



Science and Technical Advisory Committee Meeting
Ocean County College, Technology Building Conference Room
June 9, 2015, 10:00 am

Attending STAC Members: Jim Vasslides (BBP), Alena Baldwin-Brown (NJDEP/DWM&S), Steve Yergeau (Rutgers Coop. Ext.), Will Ruocco (Brick Utilities), Dr. Ron Baker (USGS), Dr. Louise Wootton (GCU), Charles Caruso (PPA), Victoria Pecchioli (OCPD), Clint Lehman (ReClam the Bay), Matt Csik (OC Health Dept.).

On the Phone: Dr. Matt Poach (Chair – NOAA), Barbara Spinweber (USEPA R2).

Guests: Sheri Shifren (NJDEP/DWM&S/MWM)

Barnegat Bay Partnership Staff: Dr. Stan Hales, Mary Judge.

Welcome and Introductions – M. Poach

The meeting was called to order at 9:05 AM and introductions were made.

Review of draft agenda and minutes of April 14th STAC Conference Call – M. Poach

The draft agenda was reviewed. Dr. Yergeau requested that the agenda read “meeting” and not “conference call.” Dr. Yergeau also requested that it be included in the minutes that he excused himself during the discussion and selection of the grant-funding opportunities for Rutgers involvement. Ms. Baldwin-Brown requested a correction to her affiliation, which should be DWM&S, not BWM&S. A motion was made by Mr. Caruso to accept the minutes with the changes as stated. The motion was seconded by Ms. Baldwin-Brown and passed unanimously with Mr. Csik and Dr. Wootton abstaining.

2015 BBP Grant Funding Opportunity review – J. Vasslides

Objective: Update on selected projects

Mr. Vasslides recapped the last meeting’s presentations and the results of the vote – which split evenly. The STAC recommended the AC fund both projects and both were funded: one using the leftover FY13-15 funds and the second project will be funded with FY16 funds. No new FY16 grant funding opportunity will be issued.

June Policy Committee review – S. Hales

Objective: Recap of Policy Committee meeting

The major item of business was the review of budget and workplan, which was approved by the Policy Committee (PC). The BBP has applied for three supplemental funds of money which EPA headquarters made available, totaling \$136,000. Dr. Hales thanked the members of the STAC who helped with that process. The amount of \$65,000 was received for PCO₂ and pH datasondes – monitoring continues to be critical to all the NEPs; this will likely be placed near a shellfish operation in the Bay given the vulnerability of shellfish to changes in acidity. The BBP partnered with NOAA and Rutgers for additional sensors and if that is awarded, the area may change. The STAC was requested to recommend areas. A suggestion was made to partner with Bob Schuster and Bruce Freeman and ask them for recommendations. It was also suggested the datasondes be put online with their telemetry system; the USGS can provide advice and assistance in this regard.

Climate-ready estuary funds (\$30,000) were also made available. The BBP was asked to increase communication with municipalities to identify neighborhoods and communities at-risk from sea-level rise. The BBP will be working with the OCC graphics department to produce some reports. The STAC was solicited for ideas as to how best to communicate the information, specifically for the senior communities, whose residents may not go on-line.

Lastly there's a blue-carbon project – carbon in the water – and we're looking at carbon sinks/sources, which builds on wetland monitoring (\$40,000). A work group has been formed with two other NEPs (Partnership for the Delaware Estuary and the Delaware Center for the Inland Bays). The BBP will pull together available information on the extent to which areas are serving as a sink for carbon. The other partner is the Academy of Natural Sciences at Drexel, which just hired Beth Watson, who has access to EPA equipment to look at gas flux and assessing the extent to which wetlands are serving as carbon sinks or carbon sources to try to get a snapshot from all the systems around here. The BBP will re-apply for additional funds next year and will revisit that at a STAC meeting in the future. Additional match was needed and the county has given that match through its Natural Lands Trust Fund.

John Leonard, the Citizen representative for the PC was replaced by John Zingis.

Spring Science Symposium – C. Caruso

Objective: Recap of Science Symposium

The symposium was well-attended and feedback was good. The powerpoint presentations will be added to the BBP website with the videos posted online in fall or late summer. The panel had a great format and the representatives were very good. A comment was made that there was not enough time for Q&A in the afternoon session and a suggestion made that Q&A be built into each session (even if the number of speakers are reduced, e.g., for the State of the Bay conference). The NJDEP will be holding a meeting in late fall to discuss its research and may discuss taking floating docks out of the water in the winter and not discarding concrete rubble and shell in lagoon communities to keep polyps from finding a home.

State of the Bay Working Group – J. Vasslides

Objective: Solicitation of members for the SOTB working group

Mr. Vasslides discussed the upcoming State of the Bay report. The last report was in 2011, culminating with a one-day symposium. A working group will be formed to begin work on the document. There were 19 indicators last time and the first item for discussion will be whether we keep most if not all of them, as additional information/data has been received since then.

Indicators will be updated (status and trends). Volunteers were solicited from the STAC. Ms. Baldwin-Brown and Mr. Caruso volunteered to be a part of the working group. Dr. Hales requested that STAC members consider setting some goals (similar to Tampa Bay's goal of sea-grass restoration). A suggestion was made to get public feedback from the SOTB indicators. The STAC could draft goal language and see what feedback is received from the symposium (keeping in mind the survey rules from OMB). This would also feed nicely into the BBP CCMP revisions – identifying a small number of priority goals. Dr. Ron Baker volunteered with Christine Wieben from USGS to serve on the working group.

