

**Bay Program Committee, Subcommittee, and Workgroup Activities for STAC
August 2006**

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Agriculture Nutrient Reduction Workgroup (June 8, 2006)

All presentations can be viewed at:

<http://www.chesapeakebay.net/calendar.cfm?EventDetails=6892&DefaultView=2>

Harold Reetz (Foundation for Agronomic Research) presented information on the science of managing nutrients to reduce environmental consequences of crop production. In order to get nutrient management right, you must have the right source, rate, place, and time. Things that must be considered include the nutrients that are needed, the crops that are grown, soil factors, weather, and environmental risk. The foundation is in favor of site-specific management systems. He felt that they had a lot of potential because they allow for the use of data on a much more site-specific basis when determining management practices. Tools for site-specific management include precision farming, grid sampling, zone management, and enhanced efficiency fertilizers.

When trying to determine what parts of a field need phosphorus, a field average is not as good as grid sampling. If you are doing a good job of sampling, then you are also not doing a good job controlling phosphorus. Zone management is based on a uniform grid or on variability. Factors that may be taken into account include soil type, yield, soil test levels, remote sensing, and slope or elevation changes. Management for each zone should be adjusted based on the variability in production factors.

Inadequate phosphorus and potassium can result in reduced crop yields and residues, lost grower profits, decreased crop nitrogen recovery, increased potential for increased residual inorganic nitrogen, and potential for undesirable water quality impacts. A current pilot project is underway and it is called the Nutrient Use Geographic Information System (NuGIS). This USDA NRCS Conservation Innovation Grant project began in 2005. It is a three-year project that is funded at \$482,000. Its purpose is to establish fertilizer management BMP's for six cropping systems in six states.

Peter Tarby (PA DEP) summarized the dairy precision feeding BMP. The purpose of this BMP is to manage the quantity of nitrogen and phosphorus fed dairy cattle to achieve minimal loss to the environment. This will be accomplished through precision formulation of feeding programs based on confirmed nutrient analysis of feed, forages, manure, and or Milk Urea Nitrogen (MUN) testing to determine the best use of available nutrients.

This BMP falls under Phase 4.3 and is not to be used in Phase 5 calibration of the CBP watershed model. This BMP came from a Bay Program task force that met in 2005. The task force included researchers, veterinarians, and nutritionists.

Scientific-based information shows that nitrogen and phosphorus are typically fed over the NRC guidelines. Most dairy herds are being fed at least 20% too much nitrogen and phosphorus. The BMP cites many different research studies and articles.

The BMP does not list hard numbers for herds but was written so that each jurisdiction would not have to rely on the same critical testing, giving them the ability to choose from MUN testing, manure testing, etc.

The workgroup conveyed the following message to Peter:

- This BMP is well researched and it should be encouraged for farmers, but how do we quantify it? How do we quantify how it will impact water quality?
- Calling it an efficiency may not work and should be called a per acre reduction instead.

- More exact testing may be too expensive, perhaps a type of less exact testing may be adequate.

Sarah Weammert (CRC Fellow) provided an update on the May 22nd Regional Manure and Litter Use Technology Taskforce meeting. The minutes and handouts can be found at the following:

<http://www.chesapeakebay.net/calendar.cfm?EventDetails=7294&DefaultView=2&RequestDate=05/07/2006>

The taskforce developed a list of potential technologies for turning animal manure and poultry litter surplus nutrients into marketable products. From this list, a short list was developed to target technologies to explore in more detail. These included on-farm energy generation, bio-energy, and composting.

Urban Stormwater Workgroup Meeting (June 27, 2006)

All presentations can be viewed at:

<http://www.chesapeakebay.net/calendar.cfm?EventDetails=6828&DefaultView=2>

Mary Lynn Wilhere (Alliance for the Bay), Businesses for the Bay (B4B) coordinator presented an overview on the refocus of B4B. The B4B has shifted its focus from primarily concentrating on toxics to include nitrogen, phosphorus, and sediment pollution. It is now concerned with issues regarding agriculture business, builders/stormwater and pollution prevention.

