Maryland Water Quality Trading Advisory Committee
Meeting Summary
Maryland Department of the Environment, Baltimore, MD
March 26, 2018

Committee Members in Attendance:

Patty Bubar	*Montgomery County Department of Environmental Protection*
Lynn Buhl	*Maryland Department of the Environment*
Valerie Connelly	*Maryland Farm Bureau*
Patricia Gleason	*US Environmental Protection Agency, Region 3*
Mark Hoffman	*Chesapeake Bay Commission*
Erik Michelsen	*Anne Arundel County Department of Public Works*
Shannon Moore	*Frederick County Sustainability & Environmental Resources Office*
Doug Myers	*Chesapeake Bay Foundation*
Susan Payne	*Maryland Department of Agriculture*
Chris Pomeroy	*AquaLaw, Maryland Association of Municipal Wastewater Agencies, Maryland Municipal Stormwater Association*
Sonal Ram	*Maryland Department of Transportation, State Highway Administration*
Dusty Rood	*Maryland State Builders Association*
Joe Tassone	*Maryland Department of Planning (*Alternate – Debbie Herr Cornwell)
Lindsay Thompson	*Maryland Association of Soil Conservation Districts, Maryland Grain Producers Association*
Al Todd	*Alliance for the Chesapeake Bay* (Alternate – Craig Highfield)
Dave Nemazie	*University of Maryland Center for Environmental Science*
Sara Walker	*World Resources Institute*

Facilitator:

Kathy Stecker

Other Attendees:

Ben Alexandro	*Maryland League of Conservation Voters*
Bob Buglass	*Washington Suburban Sanitary Commission*
Gregory Busch	*Maryland Department of the Environment*
Joel Caldwell	*Washington Suburban Sanitary Commission*
Michelle Crawford	*Maryland Department of the Environment*
Brenda Dinne	*Carroll County Department of Land & Resource Management*
Lori Graf	*Maryland Building Industry Association*
Ridge Hall	*Chesapeake Legal Alliance*
Christine Holmburg	*Maryland Environmental Service*
Chris Johnson	*Johnson, Mirmiran, & Thompson*

Steve Johnson	*Ballard Spahr LLP*
Jeremy Joiner	*Frederick County Sustainability & Environmental Resources Office*
Marya Levelev	*Maryland Department of the Environment*
Chris Phipps	*Anne Arundel County Department of Public Works*
Matt Rowe	*Maryland Department of the Environment*
Hans Schmidt	*Maryland Department of Agriculture*
Gary Setzer	*Maryland Department of the Environment*
Jennifer Smith	*Maryland Department of the Environment*
Bob Summers	*KCI Technologies*
Aaron Thomas	*Hazen and Sawyer*
Chris Trumbauer	*Hatcher Group/MCAC*
Lisa Wainger	*University of Maryland Center for Environmental Science*
Matthew Wessel	*Rodgers Consulting, Inc.*
Margaret Witherup	*Gordon Feinblatt LLC*

Action Items:

- Mr. Rowe will investigate which jurisdictions MDE is contacting for new/updated data.
- Mr. Rowe will investigate if the original projection will be used for counties that do not respond the request for new/updated data.
- MDE will follow up on which tools are being utilized for the projections.

Meeting Minutes:

1. WELCOME & INTRODUCTIONS

Ms. Stecker welcomed the meeting attendees, and everyone introduced themselves.

2. REVIEW OF THE SEPTEMBER 18 MEETING MINUTES

Ms. Stecker asked the Committee members for corrections or comments on the November 11 meeting minutes. No comments were provided and the minutes were approved as written.

