

MINUTES
Chesapeake Bay Program
Watershed Technical Workgroup (WTWG) Face-to-Face Meeting
CBPO Fish Shack, Annapolis, MD

Monday, December 3

10:00 AM to 3:00 PM

<http://www.chesapeakebay.net/calendar/event/18940/>

Welcome and Introductions – *Alana Hartman*

- Alana Hartman (WV DEP; Chair, WTWG) convened the meeting at 10:00AM, welcomed participants and reviewed the day's [agenda](#).

Summary of New York BMP Data Collection Program – *Aaron Ristow, Upper Susquehanna Coalition (USC)*

- View his presentation [here](#)
- County Soil & Water Conservation Districts collect data, USC oversees and reports data for all BMPs (cost-share and non-cost-share) to EPA. Goal is to collect all on-farm BMPs, then prioritize risks, then plan to implement practices to address the problems.
- Agricultural Environmental Management (AEM) program is a statewide program that wasn't specifically designed for CBP reporting, but can be modified for that purpose.
- Supplemental tracking sheet corresponding to online AEM BMP tracking tool was designed for CBP reporting.
 - BMPs are associated with farm centroid, not a lat-long of the practice location. Able to avoid double-counting this way.
- Examples of GIS maps using these points were shown.
- Approx. \$1 Mill/yr to plan/assess/design is offered noncompetitively. Data collection is a small part of that sum. ~\$3.5 Mill/yr (competitive) is offered for implementation.
- John Rhoderick (MDA): What do you do with leased acres?
 - Ristow: Leasing is fairly stable in the area.
- AEM will be likely verification mechanism for ag BMPs in New York.
- Rhoderick: Maryland has geo-references for BMPs. With large farms (e.g. 1000 acres) it would be more difficult to verify individual BMPs and distinguish between cost-share and non-cost-share.

Description of Options for Historical BMP Clean-Up – *Jeff Sweeney (EPA, CBPO)*

- View his presentation [here, much of which is repeated from August WTWG meeting](#).
- Need to calibrate next phase of the model by 2016, so record of implementation 1985-2012/13 cleanup will need to be complete by then.
 - Better accounting for changes in monitored loads
 - Need to incorporate BMP verification procedures for each sector
- Bill Keeling (VA DCR): we don't allow treatment trains in the model, so some practices may take up more land in the model than in reality.
- What are they verifying? Annual progress and implementation or complete inventories
 - Norm Goulet (Northern Virginia Regional Commission): will take two MS4 permit cycles for verification under draft stormwater protocol.

- Sweeney explained he would like to know what the expectation is for collecting information through verification for the next version of the model.
 - Goulet: The inventory will be developed over time. No time for local governments to build complete inventory in time for next model.
 - Keeling: We are looking at two different things – verifying progress and new implementation, and historical record cleanup for calibration. Think the focus for BMP verification should be on new implementation and annual progress.
- Hartman: each jurisdiction will make its own decision on historic BMP record cleanup, but perhaps WTWG can agree in January on basic common elements.
- Olivia Devereux (Devereux Environmental Consulting): In September the BMP Verification Committee agreed that the funding agency would be responsible for verifying its practices (e.g. NRCS or FSA) rather than the state who is reporting the BMP.
 - However, NRCS's data is aggregated, and only goes back to 2004.
- Sweeney: if we don't clean up the history, will run into cut-off issues during progress reporting.
- Keeling: Virginia is not doing farm-by-farm inventory like NY, and verifying past implementation is harder, so there is a fear that large amounts of data will be discredited.
- Ted Tesler (PA DEP): the records are not provided back in the past, so there is no way to go back and get the data.
- Sweeney: does MD plan to give the model a whole revised history by 2016? Rhoderick: historical cleanup and on-farm verification go together. The expiring BMPs pop up in the database and you either inspect them or they drop off.
- Verifying a statistically-significant subset of data was discussed:
 - Montgomery County and another county recently inventoried stormwater BMPs.
 - MD's Animal Waste Management systems were inventoried in '03; in WV they were recently researched intensively.
 - Rhoderick: A jurisdiction could do studies between now and 2016
 - Goulet: if an MS4 has 4000 facilities, could they do 1000 inspections per year? Even that might not be statistically significant.
 - Sweeney: Virginia's inventory review for the past two model versions was admirable.
- Hartman: each jurisdiction submit one-pager or short summary of their ideas for next WTWG meeting.
- **ACTION:** Each jurisdiction should submit a one-page or short summary of their ideas for historical data clean-up to Matt Johnston (mjohnston@chesapeakebay.net) and Alana Hartman (Alana.C.Hartman@wv.gov)
- Sweeney: also tell us what kind of resources the jurisdiction might need, or if they will do it in-house.