In order to address builders and stormwater compliance, B4B is participating in pilot projects with the EPA Compliance and Enforcement and the National Association of Home Builders in MD, PA, and VA. These pilot programs focus on stormwater compliance, environmental management systems, and incentives that are based on the highly successful 2005 Colorado Stormwater Excellence program. The pilot program includes certification, environmental management system, monitoring, reporting, and brochure. It is unclear at this point what role the B4B will have in this.

One of B4B's current members is the Scott's Miracle-Gro Company voluntarily set a goal to have 50% less phosphorus applied by the 2009 sales year (mostly in their turf builder homeowner products). Scott's current Chesapeake Bay initiative is to divert organic nutrients out of the Bay waste stream and convert them into beneficial uses. In order to accomplish this, they are participating in the Perdue Agricycle and mushroom compost projects.

B4B would like to increase reporting by all of its members. Recently Veridyne has added a nutrient BMP list to the on-line reporting system and has asked the B4B members to report their BMP's online. However, some BMP's that require a permit will be reported on their MS4 form.

Peter Claggett (USGS CBPO) presented information related to the modeling of land use change for the Bay watershed. It is important to be able to project future land use because the population/urban growth is a dominant force causing change in the landscape. Urban development is the fastest growing source of nutrients in the Bay watershed.

As stated in the Chesapeake Futures STAC report, "If recent trends continue, the area of developed land in the Bay watershed will increase by more than 60% by 2030". Modeling land

use change will help to determine where in the watershed this 60% increase will occur and what impact it will have on water quality.

A growth forecast estimates how many people, houses, and jobs will be in a region in the future, whereas growth allocation predicts where within a region growth will occur. The Bay Program modeling team is performing growth allocations using the New Jersey model, GAME to help forecast future land cover and nutrient sources in the Bay watershed. This model allocates growth to a township at a municipal scale in order to model where urban growth is likely to occur. GAME is being used because it produced more accurate allocations than metropolitan planning organization or county forecasts. It also has policy handles that allow for the development of alternative (what if) scenarios. It should be noted that Rob Burgholzer (UMD CBPO) is developing an animal unit model.

Calibration parameters will be derived separately for each different region and the model is not yet calibrated for the whole watershed. The MD SLEUTH (Slope, Land use, Exclusion, Urban extent, Transportation, Hillshade) model has already been applied to the whole state of MD but is only calibrated to the Baltimore-Washington metro area. The new model will replace this model and regions will be calibrated separately.

The key assumption of this model is that it relies on are that urban growth is the dominant driver of land change in the bay watershed and that future development patterns and rates are heavily influences by historic trends. The advantages of this model are its ability to create broad-scale dynamic simulations at a high resolution, its limited range of data requirements, that fact that it is tightly linked to GIS and its ability to simulate the impact of policies on land cover and land use. There is a workshop scheduled for July 17th at Patuxent Wildlife Center in Laurel to illustrate how all of the different data sets are being integrated together. The plan is to provide spatial maps and county summaries in November 2006.

Jeff Sweeney (UMD CBPO) provided an overview on the status of the states stormwater BMP reporting data, crediting historic BMP implementation in annual model assessments. Data from jurisdictions for the 2005 annual model assessment is due July 15th, this includes data from point and non-point sources.

The purpose of the Bay restoration status report is to provide accountability, guidance for future efforts, and answer questions about how the Bay watershed is doing, what is being done, and whether or not we are on track in our efforts to restore the Bay. In this report, pollutant areas are divided into four sectors: agriculture, wastewater, urban/suburban lands, and air pollution. The urban/suburban lands environmental indicator will not be quantified this year but it will be reported in 2007.

The phosphorus load to the Bay due to urban runoff was 2.66 million lbs/year in 1985 and between 3.12 and 3.18 million lbs/year between 2000 and 2004. This trend is not going to be reversed until the urban runoff phosphorus load is reduced to 2.66 million lbs/year and the goal is 1.96 million lbs/year.

If the CBP model is going to be used to access “progress”, then year to year changes in loads due to anomalies need to be addressed. Large changes are occurring in BMP data from jurisdictions, not because of on the ground changes in implementation, but because of changes in tracking mechanisms or states analysis methods. An example of this is PA’s stormwater management which has been place in for quite some time but this is the first year that it is being reported.

One possible long-term solution to the problem about data anomalies which affect progress loads would be to include historic BMP implementation and remove BMP data anomalies for the Phase 5 calibration.