3. TRADING REGULATIONS UPDATE

Ms. Buhl stated that the Maryland Department of the Environment (MDE) submitted the trading regulations on December 8, 2017. Ms. Buhl provided the Water Quality Trading Advisory Committee (WQTAC) with the Joint Committee on Administrative, Executive, and Legislative Review (AELR)'s letter, dated January 22, 2018, which places the trading regulations on indefinite hold. MDE responded to the AELR letter on February 6 noting the legal authority for the regulations and including correspondence that MDE received during the public comment period as requested by the AELR; most comments received were requests for clarification. MDE recently received a request from the AELR to respond specifically to comments submitted by the Maryland Clean Agriculture Collation. MDE has nearly completed the responses to all of the comments and will submit the draft final to AELR within the next two weeks; the draft final will

also be posted on the MDE website. MDE is in the process of creating forms for use in the generation, buying, and selling of credits and posting these activities on the registry. Ms. Buhl stated that once the regulations have been finalized, the manual will need to be reviewed again and possibly revised.

Mr. Hall asked when MDE will finalize their responses. Ms. Buhl responded that, once MDE has submitted the draft final responses to AELR and the 30 day period passes, MDE hopes to have the responses finalized by May 2018. Mr. Rood asked if the county representatives attending the meeting were relying on MDE's regulations, manual, and tools for moving forward with projects. Mr. Michelsen responded that most of the municipal separate storm sewer system (MS4) jurisdictions are relying on the trading regulations to be promulgated in order to be compliant with their current MS4s. Ms. Bubar responded that Montgomery County is working on a consent decree as a compliance mechanism, and while the consent decree does not include trading, Montgomery County is interested in the trading regulations becoming final.

Mr. Pomeroy stated that members of the Maryland Association of Municipal Wastewater Agencies expressed concerns regarding the change of performance-based limits to 3mg/L and how this change could adversely impact the credit supply in order to meet this new limit. Ms. Payne stated that the Maryland Department of Agriculture (MDA) is in the process of reviewing a farm in Harford County for a potential trade. Ms. Thompson stated that the agriculture community has been waiting for the credit trading program to pass as the State and counties are developing the Phase III Watershed Implementation Plan (WIP). Mr. Myers asked Ms. Buhl if the MS4 permits will need to be amended to allow trading and when this will be completed. Ms. Buhl responded that the MS4 permits should be amended soon after the regulations are adopted. Ms. Moore asked if and when the Wastewater Treatment Plant (WWTP) permits would also need to be amended to allow trading. Ms. Buhl responded that WWTP permits would need to be amended if the WWTPs intend to generate credits. Ms. Buhl stated that stormwater permits will need to be modified as demand for trading will be from the stormwater sector. Ms. Moore asked if the WWTP permit would need to be amended within the current MS4 cycle if an MS4 were to avail themselves with WWTP credits. Mr. Busch responded that WWTP permits would only need a minor modification which would not open the entire permit. Mr. Setzer stated that under the current trading regulations, WWTP permits would need to be modified.

4. ALIGNING FOR GROWTH UPDATE

Mr. Rowe stated that the previous Aligning for Growth (AfG) update preceded the planning targets developed by the Bay Program. These targets were used to generate the Chesapeake Bay total maximum daily load (TMDL). MDE placed AfG research on policy options, discussions, and historical approaches used in the Phase I & II WIPs on hold while it reviews the Environmental Protection Agency (EPA)'s draft planning targets. A midpoint assessment is being conducted to determine progress, as well as a gap analysis to determine what additional

load reductions are needed to reach the 2025 goal. This will allow MDE to determine what AfG policies are needed and will ensure that the Bay Program has the most accurate data for their growth projections. Mr. Rowe provided the committee with a table showing the original and updated quantities of new septic systems per year per county; the updated quantities were based on data obtained from local governments. Depending on the timeframe, the Maryland Department of Planning (MDP) updated growth simulation model will refine the Chesapeake Bay Program's projection.

Mr. Myers asked if the large reduction for projected new septic systems will create additional capacity for the wastewater sector. Mr. Rowe responded that the wastewater sector is researching if this reduction in septic systems will affect the gap and will determine which sectors/subsectors have the capacity to close the remaining gap. Mr. Myers asked if the 2025 goal can be met with current and proposed reductions, if alternative methods need to be developed to meet the 2025 goal, and how the gaps will be closed. Mr. Rowe replied that Maryland will need to contribute additional reductions to meet the 2025 goal; the gaps will be closed using the Phase III WIP. Mr. Myers reminded the committee that the projection would need to be expanded beyond 2025 if Phase III WIP is utilized. Mr. Rowe stated that the Bay Program is asking states how loads will be offset if a conservation plus scenario, 100ft buffers on all streams, was performed. The Bay Program will add this information to the model to determine how it will impact offsets and gaps.

