



**MINUTES**  
**Analytical Methods and Quality Assurance Workgroup (AMQAW)**  
**U.S. Geological Survey Science Center**  
**Tuesday, September 30, 2014**

*Meeting Webpage:*

<http://www.chesapeakebay.net/calendar/event/22109>

**Action Items**

- An internal auditing process will be recommended by AMQAW to STAR for approval. AMQAW recommends a semi-annual audit, however, during the first year, jurisdictions who have not received field and/or lab audits must receive one to verify that changes to the Bay Program approved methods have been implemented.
- Mary Ellen and Jerry Frank with follow-up with Peter Tango regarding potential funding for citizens programs to get involved in the Bay Program QA/QC programs (i.e. split samples, USGS reference samples, and blind audits).

**Announcements**

- The Chesapeake Bay Program partnership Chesapeake Bay Watershed Agreement management strategy development is underway. More information can be found at:  
<http://www.chesapeakebay.net/managementstrategies>
- The 2012-2013 Chesapeake [Bay Barometer](#) was released.
- The Water Quality Goal Implementation Team (WQGIT) is having a two-day meeting on October 7<sup>th</sup> – 8<sup>th</sup> to discuss the development of the water quality management strategies and the 2017 mid-point assessment of the TMDL, for more information see the event [webpage](#).
- [Guidance Report](#) was released this year for *Revising the Jurisdictions' Chesapeake Bay Implementation Grant QAPP for Tracking, Verifying, and Reporting Nutrient and Sediment Pollution Load Reducing Practices, Treatments, and Technologies*.

## **New Emphasis on Citizens Monitoring**

The EPA put out an [RFP](#): Chesapeake Bay Program Office Fiscal Year 2014 Request for Proposals for Integration of Citizen-based Monitoring and Nontraditional Monitoring Partners into the Chesapeake Bay Program Partnership. The initial stages of this project will be to integrate citizen science data into the Chesapeake Bay Program long-term water quality monitoring networks.

- The University Extension Programs have successful state-wide monitoring. However, it may be difficult to incorporate their data since the Chesapeake Bay watershed spans multiple states and the methods may vary by jurisdiction.

## **Virginia's Citizens Monitoring Program – James Beckley**

### **DEQ Use of Volunteer Monitoring Data** – Presentation by James Beckley

Beckley presented an overview of the volunteer monitoring programs used by VADEQ assessments, from the establishment of these relationships to current practices. This included quality assurance and quality control protocols. All data submitted to VADEQ is classified into a three level tier system, level III being the highest quality data and used for the 303(d) impairment listing/delisting assessments. Currently, VADEQ volunteer monitors collect more level III data than level I or level II. The volunteer monitoring program is funded through an \$88,000 VADEQ grant that is distributed to volunteer groups yearly. More information about VADEQ volunteer water quality monitoring can be found [here](#) on the VADEQ website.

### ***Discussion***

- How many lab and field audits does VADEQ perform for citizen science monitoring, annually?
  - On average, VADEQ performs 10 laboratory audits (mostly biological labs, 4 to 5 chemistry labs) and 20 field audits.
- What monitoring parameters are the volunteer groups audited for?
  - The audits are dependent on the parameters monitored by the individual groups. For example, some field groups are audited for field probes, while others for acid sulfite digestion.
- In the [2012 volunteer monitoring assessment](#) cycle it was determined that the volunteer monitoring groups had collected data on 4,100 stream miles, over 30,000 lakes and reservoirs, and 29 estuary sq. miles. With a total of 1,900 stations.
- EPA is interested in incorporating citizen data. However, citizen collected data is primarily biological, whereas EPA standards attainment assessments are based in chemistry.

- **RECOMMENDATION:** Instead of the Bay Program collecting and managing all the citizen monitoring data, local data can be disseminated locally for small scale use instead of managing the data as a large scale regional program.
- The South River Federation is committed to monitoring the effectiveness of restoration projects, however, these commitments are long term because it is unlikely to see progress in the first 2 years of monitoring. Therefore, continuity is an important factor for volunteer group collaborations.
- Some data collected by volunteer groups may not be desirable for integration into the Bay Program, but could be useful for the state agencies. How would this group reconcile that possibility?
- It will be important to track the reach (i.e. mileage) of the citizen monitors/volunteers to show how expansive the program is beyond what the state is capable of.
- It will be important to reward the volunteers beyond just accepting their data. For example, with reports, recognition, annual meetings, and workshops.