Stormwater management in PA is best professional judgment as they feel that they have a reasonable estimate. For the years of 2002 and beyond, PA has reported projections even though they have some data for those years have not been able to put that data into the database due to inadequate staffing needs.

MD reports what stormwater management they are able to track. Data is reported by counties. MD thinks that they may be underestimating in this area. VA suggested that the BMP efficiencies be lowered for those that are accounted for but never built, not properly built, or not maintained. VA is comfortable with reporting conservatively until data is more accurate. As a short-term alternative, the CBP Tributary Strategy Workgroup recommended that only implementation past the end of the Phase 4.3 watershed model calibration period (end of 1997) be credited. Other possible short-term alternatives include ignoring reported/estimated BMP data anomaly for 2004-2005 and putting all efforts and data into the Phase 5 calibration, only crediting the latest years worth of work for annual load reductions or crediting full implementation as if it occurred in a single year.

Neely Law and Tom Schueler (Center for Watershed Protection) presented preliminary results from a street sweeping and storm drain cleanout project in Baltimore City. The purpose of this study is to determine whether or not street sweeping and storm drain cleanout can make a difference in reducing nutrient loads to the Bay. In order to do this, more reliable estimates are needed of the potential nutrient and sediment reductions achieved by municipal street sweeping and storm drain cleanouts.

This project has the following tasks: (the first two tasks are nearing completion)

1. Literature review and reference tracking system
2. Basin-wide municipal practices survey
3. Paired street sweeping treatment
4. Street source area sampling
5. Characterization of storm drain sediment

Two catchments (F and O) are being monitored in Baltimore City that is very similar in total area, impervious and pervious cover. A monitoring station at each catchment has been collecting stormwater data for a baseline period of almost 16 months.

Key findings to date for this project include the following:

- 75 monitoring and modeling studies were reviewed from the 1970's to present
- Few studies provided sufficient data to quantify a removal rate
- Considerable differences in scope, extent and design of field or modeling studies
- Pollutant removal rates vary widely based on sweeping frequency, technology and operation, street conditions, and chemical and physical characteristics of street dirt
- New street sweeping technology can pick-up more than 90% of street dirt under ideal conditions but does not guarantee water quality improvements

One issue encountered in the literature review of catch basin studies was that big material was not being conventionally sampled because it would clog the ISCO sampler intakes. This project is trying to remedy this by attempting to perform bed load sampling by placing these types of samplers upstream of the sampling station.

The key findings of the Bay municipal practice survey were:

- Total of 22 responses
- 10 jurisdictions regularly scheduled cleanouts of storm drains and 12 jurisdictions only cleaned out storm drains in response to complaints or clogging
- Cost of storm drain cleanout averaged \$1.39 per linear foot and \$55 per catch basin
- 85% of Phase I and II communities swept more frequently than annually and the cost of street sweeping ranged from \$14.75 to \$75 per curb mile.

Please keep in mind that these findings are based on limited data.

The following manuals are available from the Center for Watershed protection website (www.cwp.org):

- The Small Watershed Restoration Manual Series
- The Maryland Watershed Users Guide (latest version available at: <http://dnr.maryland.gov/watersheds/pubs/userguide.html>)
- Smart Watershed Benchmarking Tool
- Urban Watershed Forestry Manual
- Wetlands and Watersheds Series: The Impact of Urbanization on Wetlands (August 2006), Using Local Watershed Plans to protect Wetlands, and Adapting Watershed Tools to Protect Wetlands

Paula Estornell (EPA Region III) stormwater program manager, presented information about a workgroup that is being formed by EPA Region III and state NPDES stormwater contacts. The purpose of this workgroup will be to create model stormwater permit documents. The first model draft will be created for Phase I MS4 permits. The workgroup will meet quarterly although more frequently as documents are being finalized. The first in-person meeting was proposed to take place at the NPDES Stormwater Annual meeting in Vermont on August 29-31, 2006. The workgroup will have a kick-off conference call sometime early summer to begin the process. A draft Phase I MS4 permit will be sent to the state EPA workgroup as soon as it is in final form. It is anticipated that the state EPA workgroup will be in existence until all of the proposed documents are finalized, which is expected to take 1.5 to 2 years to complete.

