LOWER SUSQUEHANNA RIVERKEEPER * POTOMAC RIVERKEEPER
SHENANDOAH RIVERKEEPER * UPPER POTOMAC RIVER MANAGER
EARTHJUSTICE

December 9, 2011

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New York Dept. of Envir. Conservation
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Michael Krancer, Secretary
Pennsylvania Dept. of Environmental Protection
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Dept. of Environmental Protection
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Robert M. Summers, Secretary
Maryland Dept. of the Environment
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Dear Sirs:

We write to emphasize the critical importance and legal requirement to address the adverse water quality effects of hydraulic fracturing in the Marcellus Shale in your Chesapeake Bay TMDL Phase II Watershed Implementation Plans (WIPs).

Applicable Law

After decades of water quality decline in the Chesapeake Bay, and the failure of several voluntary interstate agreements to resolve the problem, the U.S. Environmental Protection Agency, at the request of the Bay watershed jurisdictions, in December 2010 adopted the Chesapeake Bay TMDLs. The seven Chesapeake Bay jurisdictions have each committed to develop and submit Phase II WIPs that set forth specific strategies to ensure compliance with the nitrogen, phosphorus, and sediment loadings allocated in the Chesapeake Bay TMDLs.[1]

In order for the Chesapeake Bay water quality goals to be achieved, states overlying the Marcellus Shale and other oil or gas reservoirs must prevent and prohibit the sedimentation effects of hydraulic fracturing activities. In particular, reductions from existing pollution-discharging sources in the oil and gas sector must be included in the states' Phase II sub-

[1] Guide for Chesapeake Bay Jurisdictions for the Development of Phase II Watershed Implementation Plans, March 30, 2011.

allocations. Further, because the final Bay TMDLs did not include allocations for new pollution discharges from oil and gas operations, any new discharges must be strictly prohibited.

In addition to the commitment to develop and implement the Chesapeake Bay TMDL WIPs, the Bay jurisdictions have a responsibility, under the Clean Water Act (CWA) to implement controls on nonpoint sources of water pollution, including sedimentation from oil and gas activities. Under the Act, a TMDL "represents the cumulative total of all 'load allocations' which are in turn best estimates of the discrete loading attributed" to all sources of pollution, including nonpoint sources.[2] The CWA requires states to develop and implement a continuing planning process, in which they are required to plan for achieving the water quality goals set in the TMDLs, as well as effluent limitations and schedules of compliance with applicable water quality standards and other requirements of the Act.[3]

In sum, in order to comply with the water quality goals set forth in the Chesapeake Bay TMDL, the CWA requires that Bay jurisdictions include plans for controlling the increased sediment loading resulting from oil and gas activities, especially the intensive development of the Marcellus Shale, in both their continuous planning processes and their Phase II WIPs. Those activities include not only construction of well pads, impoundments, and access roads but also the construction and decades-long operation of pipelines and other infrastructure.

Background on Hydraulic Fracturing and Sediment

Unless adequately controlled, the construction and operation of oil and gas extraction facilities, especially in the Marcellus Shale region, will have significant adverse effects not only on the local receiving waters, but collectively on the water quality in the Chesapeake Bay Watershed. If not addressed, these pollution discharges will prevent the states from achieving the water quality goals of the Chesapeake Bay TMDLs. The extraction facilities, roadways used to access them, and pipelines used to transport the oil and gas to market will cause significant erosion, sediment and storm water discharge into the Bay. This is of particular concern because oil and gas facilities are generally subject to less stringent regulation than other types of construction sites, although they produce the same negative water quality harms.[4]

There is ample evidence that oil and gas activities conducted without adequate erosion or sediment control cause substantial sediment loading. Studies have shown that even in the case of

[2] *Dioxin/Organochloride Center v. Clarke*, 57 F.3d 1517, 1520 (9th Cir. 1995).

[3] 33 U.S.C. §1313(e).

[4] Michele C. Adams, P.E. LEED AP, Evaluation of Erosion and Sediment Control and Stormwater Management for Gas Exploration and Extraction Facilities in Pennsylvania under Existing Pennsylvania Regulations and Policies to Determine if Existing Safeguards Protect Water Quality in Special Protection Waters of the Delaware Basin for the Delaware River Basin Commission (November 15, 2010).

