

Anacostia Watershed Management Committee

-DRAFT-

Wednesday, December 11th, 2012

10:00 a.m. - 1:00 p.m.

Rooms 4/5- First Floor

Meeting Attendance:

	First Name	Last Name	Organization
Mr.	Joe	Bell	USGS
Ms	Sheila	Besse	DDOE
Mr.	Steve	Bieber	MWCOG
Dr.	Mow-Soung	Cheng	PG DER
Mr.	Cary	Coppock	AWCAC
Ms	Meo	Curtis	MC DEP
Mr.	Jim	Foster	AWS (by Phone)
Mr.	John	Galli	MWCOG
Mr.	Kevin	Jeffery	Clean Water Action
Ms.	Catherine	King	US EPA
Mr.	Aubin	Maynard	MWCOG
Dr.	Cherie	Miller	USGS
Ms.	Dana	Minerva	AWRP
Chair	Sam	Moki	PG DER
Mr.	Reggie	Parrish	USEPA
Mr.	David	Prevar	USDA
Mr.	Doug	Redmond	M-NCCPC
Mr.	Dave	Robbins	USACE-By Phone
Mr.	Rob	Shreeve	SHA
Mr.	Phong	Trieu	MWCOG

I. Call to Order/Introductions

Chair Sam Moki (Prince George's County DER) called the meeting to order at 10:15 a.m. and requested that everyone present introduce themselves.

II. Approval of the September 13th, 2012 Meeting Summary

Mr. Kevin Jeffery indicated that his name was misspelled on the Steering Committee summary. Mr. David Prevar (USDA) inquired if the summary-related suggestions that he emailed had been incorporated. Mr. Aubin Maynard (COG) replied that it had already been incorporated into the summary provided as well as the online version.

ACTION/OUTCOME: The 9/13/12 AWMC meeting summary was approved unanimously.

III. AWCAC Report

Mr. Cary Coppock (AWCAC Chair) provided a brief update on recent AWCAC activities. At the November 13th meeting Ms. Diane Cameron (ANS) gave a presentation on the Demonstrating Approaches Subcommittee and its work. Mr. Bill Duncan, President of Friends of Still Creek (FoSCr), gave a presentation on FoSCr and issues in the Still Creek Watershed. Finally, Ms. Marian Domborski was elected to AWCAC.

IV. ICC Report

Mr. Rob Shreeve (SHA) provided a brief update on the continuing construction of the ICC and related mitigation and environmental stewardship projects in the Anacostia watershed. A majority of the ICC is complete (Contract 'A' is 98 percent complete, Contract 'B' is 100 percent complete, Contract 'C' is 99 percent complete and Contract 'D/E' is 22 percent complete), and many of the mitigation and stewardship projects are also complete and being monitored. Mr. Shreeve indicated there was minimal known damage to the ICC or any associated projects caused by Hurricane Sandy. NWB-160/170 stream restoration projects suffered minor damages to log toe protection structures along an approximately 300 feet of stream length (> 1% of project length). Responding to questions, Mr. Shreeve noted that the stream was at least two feet out of its bank in that section. The contractor is examining the restoration work to determine why it failed and identify needed changes. That site, along with all mitigation projects, will be monitored for ten years (i.e., once every other year). Stewardship projects, however, are to be monitored once every year for five years. Mr. Shreeve added that for all projects, many homeowners hate having large equipment near their homes, so community coordination has been critical (and costly). Several specific homeowners are quite vocal regarding any potential standing water (i.e. fear of potential mosquito breeding areas). Mr. Shreeve concluded his presentation stating that he anticipates that all ICC construction-related activities will be completed by the end of summer 2015.

- Mr. Cary Coppock (AWCAC) inquired about recent changes to a project in BARC Area 8. He was under the assumption that the project was complete, but has recently been expanded. Mr. Shreeve explained the project is a shallow wetland stormwater facility designed principally for nutrient removal.