Education Workgroup Meeting (July 7, 2006)

Nadine Bloch (NOAA CBO) spoke briefly about the status of NOAA's Emerging Scientist Project (ESP). ESP provides the means for underserved high school teachers to bring marine and atmospheric sciences into their classrooms and the opportunity to get their students into the field. The project encourages youth to pursue careers in science, technology, engineering, and math as well as increases understanding of and appreciation for the resources of the Chesapeake Bay. Currently the program is being implemented in the D.C. public school system, where it's seen action in 10 of the district's 15 public high schools, one charter school, and one junior high. There are plans to expand the program to other urban areas in the Bay watershed and discussion of including other urban areas outside the watershed in the future.

Shannon Sprague (NOAA Education Coordinator) led a discussion about using technological tools to support the Meaningful Watershed Educational Experience (MWEE) program. The focus of discussion was to address the statement from Fostering Chesapeake Stewardship signed by the Executive Council in November 2005. The directive states that this workgroup agrees to "investigate the role of innovative technological approaches in support of the Chesapeake Bay

watershed environmental education”. Workgroup members addressed the tools that are currently used such as the website and interactive buoy system that NOAA is implementing. The workgroup members thought that rather than search for new technologies and their uses, they should draft a policy statement indicating the workgroups support of technology in enhancing field experiences and classroom activities.

Kevin Schabow (CRC Fellow) presented the highlights from a recent trip in June to Williamsburg with other members of the workgroup to find potential sites for the next Education Summit Conference that is scheduled for October 25-26, 2007. Of the three sites, one was the clear favorite and that was the Woodlands. The main focus and purpose for the next Summit should include the following comments:

- MWEE provider groups and school district representatives should be a target audience
- Large non-profits such as National Geographic and Conservation Fund should also be included
- Using technology to assist in the MWEE should be a theme
- The interdisciplinary nature of the MWEE should be highlighted
- Gateways providers should be an audience because they often provide MWEE’s
- The John Smith Water Trail should be a focus of a presentation and/or fieldtrip
- A “behind-the-scenes” tour of Jamestown and/or evening event would a desirable fieldtrip

Jill Bieri (NOAA VA CBO) briefed the group on the current status of the interactive Buoy System. A Canadian company, Science Applications International Corporation (SAIC) has been contracted to build the buoys and the first is scheduled to be in the water by April 2007. A website focusing on education and outreach for the project is under construction with partner groups (National Geographic, MD DNR, CBF) assisting with the creation of web stories for the site. NOAA CBO has partnered with the National Estuarine Research Reserve System (NERRS) to develop web content and lesson plans on estuaries. Specific lessons on the Chesapeake Bay and John Smith will be developed through this partnership and this curriculum will be embedded into the NERRS national curriculum. NOAA CBO was allocated \$500K for this project which will pay for three concept buoys located throughout the Bay (James, Potomac, and upper Bay). The National Park Service continues work on a feasibility study of the proposed Captain John Smith Chesapeake National Historic Trail. The draft report will be released by mid-July and will be available for public comment through the month of August. The report will be available on-line at: <http://www.nps.gov/nero/josm>

Nutrient Subcommittee Meeting (July 20, 2006)

Tom Simpson (UMD), Mary Lynn Wilhere (ACB), and Frank Dawson (MD DNR) attended a meeting on fertilizer and pesticide issues in Ohio. The healthy lawns and clean water initiative does not apply to just Scott’s Company. It also includes Spectrum and LESCO products. These three brands represent over 80% of the product line nationally. This document should read that to achieve a 50% reduction in pounds of phosphorus in lawn care products applied in the Chesapeake Bay watershed by 2009 as compared to a 2005 or 2006 base year.

Tom Simpson (NSC chair) proposed how the subcommittee and work groups can strategically achieve enhanced momentum in reaching our tributary strategy nutrient reduction goals. The

proposal focuses on energizing achievement of nutrient reduction (tributary strategy implementation) and supporting development of a 2010 TMDL if necessary. In order to accelerate overall performance, need to determine if current actions are giving the results expected, need to de-emphasize expected poorer performers of BMP's (in terms of expected results) and proceed with those that are the most efficient and effective. The subcommittee needs to decide on what new ideas would be the most beneficial to invest in.

