



## Maryland Commission on Climate Change Scientific and Technical Working Group Meeting

### Summary of October 17, 2016 Meeting

**Meeting agenda and the STWG.** The meeting was held at the University System of Maryland Office, Adelphi, Maryland. The agenda for the meeting follows this summary. Working Group members present in person or by telephone were Don Boesch, Eric Davidson, Belay Demoz, Russ Dickerson, Gerrit Knaap, Fernando Miralles-Wilhelm, Amir Sapkota, Adel Shirmohammadi, Eric Wachsmann and Dave Vanko. Pat Harcourt (UMCES) attended to take notes of the meeting. Other telephone participants were Lee Curry and Brian Hug of the Maryland Department of the Environment (MDE). Chairman Boesch announced that he has recommended the formal appointment to the STWG of Dr. Miralles-Wilhelm, Sapkota and Shrimohammadi to Secretary Ben Grumbles.

**Climate Change Commission's Annual Report.** Chairman Boesch reported that the Commission is working to finalize its 2016 Annual Report and its recommendations. The full Commission will meet on October 21 to approve the recommendations and on November 9 to finalize the report. The STWG is contributing two technical reports to inform the Annual Report and must complete its recommendations at this meeting.

**Methane report.** Discussion focused on a draft of the STWG report to the Commission on methane emissions in Maryland that was distributed in advance of the meeting. This discussion included the assumptions in the formulaic emissions inventories of EPA and MDE, methane emissions from Marcellus shale gas production, emissions from natural gas storage fields in western Maryland, limitations in the direct regulatory authority by the state on natural gas production and transmission, opportunities for reducing emissions from agriculture and landfills, and emissions from natural systems that might not be captured in the inventories but are affected by human activities. These inputs and any comments received by October 24 will be used in revising the STWG's draft report.

**Report on re-examining projected climate changes.** A draft of the STWG report to the Commission was distributed that re-examines the projections of temperature, precipitation and sea-level rise in Maryland during the 21<sup>st</sup> century. This report is just an update on projections, taking into account the IPCC Fifth Assessment, the National Climate Assessment, and recent published research on sea-level rise, and not a comprehensive update of the STWG's 2008 assessment. Comments on the draft are due on October 24.

**Framework for assessments on agriculture and Chesapeake Bay restoration.** The addition of Dr. Shrimohammadi to the STWG will facilitate the engagement of Maryland scientists and engineers in the assessment of climate change impacts on agriculture that is mandated in the Commission's enabling legislation. This assessment should also consider options for reducing

greenhouse gas emissions from the agricultural sector and would be a major focus of STWG activities in 2017. Dr. Currey provided an overview of the efforts of the Chesapeake Bay Program to consider how to take into account the effects of climate change in the mid-point assessment of the Total Maximum Daily Load (TMDL) and associated Phase III Watershed Implementation Plans. He agreed to distribute a document that lays out the options and invited the STWG to help advise the Maryland Principals (cabinet-level officers) as negotiations take place beginning in December. Chairman Boesch requested comments on this options paper and agreed to engage experts on the STWG and associated institutions in providing this advice.

**Recommendations for the 2016 Commission report.** Draft recommendations from STWG for consideration in the Commission's Annual Report were discussed. Taking into account this discussion and comments received by email over the next two days, the following recommendations were forwarded to the Climate Change Commission:

- Methane emissions presently contribute only a small part of Maryland's GHG emissions, nonetheless actions should be taken to:
  - Incrementally reduce methane emissions from major in-state sources (landfills, wastewater treatment, agriculture and natural gas distribution) to the degree practicable;
  - Account for out-of-state emissions associated with production and processing of natural gas consumed in Maryland; and
  - Ensure that potential natural gas production and transshipment in Maryland have strict federal or state controls on emissions, or effective offsets, to avoid adding to the state's methane emissions.
  - Directly evaluate the rate of methane emissions from such poorly quantified sources, such as landfills and old wells and coal mines, that might be mitigated.
- Broaden impact analyses of the costs and benefits of mitigation options beyond conventional economic metrics to better account for employment, human health and well-being, social vulnerability and environmental quality.
- Enhance GHG emission inventories by better quantifying presently poorly accounted for sources, including "natural" sources and sinks such as wetlands and surface waters affected by human activities and management strategies.
- Revise or fine-tune adaptation and response strategies in light of updated climate impacts assessment. In the near term:
  - Incorporate probabilistic sea-level projections in coastal resilience planning; and
  - Take climate change into account in Chesapeake Bay restoration, while recognizing uncertainties of its effects on Total Maximum Daily Load limitations.

**Work plan and schedule for 2017.** Members indicated their preference for scheduling in advance four meetings of STWG during 2017. Chairman Boesch will poll member availability for candidate dates and set the schedule before the end of the year. A draft work plan based on the STWG discussions will also be proposed by email correspondence.



**Maryland Commission on Climate Change  
Scientific and Technical Working Group Meeting**

October 17, 2016

Chancellor's Conference Room, University System of Maryland Office,  
3300 Metzert Road, Adelphi, Maryland

Call-in Number: 877-366-0711 • Access Code: 97769289#

**Agenda**

- 10:00 am Introductions and review of agenda
- 10:10 am Climate Change Commission activities and annual report
- 10:30 am STWG contributions to the 2016 Commission report\*  
Methane report\*\*  
Emerging insights on Maryland's climate change vulnerability  
Framework for assessments on agriculture and Chesapeake Bay restoration
- 11:00 am Recommendations for the 2016 Commission report
- 11:15 am Work Plan and schedule for 2017
- 11: 45 am Developments and directions in climate and energy research in Maryland
- 12:00 pm Adjourn

\* see attached outline

\*\* draft separately distributed