Validation of data for 2012 Progress and Beyond – Matt Johnston (UMD, CBPO)

- View his [presentation](#) for a checklist. See Appendix for valid landuses or landuse groups. CBPO will roll up the landuses to larger landuse groups.
- Devereux: asking jurisdictions to resubmit 2011 since Scenario Builder will pull the old data. Want to avoid those validation problems again. CBPO is happy to identify errors, (Jessica Rigelman will provide these to states to whom it applies) but states are responsible for making corrections or changes.
- Initial data submission from 12/3/12 to 12/14/12. Determined it was best to have an initial submission period to help workout validation errors. Final data submission deadline 12/31/12.
- Progress run finalized, based on feedback, by March 1st
- Jurisdictions stated their submittal status.

Update from the Land Use Workgroup – *Peter Claggett (USGS, CBPO)*

- Claggett described some of the criteria for new land uses:
 - Unique loading rate for nutrients or sediment
 - Planning, tracking and reporting needs
 - Other reasons to help inform management decisions and implementation at the local level
- Forestry workgroup wants to see forests added as a land use in Phase 6 model
- Reviewed supporting roles for WTWG
 - Review, comment, and suggest proposed land uses
 - Develop nutrient and sediment loading rates for new land uses
 - Identify new land uses useful for tracking and reporting BMPs
 - Evaluate pros/cons of establishing Phase III WIPs on a future, year 2025 land use
 - Identify land uses that are best developed within scenario builder
- Beth Horsey (MDA): how to distinguish parks, ball fields, and golf courses from pasture or cropland?
 - Claggett: There are available datasets that outline golf courses and other areas, and the remainder is likely to be agricultural lands
- Devereux: Is land cover and other data available for whole watershed? What are the gaps?
 - Keeling: floodplain data will be inconsistent
 - Shenk: It may be possible to use a probabilistic dataset, using weights of evidence to say “what’s the likelihood?”
- Johnston: should development of new loading rates be responsibility of WTWG or sector workgroups?
 - Goulet: the Land Use WG (LUWG) has said it’s not their strength. USWG has been discussing running it through an expert panel.
 - Tesler: we understood it would be done within the LUWG.

Converting the Watershed Model to PQUAL – *Gary Shenk (EPA, CBPO)*

- For more details view his presentation [here](#)
- Shenk stressed that the Partnership would like the simplicity, scalability, ease of use, and understandability in modeling tools.
 - Nitrogen cycle is currently modeled in AGCHEM, but intent is to switch to using PQUAL loading model instead.

- Under AGCHEM, the sensitivity of nutrient output to nutrient input is different for each landuse, because the submodel is different for each landuse.
 - Under PQUAL, you can see what the concentration is coming off. It offers relatively fast calibration. The one drawback is sensitivities to inputs must be specified. E.g. we would have to tell it “what is the change in export we get from changing atmospheric deposition?”
- Under proposed reconfiguration, CAST/MAST/VAST would match more precisely to Scenario Builder and Watershed Model (WSM); could use other models for discovery.
- PQUAL version would be easy to calibrate, would allow more use of multiple models as STAC has suggested for years.
- Currently working to produce PQUAL version of WSM 5.3.2, and then determine and web-publish the sensitivities for Partnership review and comment.
- Keeling: concerns that AGCHEM sensitivities are anomalous, so why would we calibrate the PQUAL version based on them?
 - Shenk: WQGIT was interested in replicating 5.3.2 as closely as possible for a smooth transition. Having the documentation out there allows people to comment on and choose sensitivities as appropriate.
- Shenk: Phase 5.3.2 will be used for Progress Runs until Midpoint Assessment/new model.
- Keeling: suggest testing Scenario Builder inputs to see if there are any unexpected results. If we get some unexpected results in AGCHEM, we will still get unexpected results in PQUAL.
 - Sweeney: PQUAL would eliminate the anomalies that currently show up in specific counties or areas (e.g., values less than zero).
- The number of curves (sensitivities) to analyze eventually would be related to the number of land uses. If there are 30 land uses times 2 (nitrogen, phosphorus), that’s 60 curves.
- Hartman: At the October WQGIT meeting, the WTWG asked for sufficient time to comment and review on the new model. Definitely seems that PQUAL would give us the needed time.
- In response to a question about discovery models: will they be done in-house or will states have to pay contractors to help do that, Shenk replied the changes will be driven by literature values, and available models, e.g. PIMS

