Maryland Water Quality Trading Advisory Committee
FINAL Meeting Summary
Maryland Department of the Environment, Baltimore, MD
October 17, 2016

Committee Members in Attendance:

Tom Ballentine	*NAIOP Maryland Commercial Real Estate Development Association*
Bevin Buchheister	*Chesapeake Bay Commission*
Lynn Buhl	*Maryland Department of the Environment*
Valerie Connelly	*Maryland Farm Bureau*
Candace Donoho	*Maryland Municipal League*
Lisa Feldt	*Montgomery County Department of Environmental Protection (Alternate – Patty Bubar)*
Brent Fewell	*Earth & Water Group*
Patricia Gleason	*US Environmental Protection Agency, Region 3*
Matthew Holloway	*Wicomico County Council, Clean Chesapeake Coalition*
George Kelly	*Resource Environmental Solutions (Alternate – TJ Mascia)*
Les Knapp	*Maryland Association of Counties*
Steve Lafferty	*Maryland House of Delegates*
Kate Maloney	*Maryland State Builders Association*
Erik Michelsen	*Anne Arundel County Department of Public Works*
Shannon Moore	*Frederick County Sustainability & Environmental Resources Office*
Doug Myers	*Chesapeake Bay Foundation*
Dan Nees	*University of Maryland Environmental Finance Center*
Susan Payne	*Maryland Department of Agriculture*
Chris Pomeroy	*AquaLaw, Maryland Association of Municipal Wastewater Agencies, Maryland Municipal Stormwater Association* (Alternate – Julie Pippel)
Mindy Selman	*USDA Office of Environmental Markets*
Phillip Stafford	*Maryland Department of Natural Resources*
Rob Shreeve	*Maryland State Highway Administration*
Lindsay Thompson	*Maryland Association of Soil Conservation Districts, Maryland Grain Producers*
Lisa Wainger	*University of Maryland Center for Environmental Science*

Facilitator:
Kathy Stecker

Other Attendees:

Vimal Amin	*Maryland Department of the Environment*
Ray Bahr	*Maryland Department of the Environment*
Brian Clevenger	*Maryland Department of the Environment*
Michelle Crawford	*Maryland Department of the Environment*
Clay Detlefson	*National Milk Producers Federation*
Chandler Denison	*Johnson Mirmiran & Thompson, Inc.*
Kristen Dewire	*Maryland Department of the Environment*
Brenda Dinne	*Carroll County Department of Land & Resource Management*
Aris Evia	*Maryland Department of the Environment*
Michael Forlini	*Funk & Bolton, Clean Chesapeake Coalition*
David Foster	*EPA Region 3 Trading and Offset Workgroup*
Jim George	*Maryland Department of the Environment*
Ridge Hall	*Chesapeake Legal Alliance*
James Hearn	*Washington Suburban Sanitary Commission*
Christine Holmburg	*Maryland Environmental Service*
Steve Johnson	*Ballard Spahr LLP*
Jason Keppler	*Maryland Department of Agriculture*
Marya Levelev	*Maryland Department of the Environment*
Hans Schmidt	*Maryland Department of Agriculture*
Jennifer Smith	*Maryland Department of the Environment*
Ed Stone	*Maryland Department of the Environment*
Rosewin Sweeny	*Venable LLP*
Gerald Talbert	*Maryland Association of Soil Conservation Districts*

Action Items:

- Distribute the presentation given at the Trading Manual, Section II, meeting on October 5
- Distribute Bay Restoration Fund (BRF) proposal
- Review and prepare to comment on the BRF document
- Provide example scenarios for the BRF presentation
- Distribute Maryland Department of Agriculture (MDA) regulations (when available)

Provide documents relating to the Virginia offset program

Meeting Minutes:

1. WELCOME & INTRODUCTIONS

Ms. Stecker welcomed the meeting attendees, including two new members, and everyone introduced themselves. Ms. Stecker noted that the agenda had been changed and there would be no Aligning for Growth (AfG) discussion at this meeting.

2. REVIEW OF THE MAY 19 MEETING MINUTES

Ms. Stecker asked the Committee members for corrections or comments on the September 22 meeting minutes. The minutes were approved as written.

3. TRADING MANUAL UPDATE – FATAL FLAWS

Many comments and suggestions were received for changing the Trading Manual. They will be reviewed and Maryland Department of the Environment (MDE)/MDA will respond at the November meeting.