V. Prince George's County Enhanced LID Practices Development Update

Dr. Mow-Soung Cheng (Prince George's County DER) provided an update on continuing efforts related to Prince George's County's collaborative work with the University of Maryland, Dr. Allen Davis, to develop enhanced, cost-effective, bioretention and sand filter systems for greater nitrogen and phosphorus removal at lower costs. Dr. Cheng explained that initial estimates for meeting the County's WIP-II requirements exceed \$800,000,000 (not including project design and maintenance). Therefore, the County needs to find LID designs that are cost-effective (i.e., lower the \$/impervious area controlled cost). To identify effective approaches the County has decided to focus on various bioretention cell systems. The first steps have included 1) conducting detailed literature searches, 2) investigating soil media conditions, and configurations to optimize phosphorus removal 3) replicating results in both the laboratory and field conditions, and 4) continued open communication with regulatory agencies (EPA and MDE) to make sure the County

receives appropriate credit for implementing new approaches. The research is being performed by Dr. Allen Davis, funded by a National Fish and Wildlife Foundation (NFWF) grant with a 50/50 County match. Both laboratory and field analysis have been completed on improving phosphorus removal through bioretention soil amendment using various recycled materials (i.e. alum and iron containing flocculant waste material from a local water treatment plant). Initial results indicate up to 90% phosphorus removal rates under both field and laboratory conditions.

Additionally, Dr. Davis has begun monitoring two recently constructed BMP's, permeable pavers with a denitrification basin system, and zero discharge devices (attempting to combine bioretention facilities with water reuse/irrigation options. Dr. Cheng highlighted several preliminary results : 1) to achieve good hydrologic management, the treatment area must be large, similar to that of the drainage area, 2) these facilities provide excellent particulate matter removal, and media depth is not important to this function, 3) there is also excellent metals and hydrocarbon removal through adsorption and 4) the biodegradation/denitrification process is important for removing nitrogen (which needs more research).

Dr, Cheng presented the second phase of research that included: 1) locating additional funding sources for further research (currently fully County funded), 2) more N and P research to improve pollutant removal efficiencies, and 3) constructing and monitoring of a field LID facilities each in Prince George's County and Montgomery County in the Anacostia River watershed. Based on the Phase I higher P removal rates ,part of Phase II research will evaluate additional aluminum and iron amendment on phosphorus uptake, locate other media amendments sources rich in aluminum and iron (currently the county is receiving amendments for free from a water treatment plant in Rockville, MD), and include additional field studies. For the nitrogen, research will evaluate cost effective denitrification system designs. Dr. Cheng concluded by presenting several proposed design options for enhanced nitrate removal. A brief discussion followed, summarized below:

- Dr. Cherie Miller (USGS) inquired about the estimated lifespan of the projects being tested. Dr. Cheng responded that there was no specific known lifespan, but maintenance will be required. For example, it is critical that plants continue to be grown in the facility, as their roots facilitate infiltration. Removal and replenishment of the mulch is also [required](#).
- Mr. Shreeve inquired if aluminum leaching is being monitored. Dr. Cheng replied it is not, but there should be no problem as long as the pH of the system is maintained [in the](#) 6-8 range.
- Mr. John Galli (COG) inquired if the woodchips in the denitrification basin [were](#) added as a carbon source. Dr. Cheng replied that he would supply the specifics of the design later.
- Ms. Dana Minerva (AWRP) inquired if these new approaches would be cost effective to widely implement. Dr. Cheng explained that is the intended outcome, but more research is needed to see how much the price will come down.
- Ms. Meo Curtis (Montgomery County DEP) expressed Montgomery County's strong interest in participating in the monitoring studies, but strongly encouraged that maintenance and associated costs be evaluated as part of the research.

VI. Fall 2012 Lower Northwest Branch Electrofishing Report

Mr. Phong Trieu (COG) reported on recent COG electrofishing monitoring efforts in the lower Northwest Branch. Mr. Trieu briefly described the monitoring sites located in Prince George's County, MD. Using the MDDNR MBSS summer fish sampling protocol, COG staff (with assistance from Montgomery County M-NCPPC and MDNR staff) completed surveys at three sites. Over five thousand fish were collected at the three sites, with a total of twenty-six species, including two species of 'greatest conservation need' (defined by the Maryland Wildlife Diversity Conservation Plan, 2005). Each site ranked "good" on the Index of Biological Integrity (IBI) scale, similar to those sites upstream sampled by Montgomery County M-NCPPC. COG plans to 1) summarize the 2012 fish D.E.L.T. data (results will likely show low presence of DELTs), 2) sort, identify, and determine the IBI scores for 2012 spring macroinvertebrate samples, 3) conduct a single pass spring 2013 fish survey and 4) repeat all IBI surveys in the spring and summer of 2014.

