Built Out Model

Volunteer And Nontraditional Partner Data Stream

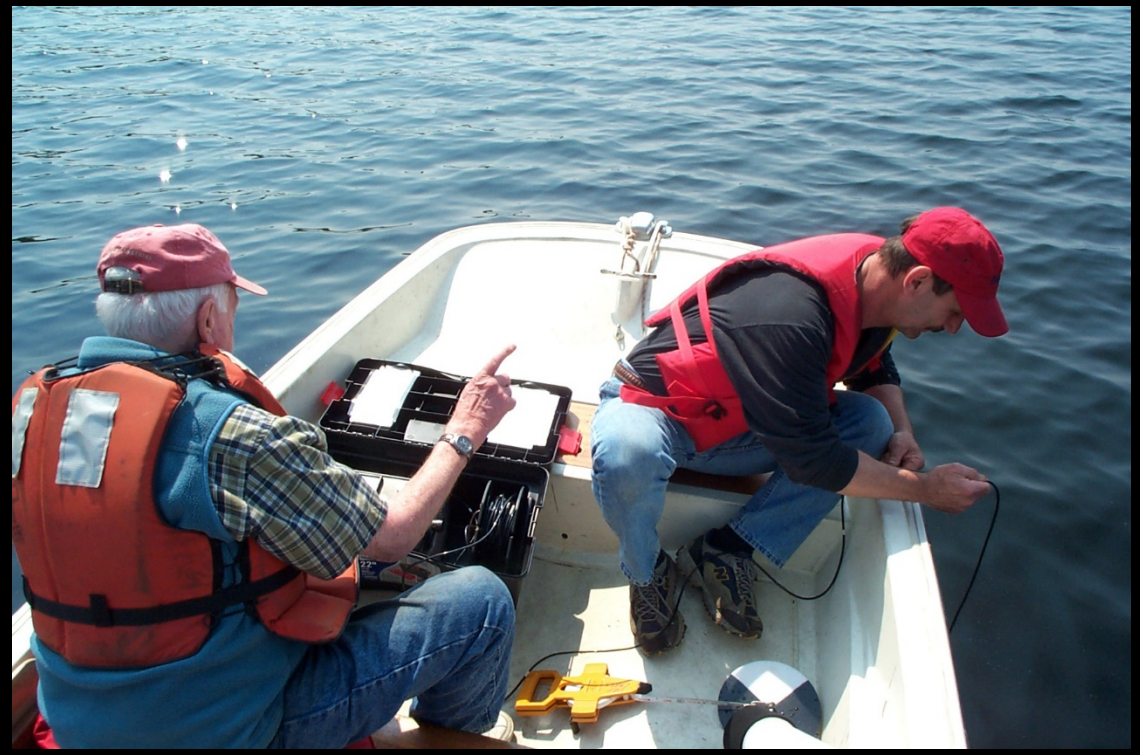


Filtered Data Set
Project specific protocols
Data meets analyst needs

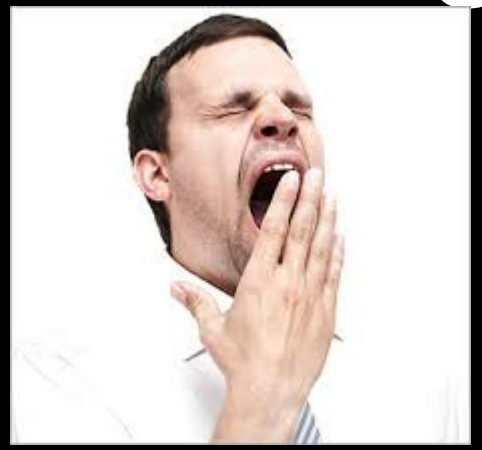
Project 1

WEBSITE: WE NEED A PROJECT PAGE.

- First Project: Dissolved Oxygen Profiles are needed!



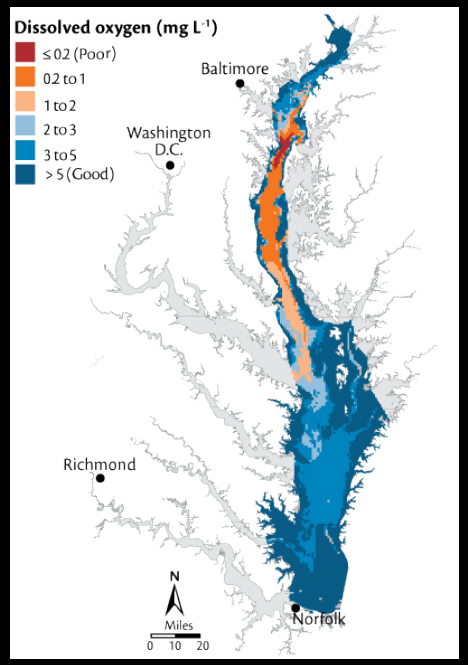
Exciting?