Ms. Levelev gave an overview of the follow-up meeting held on October 5 for the Water Quality Trading Advisory Committee (WQTAC) members who wished to discuss Section II of the Trading Manual regarding Point Sources in more detail. The issues and concerns brought fourth were similar to those from previous discussions and included:

- Baseline for Performance Credits
- Municipal Separate Storm Sewer System (MS4)
- Point sources trades
- Regulatory/Permit changes for MS4 trading
- Increases in Waste Water Treatment Plants (WWTP)s' operational and/or capital costs to generate credits when treating flows at design capacity
- Trading away future capacity
- Fairness and appropriateness of retirement ratios

MDE provided a presentation on Tracking Performance Credits for Point Sources The presentation will be posted to the website and distributed to the Committee. Ms. Buchheister asked for information regarding performance credit supply versus MS4 credit demand. Ms. Levelev replied that summary of aggregate performance credits by county was provided at the May 19 meeting and it can be found on the WQTAC website.

Ms. Buhl stated that there are three documents which will impact trade: the regulations, the permits (modifying current permits and creating future permits), and the Trading Manual. Concerns regarding the Trading Manual still need to be addressed, but development of regulations and investigation into the changes needed for the permits are currently priorities. MDE is currently waiting on the full comments on the Trading Manual from the Environmental Protection Agency (EPA) Region 3 as well. Mr. Forlini asked if the public was going to be allowed to see the comments and discussion points regarding the Trading Manual. Ms. Payne replied that the comments received can be shared.

Mr. Ballentine stated, that the retirement ratios were causing concerns. The provisions apply to both sides of the trade but throughout the document the application point is described differently; clarification is needed. Even if those points are clarified, the concept of the State taking a percentage of the trade for their own purchase causes concern. It is unrelated to the environmental impacts of the agriculture generator or the purchaser of the credits. Ms. Moore agreed. Mr. Ballentine stated that the retirement ratio goes beyond adjusting for uncertainty and is a donation of credits which threatens the liquidity of the market overall and is an added impediment for a farmer entering the market. Ms. Payne stated that if there is a 10% retirement, the buyer will likely decrease the price by 10%. Mr. Ballentine asked if it would be a buyers or sellers' market, to which Ms. Payne replied that it was unknown at this time. Ms. Maloney stated that when looking at the program long-term, it will be very important to generate the most credits in the most efficient way possible, but if the system is being artificially degraded with no benefits, then monitoring needs to occur. Ms. Connelly opposes retirement ratios on behalf of the farmers looking to sell credits due to the expected 10% reduction in price. Mr. Ballentine stated that it would be inappropriate for the State to take those credits for their own use if the buyer pays for them.

Ms. Buchheister stated that there is currently no ratio of uncertainty. Mr. Ballentine stated that the document contains the uncertainty ratio and has the flexibility to set it based on experience. It is currently a 1:1 ratio because the Best Management Practice (BMP) efficiencies have been assigned in a way that makes the State comfortable. Ms. Payne stated that in the agricultural sector, the assessment is conducted on a performance-based system and the calculation tool, which assesses the generating capacity, uses the specifics of cropping, tillage, fertilization, etc., and the parameters applicable to the site (i.e. soils, slope, hydrology, weather, etc.). In a system using a practice-based methodology, farms using the same practices will have the same amounts of credits generated, In Maryland, however, even adjacent farms can have different amounts of credit generating capacity based on the site-specific data used in the assessment. Mr. Ballentine asked how the efficiencies compare to the BMP efficiencies created by the Chesapeake Bay Program. Ms. Payne replied that the tool uses the efficiencies set by the Chesapeake Bay Program for each of the BMPs through a peer review process, and there is a discount applied to account for variation.

Ms. Maloney stated that any retirement or uncertainty ratio applied through policy would be in addition to what has already been added to the estimates. Ms. Payne stated that it is less onerous to use the retirement ratio as opposed to the uncertainty ratio. Ms. Thompson stated that the BMP efficiencies are created through an expert panel process. Because of the differences in reduction potential the uncertainty factor is built into the efficiencies as a precaution. Mr. Nees asked for clarification and asked if the retirement ratio is being used for uncertainty and risk or if it is being used for some other goal. Mr. Payne stated that the retirement ratio is a set-aside for

the benefit of the Chesapeake Bay and the credits would be permanently retired. Currently the Trading Manual applies the retirement ratio at different points, but generally it is at the point of sale. The numbers are permanently shown as retired in the registry. Mr. Nees stated that it is the job of the Total Maximum Daily Load (TMDL) to clean up the Bay, and it is the market's job to get there as efficiently as possible. Ms. Gleason stated that the uncertainty ratio is meant to address trades between Point Source (PS) and Nonpoint Source (NPS), and the retirement ratio applies to every credit generated. Mr. Ballentine stated that there are technical questions regarding the discount factors used in the Manual. The objections are directed towards the retirement ratios and its continued inclusion in the Trading Manual. The uncertainty begins to become more clarified and reduced when a more structured agreement is reached regarding verification, inspection, and remediation. Ms. Gleason stated that there is a line in the Technical Memorandum which allows for flexibility if it can be demonstrated.