The proposed focus should be expanded to include maintaining cap loads. If the goal of this subcommittee is to manage tributary strategy investment portfolios in a way that can achieve loading caps, then need to think about what are the activities that are needed to support the states and jurisdictions in their implementation efforts to help them accelerate implementation. Also it is important to make sure that the jurisdictions are getting the help they need rather than distracting them from this high priority effort.

- Ideas for key point source roles include:
 1. Help formulate enforceable policies
 2. Share ideas about how to run successful trading and permitting programs
 3. Collectively look at overall effort across the Bay watershed
- Tracking implementation on the ground, developing BMP definitions and efficiencies for the CBP model, refining BMP efficiencies, developing indicators, conducting monitoring are all important activities and must continue beyond the subcommittee.
- Need to plan for the technical support needs that the CBP Water Quality Steering Committee may have in the future to support TMDL development in the event that a TMDL for the Bay is required.
- Need to better clarify who has the authority to approve BMP's for the CBP watershed model. It is a very timely process and often results in revisiting and reworking the BMP's every step of the way. Need to figure out how to more efficiently review and approve BMP's.
- An example of how the CBP could help influence local implementation is to translate the agricultural BMP information into layman's terms so that conservation districts can easily implement them.

Update on Federal and State Procurement of Manure Products

The jurisdictions provided an update for meeting the manure strategy procurement goal endorsed by the Executive Council in November 2005. It states that by 2010, 20% of the total fertilizer, soil amendments, and compost used on state and federal lands will be comprised of poultry litter or animal manure nutrients derived from sources generated within the Bay watershed states.

Hank Zygmunt (EPA) presented a map of all federal lands in the watershed; 3 million acres out of the 44 total million acres in the Bay watershed are federal lands with the US Forestry Service comprising the majority. Lands with the greatest potential for promoting manure products are likely Department of Defense lands. He is compiling a list of federal procurement agents and how they procure fertilizers, compost, and soil amendments.

Maryland: There is currently a workgroup that is dealing with this issue. The group consists of the following: State Highway Administration, Departments of Natural Resources and Geological Survey, and the University System of Maryland. MD has preliminary data on the number of acres of state land on which fertilizers are applied and the number of acres on which manure products are applied. Currently poultry-based products are prohibited on DNR lease properties.

Virginia: A waste solutions forum was held in 2005 and one of the goals was to support an executive order that requires a percentage of the total fertilizer, soil amendments, and compost used on state lands to be composed of poultry litter or animal manure nutrients. In addition, VA is considering requiring an artificial price adjustment when manure products are used. VA would like to use manure generated within their jurisdiction rather than manure products imported from other states. VA has begun to quantify the potential for using manure products on state lands by estimating the number of acres that receive fertilizer.

West Virginia: Has a program to apply poultry-based products on state lands. In 2000, legislation was passed that required all state agencies that used compost to use compost containing poultry litter as long as it is economically feasible. This legislation was repealed several weeks ago and NSC members are researching this issue. Currently there is a commitment by producers to export a percentage of litter from WV's Bay watershed to the western part of the state. Transportation costs needs to be addressed. Land reclamation could be a great opportunity for manure product use.

Pennsylvania: There is a workgroup that is looking into solid waste use by Departments of Environmental Protection, Agriculture, and Transportation members.

It may be useful to target private companies to look for opportunities to incorporate Bay manure nutrients into their products such as potting mixes. Explore working directly with private companies to incorporate manure products into their product lines. For example, growing relations with the Scott Fertilizer Company and explore the possibility with their manure-based formulations.

Jeff Sweeney (UMD) gave an update on environmental indicators that the Nutrient Subcommittee is responsible for in the Chesapeake Bay 2006 Restoration Assessment, particularly urban/suburban lands and air pollution indicators where there were gaps in the 2005 restoration report.

- The urban/suburban indicator currently uses the same method as the method used for both point source and agriculture. But this method is causing the urban/suburban indicator to display negative results because it is not offsetting the impact of growth. Using this current method, the only way to get this indicator to move in a positive direction would be to get developed lands back to their 1985 condition and to some significant retrofits.
- Two options were presented: integrate the effects of 27 BMP's in the urban, mixed open, and septic sectors (indicator is negative), or use the weighted average of implementation level (indicator is positive).
- Tom Simpson's proposal is to illustrate the positive progress that is being made in implementing urban BMP's over time while at the same time showing that it isn't enough to keep up with the pace of growth. PA, VA, MD, WV, and DC will support this proposal for how to deal with the urban/suburban indicator.
- Is redevelopment considered retrofit? Only if it has no existing stormwater management.