2015 Seagrass monitoring collaborative – J. Vasslides

Objective: Update on STAC BBP-Stockton collaborative project

Seagrass was a big focus of the last SOTB. Dr. Kennish's previous work was discussed. The BBP has spoken with Dr. Kennish, but his group has been prioritized to other areas. Therefore, the BBP reached out to Stockton staff and a collaborative project has been worked out. Seagrass monitoring will take place at 9 of the 15 historic transects in Barnegat Bay which will provide 2015 data for the SOTB report.

Kirkwood Cohansey Aquifer System plan – M. Poach

Objective: Review and discussion of monitoring plan; preparation of comment letter.

Dr. Poach broadly discussed the Kirkwood Cohansey aquifer system, which underlies most of southern NJ. A draft monitoring plan for the aquifer was developed by Princeton Hydro through a contract with the Partnership for the Delaware Estuary. Within the draft plan there are a number of water quality indicators they are focusing on; water table elevation, stream flow metrics, looking at effects on wetland and vernal habitats, agricultural use (irrigation), macroinvertebrates in the stream, nutrients, and some septic density in terms of a stressor on the system. Under the plan, the monitoring will be done in conjunction with USGS and NJDEP using pre-existing data, while trying to find ways to fill data gaps. Different proposals are being reviewed to enhance the monitoring plan.

Mr. Vasslides pointed out that the table in Appendix B is missing. They (PDE) will take general comments, but are particularly interested in a couple of aspects of the monitoring strategy; among them is selecting locations for monitoring. The plan suggested it be limited to three and requested that comments be made regarding criteria for selection. Mr. Caruso then provided comments from the PPA hydrologist. The Pinelands Commission spent \$5.5 M to do a study

which generated a lot of reports (currently online). This draft plan doesn't look at most of the research that's already been done and it should be included -- existing science should be reviewed first. The USGS has done a lot of modeling on this, but is not sure if that's included in the plan. Multiple Pinelands Commission staff attended the workshops that this plan was based on and they are likely to submit comments. There were multiple NJDEP staff at these workshops also and they are currently preparing comments regarding any disconnect regarding what was said at the meeting and what is being said in the report. Barbara will also provide comments from the EPA hydrologist. Mr. Poach volunteered to draft the letter, but we're already past their proposed deadline; however, comments will still be accepted.

Action: Mr. Vasslides will compile all comments and re-distribute to the STAC and will let everyone know what the new deadline for comments will be.

STAC Vice-Chair nominations – J. Vasslides

Objective: Solicit nominations for the open Vice-Chair position

Mr. Vasslides solicited nominations. This is a two-year position as Vice-Chair to assist Dr. Poach, at which time the Vice-Chair is elevated to the Chair position for two years. Self-nominations are welcome. No nominations were forthcoming and it was tabled.

Partner Updates

Dr. Baker requested updates from USGS staff, as follows:

Timothy Reilly (Research Hydrologist, USGS): USGS scientists are finalizing interpretations of Hurricane Sandy impacts to sediment- and tissue-quality (blue fish and mussels) throughout New Jersey and New York for publication in a forthcoming special issue of *Marine pollution Bulletin* (MPB). Several papers in this volume will discuss results from Barnegat Bay in a regional context, including a definition of baseline sediment wastewater indicator and steroid hormone compounds. Pre- versus Post-Hurricane Sandy bluefish and mussel tissue quality and post-Sandy bluefish histology. Most notably, one paper in the volume will compare sediment chemistry and toxicity data collected as part of a USGS/NJDEP cooperative study of Barnegat Bay completed just before Sandy with post-Sandy results. Papers will be submitted to MPB by the end of September for publication in January 2016.

Christine Wieben (Hydrologist, USGS): As part of an investigation of the hydrologic resources of the Edwin B. Forsythe National Wildlife Refuge (Forsythe), the USGS New Jersey Water Science Center conducted a water-level synoptic in and around refuge lands. Portions of the refuge are located in the Barnegat Bay watershed (the refuge extends along the bay coast from the Brick area in the north to Galloway in the south). As part of the synoptic, water levels were measured in existing observation wells, in streams and impoundments, and in piezometers that were installed for the synoptic. Water levels were measured at approximately 100 sites over the span of three days in May 2015. The data will be used to map the approximate distribution of water-table

elevation and depth throughout the refuge and to provide calibration points for a groundwater flow and salinity model that is being developed for the refuge.

Lois M. Voronin (NJ Water Science Center, USGS): A groundwater flow model has been developed that will be used in the analysis of groundwater flow conditions and the response to sea level rise in the vicinity of the Forsythe refuge areas in Barnegat Bay, NJ.

Timothy Wilson (USGS): There are two papers presently in review on their work in Barnegat Bay: 1) *In-situ benthic nutrient flux and sediment oxygen demand in Barnegat Bay, New Jersey*. Authors: Timothy Wilson and Vincent DePaul. To be submitted to the *Journal Estuaries* as soon as reviews are completed. 2) *Water and Sediment Loads for Barnegat Bay, New Jersey 2011-2013*. Timothy P. Wilson (USGS SRI report.)

A review of upcoming meetings and events was given by Mr. Poach.

The SOTB working group will meet over the summer and into the fall.

Paddle for the Edge (citizen-science effort) is happening this month and members were requested to check the BBP website.

A motion was made by Dr. Wootton to adjourn the meeting. The motion was seconded by Ms. Pecchioli, and was passed unanimously. Meeting was adjourned at 10:15.