Ms. Thompson asked about the application of retirement ratio credits. Ms. Payne stated that the State accounts and tracks them, but currently it has not been determined where the credits will go. Mr. Myers asked if the retirement ratio rule was propagated by the Maryland Department of Agriculture (MDA) in its regulations. Ms. Payne replied that MDA regulations exclusively deal with the generation of credits (i.e. certification, verification, and registration). The rules currently being discussed are the trading rules for the exchange of credits. The regulations which are currently in place by MDE deal with permitting and only need to be referenced. Mr. Myers asked, regarding Technical Memorandum guidance, if other programs have as detailed and quantified methodology for credit generation as the Maryland Nutrient Tracking Tool (MNTT) and is there the same amount of confidence in the results as those which are using a 2:1 trading ratio. Ms. Gleason replied that the Technical Memorandum is used to answer the question of determining what a pound is when one is generated and one is sold. The 2:1 ratio is meant to address trading between a PS, which is heavily monitored, versus the NPS where the monitoring is not as comprehensive. Applying a 2:1 ratio is based on scientific information. If it can be demonstrated that one pound of reduction is generated, then the ratio can be adjusted.

Mr. Myers stated that there is a lack of confidence regarding trading pounds with MS4 jurisdictions with permits written in percentage of impervious surface. The 2:1 ratio should apply to this kind of trade. Ms. Moore stated that an MS4 is a point source and the retirement ratios add additional challenges to the daunting restoration requirements of MS4s. She suggested that the retirement ratio is not needed since it's not replacing the risk and the uncertainty of trades. In addition, the conversion factor written into the manual requires MS4s to meet the difference between a forested acre and an impervious surface acre to generate an acre of credit liability, which is a higher standard for restoration than many of the other practices used. Ms. Buchheister stated that a trade between agriculture and MS4s uses a 2:1 ratio and asked if it was needed due to both sectors having the same level of uncertainty. Ms. Moore stated, regarding MS4s as the buyer, that the uncertainty is not on the buyer's side. Ms. Payne stated that MS4s

are given PS status because of their permits, but they are actually diffuse sources. There will not be an uncertainty ratio and they would trade on a 1:1 basis. The only time a 2:1 ratio is applied is when a trade occurs between PS and NPS. One of the reasons this has not been placed in to the Trading Manual is that, on average, there is a 20-year+ capacity within the WWTP, which buys time to bring other sectors into compliance with the TMDL. If it needs to be addressed, it can be added in to the Trading Manual at a later date. Ms. Moore asked if a local government (MS4) needs to buy from the agriculture sector, would a 2:1 uncertainty ratio be applied. Ms. Payne replied that MS4 trading to agriculture would be on a 1:1 basis and 10% would be retired.

Ms. Connelly stated that there are five county Farm Bureaus which are submitting policies to the Maryland Farm Bureau to oppose nutrient trading altogether due to concerns that the agricultural sector will be dealt the majority of the burden. The farmers are concerned with the retirement ratio that their capacity will be traded away and incur more of a burden later. Ms. Payne replied that MDA has heard and is aware of the concerns. There is also a misunderstanding regarding capacity; the agriculture sector is only trading capacity for the length of the contract. Ms. Connelly stated that farmers are concerned with possibly redistribution of the load which would impact farmers who have sold away their reductions. Ms. Connelly asked if there was any way to protect against the redistribution of load burden for those who have traded their capacity. Ms. Thompson reiterated the concern regarding not knowing where the retired credits go. Ms. Thompson asked if there has been discussion regarding a pot of retired credits allocated to the sector which generated it. The TMDL is a moving target as the model changes and the Phase III Watershed Implementation Plan (WIP) planning process begins. The concern is that if farmers are doing more than their baseline and trading those credits, then the credits are being removed from the entire agricultural sector and the agricultural sector as a whole would not meet its goal. Ms. Maloney asked what the expectation for having the retirement ratio is. Dr. George stated that the intent is to accelerate implementation and make reductions.

Mr. Ballentine stated that generation of additionality comes from going further below the baseline. On the land developer's side, the need to trade comes from the inability to have the finished product perform at 3 pounds per acre of Nitrogen (mixed urban open is 11 pounds per acre, and impervious surface is over 15 pounds per acre). Perhaps, without the trade there would be no reductions. Ms. Gleason commented that Virginia has a viable NPS to NPS trading program involving land banks and highway projects. Permanent credits might be of more interest to the agricultural sector. Mr. Mascia stated that there are land banks in Virginia which are matched to new construction. Ms. Payne stated that permanent credits are defined by different States in different ways. A concern was raised regarding farmers with BMPs already in place, which puts them at a disadvantage as they cannot generate credits from those practices.