#### **Assurance of Data Quality – All**

- Quality assurance for volunteer monitoring groups is a full-time responsibility. The Bay Program may need another staff member for the additional QA/QC and data management needs; for example, processing the citizen data using the QA/QC software used for data verification by the tidal and nontidal water quality networks.
- A possible approach to managing the additional QA/QC needs is to coordinate with a staff member from each jurisdiction to do the additional QA/QC, at least while the program is establishing itself.
- It will be important to track the reach (i.e. mileage) of the citizen monitors/volunteers to show how expansive the program is beyond what the state is capable of.
- It will be important to reward the volunteers beyond just accepting their data. For example, with reports, recognition, annual meetings, and workshops.

#### **STAR Reorganization – Lea Rubin**

STAR is in the process of restructuring their workgroups in order to support a larger scope of work beyond, water quality. The function of AMQAW, soon to be named the Data Integrity Workgroup, will include its current functions but expand to support some QA/QC needs of new monitoring due to the signed Chesapeake Watershed Agreement. The Data Center and GIS are cross-cutting workgroups, and will be included in multiple workgroups discussions as needed.

Visit the [STAR webpage](#) for more information.

### ***Discussion***

- Where is the citizen/volunteer monitoring data inclusion being incorporated into the new STAR structure?
  - Citizen science will be discussed by the Integrated Monitoring Networks Workgroup and the Data Integrity Workgroup.
- The new STAR workgroups appear to be in silos and not integrated with each other. How will the information flow between workgroups?

### **Non Tidal Network: Status of Six Monitoring Sites from PA to MD – Bruce Michael and Mary Ellen Ley**

MDNR is prepared to begin monitoring the six new sites in November. Samples collected by MDNR will be sent to DHMH. PA and MD are using different filters for pre-filtering in the field, this was observed during the combined field audit.

### **Approach for Routine Field Audits – Mary Ellen Ley and Doug Moyer**

During the evaluation of the six sites transferring from PA to MD responsibility, it was determined that all field and lab crews could benefit from an internal auditing process. All audits do not have to be conducted by USGS.

### ***Discussion***

- **ACTION:** This internal auditing process will be recommended by AMQAW to STAR for approval. AMQAW recommends a semi-annual audit, however, during the first year, jurisdictions who have not received field and/or lab audits must receive one to verify that changes to the Bay Program approved methods have been implemented.

### **Lower Susquehanna River Enhanced Monitoring Study – Bruce Michael**

Information regarding the progress of this project is available on the Lower Susquehanna River Watershed Assessment [webpage](#). As a brief update, the Chesapeake Biological Laboratory will be analyzing the samples for this study, using the same USGS methods as the Bay Program participating laboratories. All data will be housed in DUET and available for the 2017 Mid-Point Assessment. Sampling sites will include locations upstream of dams, and in Susquehanna River tributaries simultaneously. This coordinated monitoring will occur during medium- to high-flow storm events.

### **Coordinated Split Sample Program – Mike Mallonee**

?? [Mainstem Split Sample Results](#): May 13, 2013 – May 12, 2014

?? [Tributary Split Sample Results](#): June 12, 2013 – June 16, 2014

## **Blind Audit Final Report – Jerry Frank**

Jerry Frank is adopting the USGS model of dropping the highest and lowest values reported for statistical purposes.

- QUESTION: Would the VA citizen monitoring programs be eligible for the blind audit program?
  - The Bay Program would need to provide the funding for the citizen programs to be included.
  - **ACTION:** Mary Ellen and Jerry Frank with follow-up with Peter Tango regarding potential funding for citizens programs to get involved in the Bay Program QA/QC programs (i.e. split samples, USGS reference samples, and blind audits).

## **2014 Summer Anoxia – Bruce Michael**

MDNR 2014 Chesapeake Bay Dead Zone Report – [September 2014 Update](#)

In the beginning of summer, NOAA, USGS and university scientists predicted a larger than average dead zone due to higher than average spring flows and nitrogen loading. That prediction largely held true except for the anomaly of Hurricane Arthur that acted to mix and oxygenate waters, producing record small dead zones throughout July.

**Next Meeting:** March 13, 2014 ([webpage](#))

### **Meeting Participants**

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