Mr. Rowe reminded the committee that the EPA is requiring an AfG element in the Phase III WIP. Mr. Rowe stated the policy approach can be chosen after the gap analysis and planning targets are completed. Ms. Bubar asked which jurisdictions MDE is requesting new/updated information from. Mr. Rowe responded that MDE has reached out to all jurisdictions in order to update/refine the septic section of the AfG. Mr. Rowe will investigate which jurisdictions MDE is contacting for new/updated information. Mr. Rood asked why Harford and Howard counties were the only two listed on the provided table and why the original septic projection was much higher. Mr. Rowe responded that Harford and Howard counties provided the most relevant data and that the original projection was based on old zoning maps. Ms. Bubar asked if the original projection will be used for counties that do not respond to the request. Mr. Rowe responded that he will look into that. Ms. Moore asked if the projection tools being used for projections with MDP are zoning based or ESRI demographic based. Ms. Herr Cornwell responded that the model used zoning-based tools and were cross-checked with data received from local jurisdictions. Ms. Herr Cornwell did not know if ESRI demographic data were used in the projection. Ms. Moore asked MDE to follow up on the tools used for the projection.

Ms. Thompson asked, from a Bay model perspective, whether new data from December 2017 (incorporated in the Phase 6 calibration) will also be incorporated during the two year milestone period. Mr. Busch responded that the septic projections were not used in the Phase 6 calibration

and stated that Phase 6 was calibrated using data from 1985 to 2013. MDE is working with the Chesapeake Bay Program and Land Use Workgroup to obtain current zoning projections and that effort is expected to be completed within two months. Ms. Thompson stated that similar issues over the projection of data points were also discovered in the agriculture sector. Due to concerns regarding the use of outdated data skewing the scope of potential reductions, new data was used for the agricultural sector's Phase 6 calibration. Mr. Busch asked if the concern were related to possible errors in pre-2013 data. Ms. Thompson responded that the concerns were based on the use of outdated information.

Mr. Busch stated that the projections will be updated at each milestone period in order to course correct the milestone dates. Mr. Rowe added that the Chesapeake model is adaptive. Mr. Alexandro asked if AfG will address the issue of the Phase 6 model not crediting unverified best management practices (BMPs). Mr. Rowe responded that AfG practices will follow the BMP crediting verification process. Mr. Alexandro asked if there would be a significant difference between the current model, including unverified BMPs, with the new model, excluding unverified BMPs. Mr. Busch responded that this question will be answered in the discussion section of the WIP Updates presentation. Mr. Myers asked when MDE will suggest a new policy and when will it be approved. Mr. Rowe responded that MDE will begin discussing policy updates around late May to early June after the gap analysis is completed and the gaps are closed. Mr. Hall asked if the guidance documents with option scenarios discussed at previous meetings are still being utilized. Mr. Rowe responded that the policy portion will be on hold while the technical portion is investigated and the gaps are closed.

5. WIP UPDATES

Mr. Busch provided an update on the Phase III WIP. The Bay TMDL was established by the EPA in 2010 to ensure that all pollution control measures needed to fully restore the Bay and its tidal rivers will be in place by 2025. The TMDL sets load caps for nitrogen (N), phosphorus (P), and sediment within the six Chesapeake Bay States and Washington DC. The TMDL includes an accountability framework in order to develop WIPs, set two-year milestones, monitor progress, and establishes EPA consequences for inadequate progress. TMDL progress is measured by using computer models, evaluating milestones, and assessing water quality data. Ms. Bubar asked where the BMP data was obtained. Mr. Busch replied that BMP data is obtained from multiple sources and include MS4 annual reports, construction acres from subcontractors, discharge monitoring reports (DMRs) from WWTPs, data from the agricultural sector, and septic updates from the Bay Restoration Fund. Mr. Busch stated that after the data is received it is condensed and sent to the Bay Program for input into the model. Ms. Bubar asked if specific county data could be requested. Mr. Busch replied that, while specific BMPs can no longer be distinguished once the data has been condensed, contact information can be provided to interested parties to obtain specific BMP data by county. Ms. Thompson stated that one of the new visualization tools for the Phase III WIP can organize the data by county and BMP type.

