



Chesapeake Bay Program
SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE
645 Contees Wharf Road, P.O. Box 28, Edgewater, MD 21037
Phone: (410)798-1283 Fax: (410)798-0816
www.chesapeake.org/stac

February 4, 2013

RE: STAC Marcellus Shale Workshop Report

Nicholas DiPasquale, Director, Chesapeake Bay Program
U.S. Environmental Protection Agency
410 Severn Avenue, Suite 109
Annapolis, MD 21403

Cc: Management Board, Modeling Workgroup, Land Use Workgroup, STAR

Dear Mr. DiPasquale,

Please see the attached STAC workshop report entitled, "Exploring the Environmental Effects of Shale Gas Development in the Chesapeake Bay Watershed." This report provides a summary of STAC's April, 2012 workshop. The report also includes specific recommendations identified by workshop attendees. Attendees recommended the following:

- Evaluate existing monitoring data to begin to assess the impact that Marcellus Shale drilling, production, and transport activities may have on sediment loading to the Bay.
- Implement monitoring of nitrogen deposition which may be very high locally near gas rigs, compressor stations, and processing plants.
- Add infrastructure associated with Marcellus Shale gas drilling, production, and transport into Chesapeake Bay land cover/land use maps.
- Investigate if any existing CBWM (Chesapeake Bay Watershed Model) land uses may be appropriate for simulating the land uses associated with these Marcellus Shale gas play activities by undertaking simulations with a range of parameter values.
- Investigate if the sediment loss from dirt and gravel roads used for gas development and production are effectively simulated in the CBWM.
- Provide a framework to centralize the data for well pads, pipelines, road ways, and rapid land use/cover changes.

- Investigate any scale-effects (cumulative effects) associated with using the CBWM to effectively simulate the sediment loading from Marcellus Shale drilling, production, and transport activities.
- Investigate how the Marcellus Shale gas play may affect land use/land cover future projections, and in turn, how those adjusted projections affect nutrient and sediment loads to the Bay.
- Implement real-time monitoring at headwaters where shale gas development is taking place or proposed.

We hope these recommendations are useful, and STAC looks forward to your feedback. Inclusion of such considerations are likely to increase model accuracy, improve confidence in monitoring activities, and provide the entire Partnership with a better understanding of the state-of-the-science on shale gas development in the Chesapeake Bay Watershed.

STAC respectfully requests a written response to the above specific recommendations from the CBP Management Board Chair by Thursday, April 4, 2013.

Please direct any questions you may have about this report and its recommendations to Natalie Gardner, the Chesapeake Bay Program's Scientific and Technical Advisory Committee Coordinator, and STAC member (workshop lead), Kurt Gottschalk (USDA-FS).

On behalf of the entire STAC, thank you again for considering these recommended next steps, and we look forward to working with you closely on this in the future.

Sincerely,

A handwritten signature in black ink, appearing to read 'KH' with a long horizontal stroke extending to the right.

Kirk Havens
Vice Chair, Chesapeake Bay Program's Scientific and Technical Advisory Committee

On Behalf of Chris Pyke Chair, Chesapeake Bay Program's Scientific and Technical Advisory Committee