- What if you upgrade the stormwater management during redevelopment? Yes, if you upgrade the stormwater management it is considered retrofit.

Announcements:

Virginia announced that their FY07-08 biennium budget was approved. The VA Water Quality Improvement fund now has approximately \$280 million available for grants to install point source nutrient control. Also, the Nutrient Credit Exchange Program is being implemented with work nearing completion on the watershed general permit regulation that will govern the credit exchanges and future offsets to maintain load caps.

Forestry Workgroup Strategic Action Plan discussed by Sally Claggett (USFS CBPO) at the previous Nutrient Subcommittee meeting is available on the website at:

http://www.chesapeakebay.net/pubs/Action_plan_3_15_04.pdf

The objectives of this action plan are to:

- Support Bay restoration efforts through model watershed partnerships
- Expand and enhance partnerships
- Sustain and strengthen federal-state collaboration in forestry
- Conduct assessments that improve forest-related planning and decision-making
- Deliver useful, audience-appropriate, science-based watershed forestry education and information tools
- Protect 6.5 million acres of forest land from development by 2010
- Reduce the rate of fragmentation and parcelization on forest land in the watershed
- Restore at least 10,000 miles and protect at least 25% of riparian forest buffers by 2010
- Improve the success of buffer restoration efforts through monitoring, training, and maintenance
- Develop and deliver information about riparian buffers for use in watershed planning and buffer restoration efforts
- Preserve and expand urban forests in the watershed
- Develop and deliver information about urban forestry that can be used for planning, assessment, and educational activities
- Advance innovative stormwater management techniques that include the use of trees
- Market available technology using urban forest demonstration projects

Living Resources Analysis Workgroup (July 25, 2006)

Integrated Monitoring Assessment discussion focused on the invitation of monitoring program managers from around the Bay watershed on how to better integrate water quality, fishery, living resource, and other types of biological monitoring efforts. Bob Wood (NOAA Oxford) opened the discussion with the three major priorities for LRSC:

1. Bay health indicator redesign
2. Ecosystem-based fishery management planning
3. Linking water quality and living resources modeling

While the current monitoring programs sufficiently perform their initial functions as “watch dogs” for the Bay, the sampling design are inadequate to inform all three priorities listed above. Incomplete data sets or data that are not aligned temporally or spatially contribute significantly to the problem.

One option is a small-scale monitoring approach to better understand processes and then link these smaller studies for a broader picture of the Bay. For example, a standardized sub-watershed approach might offer some simpler ways to integrate new scientific inquiries into current monitoring design. This would reduce the number of “watch dog” stations and focus on finer-scaled studies that target overall stressors. It might be valuable to consider re-arranging sampling stations to better utilize resources. In any case, cautious interpretation of small-scale causal relationships in the broader scheme is also important. The shift is from monitoring for single-question answers to addressing overarching questions and ecosystem level issues. This stresses the importance of a core monitoring program that can accommodate expansion to address community issues.

The shallow water monitoring program is spatially intensive assessment of water quality criteria. With some additional resources, the program would be poised to include living resources monitoring such as phytoplankton and zooplankton collection. This might be a first step toward integrated assessment. An integrated monitoring program should address questions framed within the overall Bay Program goals of restoring living resources and water quality, and managing food webs and fisheries for long-term sustainability.

A workshop may be the best forum for crafting the specific questions that an integrated monitoring program should help answer the ecosystem assessment and modeling. The major links now are between shallow water quality monitoring and stressors like disease, HAB's, and DO, but an integrated monitoring program must also emphasize the links between stressors and living resources.