Mr. Busch stated that the Phase I WIP was established in 2010 as a general plan with strategies to meet at least 60% of the total required reductions of N, P, and sediment by 2017 and 100% reductions by 2025. The Phase II WIP was created in 2012 to provide more detailed strategies and was developed using the Phase 5 model with extensive local engagement. MDE is evaluating the 2010 to present TMDL progress. The Phase III WIP will be developed using the Phase 6 model and will detail local goals to meet the required reductions of N, P, and sediment by 2025. Mr. Myers asked if local milestone goals will be programmatic or numeric. Mr. Busch responded that both numeric and programmatic data will be incorporated into the Phase III WIP.

Mr. Busch showed the committee pie charts for N and P loading reduction progress in Maryland: N loading in 1985 and 2017 was at 83.6 and 56 million pounds respectively and P loading in 1985 and 2017 was at 7.42 and 3.79 million pounds respectively. The 2025 goals for N and P are 45.3 and 3.60 million pounds respectively. Mr. Busch provided highlights for the developed sectors: 95% of municipal wastewater flow will be upgraded to enhanced nutrient removal (ENR) technology; National Pollutant Discharge Elimination System (NPDES) permits will cover 90% of impervious land and older 'untreated' stormwater systems will be retrofitted with stormwater controls; environmental site design will be conducted for stormwater improvement; and failing septic systems will be corrected to ensure public health standards are met.

Mr. Busch stated that the Phase III WIP is being developed at this time. In December 2017, the Phase 6 model, which includes monitoring data from 1985 to 2013, was approved; land cover analysis was improved using local government data; the Conowingo Dam project has increased monitoring efforts in that area; and the effectiveness of BMPs has been updated. Maryland's current progress towards the 2025 goal includes continuous improvement of the Bay's overall health, based on Maryland's robust funding programs/mechanisms, such as the Bay Restoration Fund, Chesapeake and Atlantic Coastal Bays Trust Fund, and Maryland Agricultural Cost Share; significant load reductions from the wastewater and agriculture sectors; reductions in air source contributions; development of the next generation stormwater permits; and the establishment of the Trading program.

Mr. Myers suggested that, during the Phase III WIP planning period, each funding source should target the best load reductions within each sector. Mr. Busch stated that the review period is a good time to make adjustments to all portions of the program. Additional effort from Maryland will be required as the new model shows Maryland's discharge is more impactful on the Bay than previously anticipated and proposed projects might not meet the 2025 reduction goal. Mr. Nemazie stated that one of the guiding principles for the Phase II WIP included all sectors participating in nutrient reduction projects, and with some sectors implementing more BMPs than others, these additional reductions could be traded to another sector, thus resulting in more cost-effective implementation. Mr. Nemazie asked if the Phase III WIP will still have this as a

guiding principle. Mr. Busch replied that the equity based approach used in the TMDL and Phase I and II WIPs will continue to exist as MDE's long-term goal to meet nutrient reductions on a sector-wide scale although a more flexible approach should be taken when looking at the 2025 goal. The Trading program will enable the sectors to meet their respective reductions until they can fully meet them without needing credits. Mr. Nemazie asked when Blue Plains and other Baltimore WWTPs will become fully operational. Mr. Busch responded that 56 of the 67 WWTPs have been completed; Blue Plains WWTP has been operating with ENR technology for several years; Back River WWTP went online in September 2017 and is operating below 4mg/L; and Patapsco WWTP will come online within the next few years. Mr. Nemazie stated that additional nutrient reductions from the wastewater sector will become more challenging as the 2025 deadline approaches. Mr. Busch stated that additional nutrient reductions from the agricultural sector will be challenging as well.