Ms. Gleason mentioned that in Virginia, the starting point for PS to buy NPS credits is a 2:1 ratio and in Pennsylvania, it is a 3:1 ratio. Mr. Mascia stated that the 2:1 ratio could be overcome by

either a permanent land instrument which backs up the practice or by monitoring which approaches the level of continuous discharge monitoring. Mr. Ballentine asked if Virginia allows a portion of the onsite stormwater management to be offset through the trade offsite. Mr. Mascia replied "Yes." Mr. Nees stated that he believed that Virginia does not have a trading program for existing pollution, only for new pollution and it does not include MS4s. Mr. Mascia replied that credits are sold to MS4s for the end of the permit cycle to meet compliance; they are seen as offsets, not credits. Ms. Gleason stated that Virginia has some outstanding credit certification regulations which need to be promulgated. Mr. Mascia stated that Virginia has not been in a rush to promulgate all of the regulations since trading is currently occurring and succeeding; guidance is being developed.

Mr. Myers stated that the language discussed needs be adopted in the Trading Manual for the narrow circumstances; the information where the 2:1 ratio would apply should be extracted for the regulations regarding uncertainty. Mr. Myers suggested that retirement ratios should accrue to whichever sector is engaged in the trading; otherwise there is no discernible environmental benefit of retiring the credits especially since there are no AfG policies in place. Ms. Buhl asked if there were any objections to the proposal of retired credits accruing in the sector in which it is generated. Ms. Moore suggested a 50/50 split between the buyer and the seller for the retired credits. Ms. Buhl stated that MDE and MDA will discuss the comments about retirement ratios with EPA although currently no decision has been made.

Ms. Wainger noted that some of the trades are short-term but retirement of credits is permanent, Ms. Wainger recommended thinking ahead. Ms. Moore stated that term trades do not have permanent retirement. Ms. Payne stated that the topic of retirement ratios will be clarified in the Trading Manual. Ms. Buchheister recommended using the retirement ratio to offset pounds accrued by counties which approved new development not realizing that the loads would increase and that every pound would have to be offset from 2010 and onward. Ms. Thompson stated that clarification is integral moving forward.

Ms. Buchheister stated that the EPA Technical Memorandum acknowledges that additionality is met as long as the reduction is under permit level. Ms. Buchheister had commented that if the WWTP's have permits for 4mg/L nitrogen and the facilities are operating at 3mg/L currently, then they are not providing an additional reduction. Another issue is that the WWTPs are using the BRF funds to upgrade to 3mg/L and the facilities can use the credits generated while the agricultural sector cannot generate credits using cost-shared funds. To be consistent the limit should be set at 3mg/L since the BRF grant agreement requires WWTPs to reach the lowest level possible. Ms. Moore stated that the 2008 Cap Management Strategy established 4mg/L as a baseline for additionality; the credits can potentially be sold but only under a floating cap. As the WWTP gets older and has increased loads, it is harder for the facility to stay at the specified mg/L. Additional practices have to be implemented (sometimes at additional costs) to keep the

facility performing at its best. Fundamentally the 4mg/ml is codified in the permits and the Cap Management Strategy. Regarding the grants for implementation, the 2008 Cap Management Strategy does not envision the ability to sell credits. It does, however, envision that the use of BRF funding for WWTP upgrades. It has been proposed that it would need to be determined what portion of the reductions is attributed to BRF funding; the question is how to do that.

Ms. Thompson stated that the BRF paid for the designs to allow WWTPs to get down to 3mg/L. There are additional operating costs to operate at that level, which makes it very similar to a cost-share which agriculture participates in. If the WWTPs are able to trade on those credits with BRF funding supplemented by their operating funds, the agriculture should be able to do the same. Ms. Donoho stated that there would be equality between the WWTP and agriculture sectors. Ms. Payne referenced a permit stating "the permittee should operate the Enhanced Nutrient Reduction (ENR) facility in a manner that optimizes the nutrient removal capability of the facility as stipulated in the grant agreement for ENR upgrade." Ms. Payne had asked Ms. Gleason if that meant facilities had to operate below 4mg/L to optimize their functionality or capability, which would create a margin of safety to protect the plant from being out of compliance.

Ms. Payne expressed a concern of the margin of safety being traded away. Ms. Wainger and Ms. Donoho stated that facilities are risk adverse and would not want to trade away the margin of safety. For comparison, Ms. Payne noted that the Nutrient Management Plan (NMP) is a guideline, not a requirement. The assessments of the farms have to be based on current practices, not what the NMP says it can do. Ms. Buchheister stated that the same logic should be applied to WWTPs, and if they are currently at 3mg/L and they go below, it should be considered additionality. Ms. Payne stated that the 3mg/L is the baseline, and credits can be generated below that number. Ms. Buchheister asked why WWTPs were able to sell credits between the delta of 4mg/L and 3mg/l if the facility is currently running at 3mg/L.