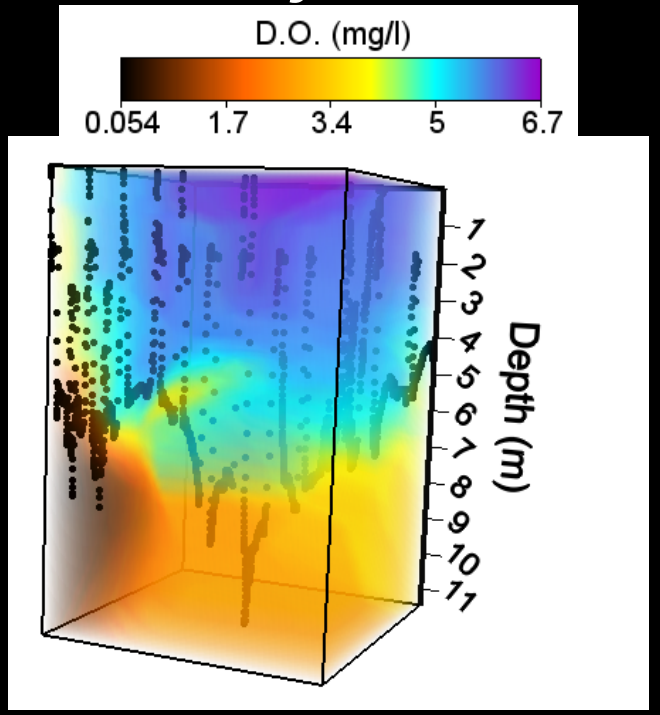
Maybe not so much... but...

WE NEED SOME CREATIVE PROJECT DEVELOPMENT AND MARKETING!

- First Project: ~~Dissolved Oxygen Profiles are needed!~~
- ***The Dead Zone Hunters Club! Discover dead zones in your tributary!***



Chesapeake Dead Zone



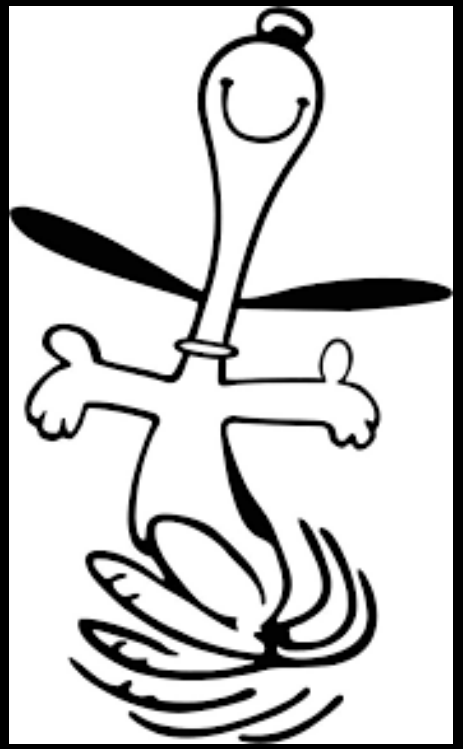
Severn River Dead Zone!

WEBSITE: WE NEED A PROJECT PAGE.

- Second Project: Fixed Site Macroinvertebrate Trend sites are needed.

WEBSITE: WE NEED A PROJECT PAGE.

- Second Project: Chesapeake's Annual Bug Bioblitz!



YAYYYYYYY!

NEXT STEPS

- STAR Workgroups (IMN WG and DIWG) are developing a template for projects
- STAR Workgroups developing 1-3 examples of projects and project pages
- STAR and its workgroups will continue coordination with the Chesapeake Monitoring Cooperative on implementing projects for directed data collections.
- STAR working with STAC on integrated management questions that cut across GIT interests that will then guide prioritization of project development
- GITs and Workgroups continue efforts on workshops to define indicators, metrics and parameters that monitoring capacity will be needed
- GITs consider in their RFP funding requests to have funding for support in developing study designs that will meet their decision-making support information needs – include assessments of existing capacity and spatial/temporal gaps. This information can then be used to derive projects that volunteers/citizen scientists/nontraditional partners can make contributions to.