- Chair Moki inquired about Mr. Trieu's assessment of the overall health of the Northwest Branch fisheries in that area as being rated "good." Mr. Trieu replied that while, over all it is good, game fish size at that location appears to be on the small side.
- Ms. Dana Minerva inquired if the low presence of DELTs indicated a cleaner river, and suggested that Dr. Fred Pinkney (USFWS) give an update on his research on DELTS. Mr. Galli replied that he has maintained regular communication with Dr. Pinkney and that he is not yet ready to present to the MC.

VII. USGS Anacostia Watershed Monitoring Update

Dr. Miller gave a PowerPoint presentation on existing and proposed USGS flow and water quality monitoring activities in the Anacostia watershed. Currently, there are four existing monitoring stations located within the Anacostia (i.e. some stations monitor water chemistry in addition to flow). The Watts Branch station will be upgraded to include discrete water quality sampling. Two additional stations, Hickey Run and Nash Run, will come on-line to generate both water quality and flow data. These stations will begin collecting data in the next few months. She also highlighted that with funding from Montgomery County DEP and USGS, the data from existing stations in Northeast Branch, Northwest Branch and Paint Branch, as well as Rock Creek have been used to revise models of nutrients, suspended sediment, and bacteria at these locations. Findings for the 2008-2011 period will be released soon. Some highlights from the report include:

- Anacostia watershed precipitation is evenly distributed over the year.
- The main seasonal effect on baseflow is evapotranspiration over the summer months.

Estimates of Sediment Loads

- Annual yields of suspended sediment in kilograms per year per square kilometer.
- Mean annual flow were highest in 2010.
- Largest discharge events occurred in 2011.
- Too much variability yet to determine trends and patterns.

Estimates of Sediment Loads

- Annual yields of total nitrogen in kilograms per year per square kilometer.
- Similar patterns for SS – particulate organic nitrogen is main phase in transport.

Estimates of *E. coli*

- Annual yields of *E. coli* in billions of colony forming cells per year per square kilometer

Other related data to be released next year include: 1) trends in total phosphorus in the Chesapeake Bay Non-Tidal Monitoring Network (in general shows improvements for TP), 2) updated impervious surface data layers and 3) a report on groundwater monitoring in the Tidal Anacostia, to develop a steady-state MODFLOW 3-D groundwater flow model. Dr. Miller concluded by updating the group on the most recent Urban Waters program-related activities. A brief discussion followed, summarized below:

- Mr. Kevin Jeffery (Clean Water Action, AWCAC) inquired if there is any way that non-certified citizen's can assist with monitoring efforts. Dr. Miller explained that the USGS follows strict monitoring protocols, and that the USGS is not setup to work with such volunteers. Mr. Joe Bell (USGS) suggested that bacteria testing might be done by volunteers, as protocols are quite straightforward.

VIII. Development of Post-2010 Anacostia Indicators and Targets

Chair Moki began the presentation by explaining that at the last SC meeting the MC was tasked to reexamine the Partnership's existing indicators and targets, and present recommendations for the post-2010 period. Chair Moki stressed that the current presentation and discussion should be seen as the "beginning of a conversation." The expectation is to pass on finalized recommendations to the SC in spring 2013.

Mr. Galli gave a PowerPoint presentation highlighting the specific directives given by the SC, background on the Partnership's longstanding six restoration goals, and provided several suggestions how to proceed selecting updated indicators and targets. Specifically, the SC requested that the MC reexamine both the purpose and need of the existing indicators and targets, and to report back with recommendations by spring 2013. The current broad restoration goals have been in place since 1991. However, as part of the 2001 Restoration Agreement, 50 restoration indicators and targets, for measuring progress to the end of calendar year 2010, were set. This included 16 'Leading' indicators (for public communication) that were later reduced to 12 'Key' indicators. Mr. Galli noted that, in the process of developing the 2001 Agreement, TMDL's were envisioned, but that no numerical targets were set. In 2010, a SC 'Goals Sub-Committee' began to draft potential post-2010 goals and indicators, but were never fully developed and thus not adopted by the Partnership.