Mr. Stone stated that unregulated NPS and regulated PS have different beginnings. When agriculture was creating its trading program, it was establishing the baseline at the same time it was determined what could and could not be traded. When creating the trading component for the PS, the baselines were established along with what would be considered as additionality. It is challenging to compare the non-regulated agriculture sector with the regulated PS sector. Ms. Connelly noted that if a farmer performs a baseline test using the online calculation tool, anything already in place cannot be used to generate credits and more practices would have to be implemented to create credits for sale. Ms. Connelly also asked if a farmer would have to stop a practice and then restart it in order to be able to sell the credits. Ms. Payne stated that if it is an annual practice and the farmer can stay below the baseline without that practice, then the practice could be used to generate credits. Ms. Thompson asked if the practice would have to be stopped for a period of time before it could be re-implemented and used to generate credits. Ms. Payne

stated that it would not because it is an annual practice. When a credit is certified, it is certified for the next year. Ms. Connelly asked if a credit could be generated using new technologies. Ms. Payne replied that there are a number of precision agriculture practices which are considered annual.

4. BRF LEGISLATION – ISSUE PAPER

Dr. George gave a presentation regarding the BRF legislation and the proposal that the BRF be expanded to include purchasing of nutrient reduction credits. Dr. George stated that it is a continuation of HB-325 in which MDE proposed expanding the use of the BRF. Dr. George reminded the WQTAC that the proposals are still being formulated and do not reflect current State policy; many divisions within MDE and other departments still need to vet the document. The goal is to keep the policy simple and obtain something that is generally agreeable knowing that in the future, more can be added if necessary (the WQTAC would be called upon for advice regarding any future changes).

Dr. George stated that the proposal is to amend the BRF statute to expand the uses of the sewer user fee to purchase nutrient credits. Key issues include:

- How will credits be purchased
- What credits are eligible for purchase
- Where may credits be purchased (generated) relative to where the credit is applied
- How will credits be applied

The issue paper was distributed and is an initial draft of policies and procedures for implementing the proposed BRF legislative amendment. The paper supports and documents stakeholder dialogue on the subject and includes an appendix of policy questions and proposed responses. As background, in 2016, Maryland's Bay Cabinet outlined a framework for closing a funding gap to reach the 2025 goals. A report, the Section 40 report, was given to the State legislature and it is available on the WQTAC webpage. The proposal was founded, in part, on research and recommendations by the Environmental Finance Center (EFC) in which one of the general concepts was to transition to a pollution reduction credit-based financing and accounting system. This would tie reductions to cost per pound; the BRF revenue collection system is one existing, efficient way to do this. It is an existing framework that is transparent, has an oversight body to review how the policies are used, and the WQTAC, which also looks at it.

The BRF has two revenue streams; the septic system fees and the sewer fees. Regarding the septic system revenue fund, about $17 million (60%) goes to septic upgrades and connections to advanced WWTPs, and about $11 million (40%) designated by statute is sent to MDA to be used for agriculture cover crops. Regarding the wastewater sewer fund, about $50 million pays for debt service, and about $60 million is available, beginning in fiscal year 2018, to be used for

cost- effective nutrient reduction. About 1.6 million pounds of nitrogen, or 14% of the total reduction, must be achieved by non-permitted sources from the 2010 levels to meet the final goal. Part of the policy is directed at the issue that the State has no way to compel non-permitted sectors (septic and non-MS4 stormwater) to make reductions other than to pay for it.

Regarding how credits would be purchased, MDE could have an Open Auction where bids would be taken and MDE would then select the proposals with the lowest cost per pound delivered to the Chesapeake Bay. MDE could also set a "floor price" available to any entity that cannot sell the credit on the open market; MDE is considered a buyer of last resort. MDE could also set a "spark price" to stimulate credit generation activity. The credits must be guaranteed for 5-15 years. Bids must produce a minimum 1,000 nitrogen credits or 100 phosphorous credits; this promotes the use of aggregators. Agricultural credits will be eligible for purchase by the BRF only if they are calculated by the Maryland Nutrient Tracking Tool or MNTT (the Maryland version of the Chesapeake Bay Nutrient Trading/Tracking Tool or CBNTT). The use of the credit calculation tool and the trading platform's registry ensures that the credits are defensible and transparent. They are also governed by regulations which assure the verification of credits. Annual credits would be eligible only if they are part of a 5-15 year contract commitment (cover crops will not be eligible at this stage, but can be used to reach the baseline for trading), and generated by practices accepted by the Chesapeake Bay Program Partnership. Credits generated by WWTPs are not eligible, and credits must be verified annually.