Mr. Alexandro asked how nutrient reductions are being achieved for the air sector. Ms. Wainger responded that EPA stated that clean power plants were not included in the projections. Mr. Hall suggested moving the reserve ratio into a retirement ratio in order to ensure the uncertainty ratios are able to result in a net overall reduction of pollution. Mr. Busch responded that coordination occurs regularly. Mr. Michelsen asked if the wastewater nutrient reductions were based on a fixed limit or on the DMRs. Mr. Busch responded that the wastewater nutrient reductions for 2017 were based on DMRs from Fiscal Year (FY) 2017; the numbers do not incorporate the Back River WWTP upgrade. Mr. Alexandro asked, since most WWTPs are performing at the lowest reduction as currently possible, if counties should develop financial insurance plans for credits traded within their own WWTPs, or should they put money in other sectors (e.g., agricultural projects).

Mr. Busch responded that MDE is looking into county-developed plans for more cost-effective reductions. Mr. Busch stated that having WWTPs operating at a lower concentration will bring reductions that are not necessarily reflected in the performance of the WWTPs unless these reductions result in additional performance enhancements. Mr. Busch stated that the Phase III WIP will be a culmination of many things. The Phase II WIP included many ideas that will be brought to the Phase III WIP planning process in county plans and soil conservation district implementation strategies. The wastewater permits, which reflect allocations assigned under the Bay TMDL, MS4 permits, which include financial assurance plans, and TMDL implementation plans bring the counties into the planning process to address local TMDLs. The goal is to apply the funding mechanisms in the most cost-effective manner while addressing localized issues. Finally, the Water Quality Trading program is an integral part of the Phase III WIP. Mr. Myers stated, regarding AfG, that choosing more permanent load reduction practices will lead to continuous reductions past the 2025 goal. Mr. Busch agreed that load reductions should not just reach the 2025 goal, but also go beyond to new future goals.

Mr. Busch stated that MDE is currently calculating the size of the gap remaining and how the 2025 goal can be achieved. Maryland is required by EPA to meet the reductions at a state basin level. Ms. Bubar asked if the gap analysis will be at the state level and if it would recommend which sectors will need additional reductions. Mr. Busch responded that the gap analysis will project each county's current and planned reductions to 2025 to obtain a state reduction level and show what reaming reductions must be performed for each sector at a county level. MDE is currently at the initial State scenario step in the provided schedule. The next steps are to complete an "optimized" final draft State scenario, close all gaps by fall of 2018, complete county goals by sector, and develop countywide targets by June 2019.

Ms. Connelly asked if the gap discussion and closure process will be open to the public. Mr. Busch responded that all parties will be able to participate in the gap closure. Ms. Bubar asked if the gap will be discussed at the county level and sector level, or the county level and the sectors within the counties. Mr. Busch responded that MDE has not decided yet and requested the committee's feedback. Mr. Myers stated that the stakeholder meetings should be held at the county level with representatives from each sector as county targets are being set. Mr. Nemazie reminded the committee that the Hughes Center of Agro-Ecology held a series of workshops for the development of the Phase II WIP which were well received although it was at a regional scale. Mr. Busch stated that five Phase III WIP regional meetings will be held between May and June 2018 to bring all the sectors together for reduction updates. The Phase III WIP considerations include: identification of pollution reductions already being performed, what can be accomplished by 2025, identification of any gaps and strategies to fill them, determining funding needs for implementing these strategies, discussion on the pace for implementations beyond 2025, AfG, Conowingo loadings, climate change, and local engagement and goals. Mr. Busch provided a schedule for the committee: review of Maryland's draft planning targets should be completed by Spring 2018; the five Phase III WIP regional meetings will be held from May to June 2018; technical webinars will be held during Summer 2018; the draft Phase III WIP is expected to be completed by March 2018; and the final Phase III WIP is expected to completed by June 2019. Mr. Busch stated that Maryland's draft planning targets will be presented at the regional meetings.