Algal Turf Scrubbers Workshop Summary – Sarah Lane

- View her presentation [here](#)
- Urban stormwater workgroup held a [new technologies workshop on July 25th](#) to discuss ATS and floating treatment wetlands.
- Lane defined algal turf scrubbers and explained that they have been in development since 1970s.
- Some reveal 30g nitrogen removal per sq. meter per day, lower in winter, harvested weekly or bi-weekly.
- About a dozen pilot and large-scale ATS sites around the U.S., including Wastewater Treatment Plants, CAFO ditches, and harbors/rivers.
- Rhoderick: ag drainage ditch was at lower end of range

- In our region, potential uses for harvested algae include cosmetics, pharmaceuticals, and biofuel. Elsewhere: fertilizer.
- Potentially push through the panel quicker than other BMP reviews
- Rhoderick: will have difficulty determining an efficiency due to many caveats, maintenance needs (like a wastewater plant); better to base it on measurement of biomass.
- Johnston: this is the WTWG's only lead priority.
- ACTION: consider and make recommendations for panel membership
- Clarify patented/licensed status
- Jurisdictions would likely report mass reduction (in pounds)
- Objections to forming panel?
 - None heard.

DECISION: The WTWG will move forward in 2013 with an expert panel on algal turf scrubbers.

Experiences with the Maryland Assessment and Scenario Tool – *Greg Sandi*

- Sandi reviewed the MD localities' use of MAST to date. View his presentation [here](#).
- Accuracy is scale-dependent, Inaccuracy complaints came especially from sub-county level.
- Considering using MAST for interim milestones/progress. Localities would provide "what we did," and the MAST result.
- Volk: does CAST or MAST calculate the relative load reductions for specific practices?
 - Yes, but have to run scenarios yourself with and without the BMP
- Rigelman: was complaint at smaller scale that the loads were incorrect or more that local land uses were not completely accurate?
 - Sandi: A little of both
 - Rhoderick: a now-known error caused loads to increase in eastern shore segments when BMPs were added
- Hartman: would like to discuss case studies for CAST/MAST/VAST at future meetings
- Ristow: CAST brought to light an issue with animal numbers. Thankful to Johnston and others that worked to correct that issue. In this case, CAST shed light on a problem with the WSM.
- Some stakeholders want the ability to change the landuse acres.

Announcements/Future Possible Agenda Topics

- Hartman proposed in 2013, hold one face-to-face meeting every third month, with two conference calls in between. No objections heard.
 - DECISION: January and February will be teleconferences; March face-to-face.
- USWG workshop on Monday, December 17th to review two new urban BMP reports: urban nutrient management and stream restoration. The workshop will be the beginning of a 30-day comment period on the reports before they are presented for workgroups' and WQGIT approval.

Adjourned 2:45pm

Participants

Name	Affiliation
Alana Hartman, Chair	WV DEP
Matt Johnston, Coordinator	UMD
Jeremy Hanson, Staff	CRC
Greg Albrecht	NYS DEC
Bryan Bloch	DE DNREC
Jim Curatolo	USC
Olivia Devereux	Devereux Consulting
Barry Evans	PSU
Marcia Fox	DE DNREC
Steve Gladding	NYS DEC
Norm Goulet	Northern VA Regional Commission
Beth Horsey	MDA
Ruth Izraeli	EPA, Region 2
Bill Keeling	VA DCR
Sarah Lane	UMD/MD DNR
Neely Law	CWP, CBPO
Robin Pellicano	MDE
John Rhoderick	MDA
Jess Rigelman	J7 LLC
Aaron Ristow	Upper Susquehanna Coalition
Greg Sandi	MDE
Gary Shenk	EPA/CBPO
Jeff Sweeney	EPA/CBPO
Ted Tesler	PA DEP
Jenn Volk	U. of Delaware
Beverly Quinlan	VA DCR
Sally Claggett	USFS, CBPO
Mark Dubin	UMD, CBPO
Peter Claggett	USGS, CBPO