Regarding the generation and application of the credits, it is proposed that the location of credit generation may differ from where the credits are applied. The rationale is that the trading is for reductions, not offsetting new loads, and promoting a lower cost way of restoring the Bay. The goal is to keep the initial program simple and modest reductions imply insignificant geographic distribution of water quality impacts. The assumption is that each credit will cost $100 per year with a $10 million per year cap, which would equal a 100,000 pound reduction. The idea is to experience the exercise of the mechanics of the trading system. If the BRF credit purchase initiative is successful, it could be expanded in the future. Currently it is viewed as a pilot project.

Regarding how credits may be applied, the proposal has two steps: the first is to distribute credits in proportion to the combined septic and sewer revenue paid annually into the BRF by local jurisdictions. The second is to apply the credits in a preferential order: Septic Systems, Non-MS4 Stormwater, and MS4-Stormwater. This preferential order is proposed because there is no way to compel the 1.6 million pound reduction from non-regulated sectors such as nonregualted stormwater and septic. .EPA is concerned about meeting the Bay TMDL load allocation and requires Bay states to have assurance of implementation plans (in the case of the Bay TMDL, it is the WIP.). EPA has also expressed concern about Maryland's lack of progress on reducing septic systems loads, which is why it is first in the preferential order. Dr. George reminded the

WQTAC that everything is open to negotiation and discussion. Ms. Donoho stated that the Maryland Municipal League had 50 municipal Phase II stormwater permit holders operating, which should come into the queue. There are no septic systems in many municipalities, and MDE needs to be aware of that. Dr. George stated that if the Phase II stormwater jurisdictions without septic systems pay into the fund, they could apply the credits toward meeting their Phase II MS4 permit obligations..

Mr. Lafferty asked, since MDE promulgated a change in regulation stating that the Best Available Technology (BAT) will not be required for all septic systems except in the critical areas, how does that comport with putting septics first in the preferential order? Dr. George replied that the septic system reduction in the Phase II WIP which would be addressed by this proposed policy is from existing septic systems. Mr. Lafferty stated that BAT's should be on all of the systems. Dr. George replied that there is a different policy moving forward in terms of new sources (AfG) while the BRF credit purchase proposal is geared toward reducing existing sources that have been in place prior to 2010. Mr. Lafferty asked about the failed systems which are still in place. Dr. George replied that there is still funding from the septic side of the BRF that will continue being used for those failed systems. Ms. Moore asked where the BRF funds will be otherwise spent. Dr. George replied that the BRF is finishing its obligation for funding the upgrades of major WWTP's, and as of fiscal year 2018, when the funds are in the pipeline for the 67 plants, there will be additional revenue for use in making nutrient reductions toward meeting for the Bay restoration goals. Ms. Donoho asked about minor WWTP ENR upgrades. Dr. George stated that the proposed BRF legislation has a $10 million per year cap and the remaining $50 million would be available for other uses. There will be a competitive process for the most cost-effective credits, and it is understood that the minor WWTPs are cost competitive, and there may even be a preference in statute for minor WWTPs.

Mr. Michelsen asked if MDE had any rough estimates for the cost per pound reduced that they are getting from the implementation of septic upgrades, cover crops, etc. Dr. George replied that MDE has a presentation that was given at the Region WIP workshop which has a scatter plot of the cost effectiveness. Mr. Nees cautioned the WQTAC to remember what is coming: only about half of the pounds that are necessary to achieve 2025 goals are currently regulated, which effectively leaves the State responsible for the other half. The State is either going to have to pay for those pounds, or it is going to have to hold MS4s accountable, halting growth. Mr. Myers appreciated the additional detail received and is encouraged by the overlying philosophy of the BRF credit purchase proposal to meet the load reductions. Ms. Moore stated that the counties have two prevailing concerns: the first is that since the BRF is being set up to allocate funds on the basis of cost-effectiveness, this will make stormwater projects uncompetitive and, thus, meeting their MS4 obligations more difficult. The other concern relates to competing with MDE for credits. Ms. Moore suggested investigation of the "buyer of last resort" concept more fully as other buyers may be squeezed out of the process. Mr. Nees suggested evaluating the BRF

program after three years to see if it is still beneficial. Dr. George stated that once a contract is locked in, the contracts would be paid every year for the term (5-15 years). The $10 million is not set aside; the program is spending up to $10 million in any given year, and if it is outcompeted by lower cost BMPs, then those would be pursued.