Living Resources Subcommittee Meeting (July 27, 2006)

Announcements:

The Executive Council meeting will take place from September 21-22, 2006. The first day is a Restoration Fair at Sandy Point State Park from 1 to 4pm and will have displays of projects and programs that work to achieve the goals and commitments of the Chesapeake 2000 agreement in the following thematic areas:

- Living Resource Protection and Restoration
- Vital Habitat Protection and Restoration
- Water Quality Protection and Restoration
- Sound Land Use
- Stewardship and Community Engagement

If an organization is interested in participating in this Restoration Fair, please contact Catherine Shanks at cshanks@dnr.state.md.us. Crab feast and/or barbeque will be served for invited guests afterwards. The Governor's will meet on the second day at the Chesapeake Bay Beach Club on Kent Island and will include directives on phosphorus reductions in lawn fertilizer, state of forests for the Bay, and the Farm Bill. More details to follow as the agenda and other details are worked out in the near future.

The Living Resources Subcommittee has authorized the *Crassostrea ariakensis* Ad Hoc Panel to convene and review the latest *ariakensis* proposal. The Corps of Engineers recently issued a public notice that can be viewed at the following:

<http://www.nao.usace.army.mil/redesign/technical%20services/Regulatory%20branch/PN/06-V1295/06-V1295.pdf>

Mike Naylor (MD DNR) announced the culmination of a 5-year collaboration to produce a new key for SAV in the Chesapeake Bay titled "Underwater Grasses in Chesapeake Bay and Mid-Atlantic Coastal Waters: Guide to Identifying Submerged Aquatic Vegetation". The book covers SAV from Maine to the Carolinas and is available through MD Sea Grant for \$29.95 plus shipping and handling. You can check it out at: <http://www.mdsg.umd.edu/store/sav/index.html>

Jennifer Greiner (USFWS CBPO) announced that Wetlands Evaluation Taskgroup (WET) and the Land, Growth, and Stewardship Subcommittee are organizing a STAC workshop titled "Role of Stream Restoration/Protection and Wetland Enhancement in Nutrient and Sediment Reduction" on November 14-15, 2006 at the Patuxent Wildlife Center in Laurel, MD.

All presentations can be found at the following: <http://www.chesapeakebay.net/calendar.cfm?EventDetails=6851>

Michael Williams (UMCES CBPO) provided an update on the effects of the June 2006 rainfall event discussed at the Tidal Monitoring and Assessment Workgroup meeting on July 6th. The major factor contributing to deleterious effects on living resources is the large amount of sediment from increases in population and impervious cover. Oysters and SAV are particularly vulnerable to high flows and large amounts of sediment. Bay flow was well below average prior to this June event but soared 31% above average after the event. Flow in the Susquehanna was three times above average while the Potomac and James Rivers experienced four times greater flow. Similar patterns were seen for total nitrogen and phosphorus. Linking resources experience a number of effects including food web alterations (especially in the lower trophic levels) and immediate downstream displacement. The scientific community has responded by tracking water quality conditions, monitoring oysters and SAV, and assessing the fate of sediments. Events such as this illustrate the utility of continuous monitoring stations throughout the Bay to better characterize the extent of effects. Compared to Hurricane Agnes in June 1972, this recent event in June had a smaller geographic range and had less precipitation in the region.

Tom Dahl (USFWS) presented the latest peer-reviewed national status and trends report for wetlands (1998-2004). A statistical sample of the lower 48 states was taken using remote sensing, digital aerial photography, satellite imagery, and ground truthing to measure gains and losses in 4682 plots. The country is split into physiographic regions with an added coastal zone area to include near-shore features. The 2004 report is improved over previous reports with all imagery used being digital with one-acre resolution and fairly current, updated documentation, automated data verification tools, and increased field verification efforts. At the time of release, the only available commercial imagery came in VA. The rest of the region required use of classified satellite imagery. Major findings included 107.7 million acres of wetlands in existence, 191,750 acre gain from 1998 to 2004. Most of these gains are from the creation of freshwater ponds, restoration on idle and active agricultural lands, and restoration on conservation lands. The loss rate of freshwater vegetated wetlands continues to decrease as well. However, despite the net gain important wetlands are still being lost, especially freshwater and emergent estuarine wetlands. Most losses in the Bay region can be attributed to sea level rise and sediment shifts, while freshwater wetland losses are mostly from development, agriculture, and silviculture.