Mr. Busch stated that the overall health of the Bay continues to improve, and although the 2025 targets are achievable, more effort will be required to meet them. MDE is currently conducting the gap analysis and regional meetings will be held in May and June. The Phase III WIP will be discussed in further detail at the next WQTAC meeting; the committee was informed that the Phase III WIP Outreach Coordinator is Kathy Stecker. Mr. Myers requested that the next meeting be held when the Phase III WIP trading regulation information is available. Ms. Buhl asked the committee if WQTAC meetings should continue to discuss WIPs and AfG. Ms. Bubar stated that the WQTAC forum is helpful. Mr. Hoffman suggested that an advisory committee be created to obtain opinions and suggestions for public stakeholders. Mr. Alexandro asked that

smaller stakeholders that attend the WQTAC be included. Ms. Stecker suggested that at least one additional meeting should be held to tie up loose ends. Mr. Pomeroy suggested that the current financial capacity for additional reduction aspirations and the realistic ability to accelerate or add reduction programs to meet the 2025 goal should be discussed at the next meeting. Ms. Bubar suggested that the gap analysis and the financial situation be discussed. Ms. Stecker provided additional topics that could be discussed: permanence of BMPs, trading between wastewater and stormwater within a county, data flow for BMPs, if targeted funding is warranted, and interactions between trading and the Phase III WIP.

Mr. Phipps asked if the load reduction contributions of other states will decrease when Maryland's contributions increase or if all state contributions increasing. Ms. Thompson responded that, per decisions made at the Water Quality Goal Implementation Team level, the other states in the Chesapeake Bay Watershed cannot decrease their contributions below what was previously committed for the Phase 5 model or during FY 2018. Mr. Phipps asked if the baseline was inaccurate. Mr. Nemazie responded that some of the efficiencies of reductions included in the Phase 5 model did not meet its goals. Mr. Phipps asked if Maryland's definition of "efficiency" was used for the Phase 5 model. Mr. Nemazie responded that the Bay Program's definition of "efficiency" was used and is based on a Technical Review. It was stated that Maryland's contribution has been increased due to its greater impact on the Bay's TMDL; N was found to impact the Bay much greater than previously thought while P impact was much lower than previously thought. Mr. Phipps asked if the updated septic system projection would affect Maryland's contribution. Ms. Thompson responded that the updated septic system projection corrected an effectiveness issue, not a contribution issue. Mr. Phipps asked if each state/county was using the same BMPs. Mr. Nemazie responded that each BMP has different delivery rates for each state/county. Ms. Thompson stated that the greatest factor that increased Maryland's contribution is that a pound of N produced/reduced in Maryland is more impactful due to its proximity to the Chesapeake Bay than if performed in any other state. Mr. Phipps asked if Maryland's increased contribution changed the bottom line. It was stated that comparing Maryland's increase in effort to an increase in the base line would be difficult due to many factors. Ms. Bubar asked if this description change can be found on EPA and the Bay Program's website; it was replied yes.

Ms. Buhl stated that interstate trading will need to be discussed at a future time. The Blue Plains WWTP is included in the Bay calculation, but it discharges to the Potomac River and cannot currently participate in the trading program since the WWTP is not in Maryland. Ms. Buhl asked if Blue Plains should be able to participate in the trading program. Mr. Johnson asked if Blue Plains could receive credit for the portion of Maryland water that it treats. Ms. Buhl responded that the regulations state that the credits must be generated in Maryland.

UPDATES

There were no updates.

6. PUBLIC COMMENT

Mr. Alexandro stated that the Maryland League of Conservation Voters is looking forward to discussions regarding local engagement for the Phase III WIPs and asked that future meetings discuss how counties and local leaders can become engaged.

7. UPCOMING MEETINGS

Ms. Stecker asked the committee if the next WQTAC meeting should be held in June 2018. Ms. Thompson responded that the committee should meet in June only if the gap analysis is complete and shareable at that time. Ms. Stecker stated that the next meeting will provide a trading update, an AfG update, and a Phase III update. Mr. Myers requested that permitting details should be discussed as well. Ms. Moore requested that the gap analysis and the draft planning targets be separated by sector.

The next WQTAC was tentatively set for June 2018.