Mr. Shreeve recommended buying $10 million in credits if it is the goal to prime the market, and then sell the credits over time as the market matures. Buying and holding the credits does not add any economic stimulus. Mr. Mascia asked if the credits have to be certified and in the ground to be eligible. Ms. Payne replied that credits can be certified pending implementation. Mr. Mascia stated for stimulating private investment, MDA would want to award a readiness factor for those who already have practices in place versus someone who has yet to begin implementation and has only made a promise. Ms. Wainger stated that there are two competing goals between priming the market and meeting the non-regulatory need. Ms. Wainger agreed with Mr. Shreeve regarding resale of credits purchased by the State. For example, one aspect possibly holding people back from buying credits is ensuring enough credits are available to offset their entire project. The State could get the projects in the ground, pay for them, and have them available for use to obtain the necessary market participation.

Ms. Payne reminded the WQTAC that the credits must be used in the year they are generated. In Washington D.C., Prudential Financial has an agreement with the Nature Conservancy to create the project that generates the credits, which are then sold to D.C. The remaining money, after most likely a percentage taken by Prudential and The Nature Conservancy, goes back in to the fund as a continuing source of money to create additional projects. Mr. Nees stated that D.C. is taking a mitigation banking approach to their stormwater program, which removes the risk for credit generators. Maryland is taking the opposite approach. Mr. Nees reminded the WQTAC that if the current trend continues, there will be no growth capacity left in the WWTP sector by 2025, as noted in the EFC report. The State should be using this process to build growth back in to the system, allowing it to be used in 2025.

Dr. George listed the stakeholder concerns that were raised regarding HB325 in 2016:

- No limits on when and how many credits may be purchased.
- Questions regarding to what the credits apply.
- Safeguards for the use of dedicated funds.
- Potential impacts on agricultural sector ability to meet its Bay goals.
- State involvement in marketplace pricing, becoming a positive influence on the market and avoiding unintended consequences.
- Premature given limited understanding of trading program.
- Potential expectation for restoration to occur in urban locales.
- Potential impact on funding stormwater permit obligations.
- Concern small WWTPs will not receive upgrade funding.

Ms. Buchheister asked how it was decided to cap the program at $10 million. Dr. George stated that it can be a starting point for discussion. There have been some concerns about using all of the funding or not having any boundaries so the $10 million was set as a starting point. Ms. Buchheister stated that the WWTP sector raised $100 million a year from the stormwater fee, and the Department of Legislative Services report stated that to meet their obligations, the WWTPs would need $400 million a year. The program is taking money from the pot that the local stormwater entities would use when the funds become available in 2018. Mr. Myers stated that the money would be spent on the most expensive projects, which are also the least effective projects. Mr. Myers stated that the most effective practices need to have the most funding.

Dr. George stated that the Chesapeake Bay Foundation (CBF) sent a letter regarding issues identified with the Trading Manual to determine if they would create any barriers for the BRF. The first comment regarded specifying consistencies with the EPA's trading Technical Memorandums, and MDE will seek EPA statement of sufficient consistency. Another issue identified dealt with the required 2:1 ratio for trades involving NPS credits, and since the BRF would be buying NPS credits to meet NPS reduction goal, as opposed to NPS credits to meet Point Source goals, a 1:1 ratio should suffice. The issue of capacity and performance credits between WWTPs was also brought up, but this issue is not applicable because under the BRF proposal, WWTP credits are not eligible for purchase. There were also MS4 trading and land application credits issues, which are not applicable to the BRF. There were concerns raised about MS4s and the trading geography, but in the proposal, it states that geography limits do not apply to the BRF initiative at the present time per rationales expressed in the Issue Paper; in the future, it could be revisited if necessary.

Mr. Michelsen stated that the State has a statewide TMDL which it needs to achieve and that sector divisions have been arbitrarily put in place to provide responsibility for the load reductions. Mr. Michelsen asked if the reductions are achieved, then why does the State need to trade using the BRF fund; why cannot the State be paying for cost-effective implementation outside of a trading program. Dr. George replied that the TMDL framework requires the State to allocate loads among sectors. The intent is to be transparent about who is responsible for what. Mr. Nees stated, hypothetically, that half of the allocations were for agriculture while the other half was for MS4s by permit; the State cannot say it is the responsibility of the agricultural sector until it is made their responsibility, which is highly unlikely. This means that the State will have to pay for the reductions. Mr. Michelsen stated that there are two sectors, the regulated sector, which has to take care of its loads, and the non-regulated sector, which is the State's load. Mr. Michelsen recommended paying for the non-regulated sectors load. Dr. George replied that there is a framework set up through the TMDL process. The other aspect of the allocation is that it allows the State to set up agriculture allocations, which serve as baselines for generating tradable credits. A construct has been developed for meeting the baseline in the agricultural

sector, which enables the farmer to generate credits if they do more and achieve reductions below their baseline.