The latest report can be viewed at:

http://wetlandfws.er.usgs.gov/status_trends/index.html

Leslie Hartsell (USFWS) discussed the measures to address fish habitat degradation. In 2002, the sport fishing and boating partnership suggested forming a national initiative for fish habitat and the US Fish & Wildlife Service committed to it. The action plan was finalized in 2005 and approved by the Secretaries of the Interior and Commerce in 2006. The plan works at multiple scales: locally through cost-sharing on-the-ground projects, regionally through prioritized funding and scientific assessment, and nationally through funding and national aquatic habitat status assessments. The action plan will be implemented beginning with five pilot partnerships, each based on a cooperative conservation approach. The core working group that developed the plan will pass on the responsibility to the National Fish Habitat Board made up of state, federal, non-governments, industry, tribal, and academic representatives. The Board will be responsible for establishing action plans, locating funding support, measuring progress, and coordinating with partners. The science and data team are pulling together a fish habitat report to be published in 2010 and at five-year intervals thereafter.

National funding sources include the sport fishing and boating partnership council, Bass Pro shops, multi-state conservation grants, US Fish & Wildlife appropriations, NOAA, USGS, and National Fish & Wildlife Federation. \$3 million are potentially available from the US FWS and these funds will go to on-the-ground projects rather than monitoring project success over time. The next steps include 12 partnerships by 2010 (including the 5 pilot partnerships), organizing the national board, and completing the habitat status assessment. This may be an opportunity for the Chesapeake Bay region either as its own partnership under the action plan or in conjunction with the Eastern Brook Trout partnership.

For more information on the action plan, please visit the following:

<http://www.fishhabitat.org> and <http://www.morefish.org>

The National Fish Habitat Action Plan will hold a data summit in late October as an effort to centralize federal and state data. Currently coastal areas are under-represented. Registration information can be obtained from Leslie Hartsell at leslie_hartsell@fws.gov or 703-358-2195.

Leslie also provided a brief update on the Atlantic Coast Fish Habitat Partnership. Dr. James Geiger (USFWS) proposed to the Interstate Fishery Management Program (IFMP) policy board during the Atlantic States Marine Fisheries Commission (ASMFC) spring meeting that the ASMFC habitat committee be tasked with developing an Atlantic coast pilot fish habitat partnership under the National Fish Habitat Action Plan (NFHAP). The partnership plan works at federal, state, tribal, and local levels to target new and existing funding and technical resources for fish habitat projects. Discussion by the policy board centered around the need for the resources to take an active role in being a central and integral part of fisheries habitat protection along the Atlantic coast. The board endorsed Dr. Geiger's proposal and the charge went to the habitat committee.

The ASMFC habitat committee chaired by Bill Goldsborough (CBF) along with the habitat committee coordinator, Jessie Thomas have formed a working group and begun framing the pilot partnership, focusing on diadromous and catadromous fish species for approval by the ISFMP policy board and NFHAP board.

Sally Claggett (USFS CBPO) provided an update on the progress of the Land Conservation Challenge for the 2007 Executive Council that will focus on targeting for habitat and water quality benefits and protecting working landscapes from development.

- Healthy forests and wetlands are the best land cover for protecting water quality and habitat in the Bay basin
- It is not just the number of acres in a land cover but where it occurs that is important
- These lands need protection now from the pressures of development in order to continue to provide valuable benefits to life in the Bay watershed
- In 2003, the Bay Program identified the most valuable lands for water quality and those most valued for habitat. This Resource Lands Assessment was developed to guide conservation planning in the Bay watershed.
- The act of conserving these lands best occurs at the local level, therefore it is critical to obtain the involvement of local governments, citizen-based watershed organizations, and land trusts.

Need to identify the top ten priority landscapes in the Bay watershed where the conservation of land to protect water quality and habitat is most needed.

- Work with land trusts, watershed organizations, and local governments to develop a comprehensive framework that targets available lands, programs, and funding for conservation practices (transfer available lands, land acquisition, and more innovative approaches) within each priority landscape.

Mike Fritz (EPA CBPO) has taken the lead on collaborating with VMRC, MD DNR, USACE, NOAA and others to launch the annual oyster symposium through the oyster management plan (OMP). The symposium will address issues such as lessons learned from previous/current research and policy, next steps needed toward implementation of the OMP, optimization of resources, barriers to implementation and accountability. The annual deliverable might be an amendment to the OMP that describes the activity to be emphasized for the next year and the funding sources for that activity.