Mr. Galli provided members a number of basic questions and factors to consider (detailed in the presentation) when thinking about updating the indicators and targets, but stressed the importance

of remembering that each indicator and target must be measurable and trackable, and that monitoring is required. The following timeline was proposed for reporting to the SC:

1. Discussion Today, Followed By Post-Meeting Reflection and Suggestions/Recommendations for MC Chair and COG Staff (Note: COG Staff will Prepare and Disseminate Meeting Minutes Before the end of December 2012),
2. systematically Re-examining/Re-evaluating the 12 Existing 'Key' Indicators and Targets Homework Assignment (By the End of January/Beginning of February 2013),
3. Possible MC 'Special Session' Meeting(s) (February/March 2013),
4. draft Report for Discussion (To Be Presented at May 9, 2013 MC Meeting) and
5. final Report for Transmittal to SC (May/June 2013)

Finally, Mr. Galli provided a sample summary table of existing Key indicators with potential evaluation categories. Potential evaluation categories included: 1) Measurable/Tractable (Difficulty: High, Medium, Low) and 2) Priority Level (High, Medium, Low). Mr. Galli stated that the MC must also meet the challenge of incorporating the ARP, its project implementation and related tracking mechanisms. As important, he presented a provisional list of 12 other potential candidate implementation-related indicators for consideration. An extensive discussion followed, summarized below:

- Vice-Chair Sheila Besse (DDOE) inquired why the 2010 attempt to update the targets/indicators failed, so the MC could avoid the same pitfalls. Mr. Galli explained that at that time, the local jurisdictions were focused on MS4s, and new restoration goals were not a high priority. Ms. Minerva agreed and explained that the local Jurisdictions thought goals were set by MS4s. Ms. Minerva added that while the MS4s may set goals, there is not a lot of monitoring of specific results.
- Chair Moki explained that for Prince George's County, regulatory compliance is still the main goal and will drive the post-2010 indicator selection, but there will be common indicators between all Jurisdictions. A balance must be met between the many regulatory requirements and additional monitoring needed to verify targets have been reached.
- Ms. Minerva pointed out that there is insufficient data to know if several of the current targets have been met. Monitoring will be key, but current required monitoring is limited and modeling results may be used as surrogates. In addition, there are some targets that might not be specifically set forth in the regulatory documents that are still good to monitor, such as forest cover and IBIs. Dr. Cheng added that the WIP-II does have specific requirements for reporting nutrient reductions.
- Ms. Curtis stressed the importance of updating the language of many targets and how they are tracked. The wording must be aligned with those regulatory requirements in MS4s and WIPs. In addition, WIPs and MS4s have a tremendous amount of reporting including specific monitoring results.
- Mr. Doug Redmond (M-NCPPC) noted that there is a danger in measuring at the project level (e.g. acres reforested, or buffer length) and so targets/indicators must somehow get to

the “functionality” of each. For example, a location could be reforested multiple times (i.e. your total acres reforested would increase, while in reality a much small area was actually reforested). Mr. Prevar added that the buffer target is still critical even though it might be difficult to measure. Vice Chair Besse added that sometimes the best parameters cannot be tracked due to time or funding constraints, for example DDOE tracks trees planted since canopy is so hard to measure.

- Mr. Galli requested that members review the included indicators table as it encapsulates some of the requirements discussed, and consider how to wrap in ARP projects and implementation, as well as other issues like toxics, measuring channel protection volumes and green jobs. Members were requested to submit comments on new indicators/targets to Mr. Galli by January 25th, who will then compile them and resend to members. This information was attached in an e-mail that Mr. Galli sent on December 6th. Mr. Galli also pledged to supply the meeting minutes (from the current meeting) before December 24th to help facilitate member comments.
- Chair Moki closed the discussion by reiterating that the discussion was the beginning of a longer conversation, and implored members to send thoughtful comments. The date for a potential special session of the Management Committee would be considered as well.
- Dr. Harriet Phelps (UDC) announced she will be working with the Anacostia Museum to host a toxics workshop on Saturday April 20th, 2013 and hoped to get District of Columbia and Maryland representatives seriously talking about how to address the toxics issue in the tidal Anacostia and its tributaries.

ACTION/OUTCOME: Members will submit comments on new indicators/targets to Mr. Galli by COB, January 25th, who will then compile them and resend to all members.