Mr. Nees clarified and stated that the State should not disregard the allocations, but the application of the BRF credits to septic and MS4s does not make much sense. Mr. Michelsen reiterated that the proposal overcomplicates things and that the State should pay for the most cost-effective implementation. Ms. Thompson stated that trading inflates the cost of the credit because of verification, overhead, contracting, etc. It might only cost $100 per credit per year for Nitrogen to implement the practice and to generate the pound of reduction. Generating a pound of reduction is a different topic than generating a pound of credit for sale. Mr. Myers stated that was an initial concern and a pricing signal is needed to jump start the program. Ms. Thompson stated that it is unknown what the price of the credits will be, but mentioned that the farmers would not sell a credit for $100. Dr. George reminded the WQTAC that the credit price would be paid yearly for the length of the contract and that the proposal is open for discussion.

Ms. Wainger suggested demonstrating the transaction costs; establish the contract language and templates that could be reused. If the worst happens, the market has not been developed, but in the best case scenario, the State has helped the market develop. If a 15-year contract is equivalent to a bank and the credits could be resold, then the system may be able to overcome other concerns regarding buying credits. The State would be hedging its bets. Ms. Buchheister requested a sunset provision for when the market is up and running to develop an offset policy. A public participant stated that there is a need to be able to demonstrate to the agriculture sector that the program is real; there are farmers who are willing to test the program and the BRF proposal provides an excellent opportunity. Regarding the 50 additional MS4s coming online, most of them are fearful of the looming costs. Mr. Foster encouraged experimenting with the pilot project with the current MS4s.

Ms. Payne stated that the issue with the agricultural sector is the amount of time involved (5 to 15-year contract). An attachment to the deed of the property will be necessary in the case of the farmer's death or the sale of the farm because the contract will still be ongoing. The credit price is related to the rental value of the land. One of the most valuable resources in the State is its immense land preservation program because those lands are already in permanent easements and will always be agriculture. Credits from those farms would be less expensive and always available, which is extremely important to a buyer. There is almost 900,000 acres in Maryland that are in associated county land preservation programs. The State has a goal to have a little over a million acres in that program, which is roughly equal to one-half of the agricultural lands.

Dr. George outlined the next steps and the upcoming schedule for the BRF proposal. A meeting is expected to be held in October or November regarding more specific details of the BRF proposal and Issue Paper. The Issue Paper was distributed to the WQTAC and comments were

requested for discussion at the November WQTAC meeting. The hope is to develop some operating procedures to give people comfort in adopting the amendment, but also taking advantage of the opportunities to work through some of the issues which have been mentioned. Many members of the WQTAC expressed interest in attending the BRF proposal informational meeting.

Regarding AfG, discussions have been held since 2012 and a report came out in 2013 from the AfG Workgroup. This summer individuals met for an update regarding the AfG topic. There are three elements which still need to be pieced together. One includes tracking since the State does not have strong means of tracking land conversion over time. There are also issues with the water management administration in terms of operational details. Another piece includes the offsets and how the loads are changing. There is also a scale issue; the Basin scale or the site-level scale. Often times the nutrient reductions associated with the land use conversion from agricultural to urban land result in net reduction on a larger, Basin scale. Regarding the site-level scale, MDE is awaiting information from EPA Region 3. The third piece is that as the landscape is converting, the allocations among the sectors that inhabit that landscape are also changing. As crop land converts to developed land, there is a question of shifting of allocations from the agricultural sector to the urban sector, which has not been recognized since the TMDL was put in place in 2010. It is a management issue which is integral to the AfG policy. MDE is working through a document that is formatted similar to the sections in the Trading Manual, but is not completed. MDE is expecting to have a presentation on AfG policy at the November WQTAC meeting. The goal is to have the WQTAC vet the AfG policy and to have something in place by spring or summer of 2017 because the AfG policy will be an input to the Phase III WIP development process.

Mr. Myers requested example scenarios for a land use being converted to understand what is happening to the wastewater and stormwater loads and any ancillary loads which are separate from the actual land use conversion shown in the model runs. Mr. Myers stated that loads during construction from poor erosion and sediment control practices would also need to be covered. Land conversion during the transition period (i.e. construction period) often has loads associated with it that need to be discussed separately. Regarding site scale, the changes in the stormwater and wastewater need to be associated with that parcel.

5. UPDATES

Ms. Payne noted that MDA cannot provide the updated regulations at this time because the Code of Maryland Regulations (COMAR) is published only twice a year. Ms. Buchheister asked if MDE would be able to tell the WQTAC what the Virginia offset program looks like as Maryland begins to consider its program. Mr. Mascia stated that currently it is a guidance document and a statute which authorizes it and a State general permit requirement for phosphorous and new construction.

6. PUBLIC COMMENT

There were no public comments.

7. UPCOMING MEETINGS

Thursday, November 17, 1-4 p.m., CBF, 6 Herndon Avenue, Annapolis, MD 21403
Monday, December 12, 1-4 p.m., MDE, 1800 Washington Boulevard, Baltimore, MD 21230