small rainfall events or short exposure times, sedimentation at these sites is substantial, requiring adequate erosion and sediment protection. A 2005 U.S. Environmental Protection Agency concluded that "gas well sites have the potential to negatively impact the aquatic environment due to site activities that result in increased sedimentation rates."[5] This study goes on to recommend that state and local governments regulate erosion and sedimentation on these sites in a manner similar to the point-source permits applied to conventional construction sites. Additionally, the EPA has concluded that roads that are constructed or altered in order to access the gas extraction or exploration facilities themselves also contribute significantly to sedimentation and degradation of surface water quality.[6] Pipeline construction and operation also add to erosion, sedimentation, and storm water runoff, because soils are exposed over long distances as trenches are cut, and rights-of-way cut through forest must remain cleared for the lifetime of the pipelines.[7]

Current efforts to prevent and eliminate increased sedimentation from oil and gas extraction activities are either nonexistent or inadequate. In Pennsylvania, for example, one review conducted for the Delaware River Basin Commission ("DRBC") found that "existing environmental regulations and policies of the Commonwealth of Pennsylvania, either as enacted by the Commonwealth or implemented by the Pennsylvania Department of Environmental Protection (PaDEP), *do not provide adequate performance standards, review, implementation, or enforcement to protect the Commonwealth's water resources*, including the Special Protection Waters of the Delaware River Basin." *See* Adams, supra note 4, unnumbered pg. 1 of Exec.

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[5] Kenneth E. Banks, Ph.D., United States Environmental Protection Agency, Final Report for Catalog of Federal Domestic Assistance Grant Number 66.463 Water Quality Cooperative Agreement for Project Entitled "Demonstrating the Impacts of Oil and Gas Exploration on Water Quality and How to Minimize these Impacts Through Targeted Monitoring Activities and Local Ordinances" (2005), *available at* http://http.epa.gov/npdes/pubs/oilandgas_impactgrant.pdf.

[6] United States Environmental Protection Agency "Erosion, Sediment and Runoff Control for Roads and Highways", Office of Water (4503F) EPA-841-F-95-008d, December 1995, available at: http://water.epa.gov/polwaste/nps/runoff.cfm.

[7] Comments on Environmental Assessment of MARC I Hub Line Project, Exhibit G, FERC Docket No. CP10-480-000, Submittal 20110711-5189 (filed Jul. 11, 2011) (statement of Susan Beecher, Executive Director, Pike County [PA} Conservation District (July 8, 2011)), *available at* http://elibrary.ferc.gov/idmws/docket_sheet.asp. Ms. Beecher reports:

> Right of way widths are increasing, additional "temporary workspace" requests are granted without question, and formerly forested areas are being converted to grass with little consideration for associated riparian impacts or post-construction stormwater volume increases. The entire right of way is cleared and graded early in the project and remains in an unstabilized state for long periods of time. Disturbed approaches to wetlands and stream crossings, often with very steep slopes and totally inadequate vegetated buffer strips (10 feet is the norm) are particularly prone to uncontrolled runoff and sediment discharge. The . . . process almost guarantees water resources impacts because there is too much earth disturbance over prolonged periods to allow for adequate E&S best management practice (BMP) installation and maintenance, timely inspections and effective enforcement.

Id., Exhibit G, at 1.

Sum. (emphasis added). Further, "by grandfathering the exploratory wells that were permitted by PaDEP prior to the June 14, 2010 and July 23, 2010 Supplemental Determinations of the DRBC, DRBC has effectively held these facilities to a lower environmental standard than that which is applied to other activities within Pennsylvania." Yet, because "negative water quality impacts related to sediment discharge and stormwater management from these facilities can and do impact existing water quality, these facilities cannot be exempt from the requirements to protect and maintain Special Protection Waters, or subject to lower regulatory requirements than other construction and industrial activities." *Id*. Pennsylvania's Phase I WIP suggests that the state intends to rely on its Erosion and Sedimentation Control General Permit (ESCGP-1) as its sole or primary means of preventing oil and gas activities from preventing achievement of the Chesapeake Bay TMDLs. For reasons not limited to the foregoing discussion, this is simply not enough.

Although the above examples pertain to Pennsylvania, the same problems and principles apply to the other states with oil and gas development. Oil and gas facilities in all Bay states and of all sizes contribute sediment pollution to the Chesapeake Bay watershed, regardless whether states until now have allowed certain facilities to be "grandfathered" or to operate under less stringent controls than those required for conventional construction sites. Furthermore, failure by the states to control and monitor sediment contributions from oil and gas facilities will exacerbate the need for higher-cost reductions from municipalities and other regulated sectors. Therefore, strategies to control and prevent the otherwise inevitable increases in sedimentation and erosion that result from construction and operation of oil and gas extraction facilities, especially in the Marcellus Shale region, must be developed and implemented through the states' Phase II WIPs.

Conclusion

In their Phase II Chesapeake Bay Watershed Implementation Plans, the Bay jurisdictions must "demonstrate reasonable assurance that Bay TMDL allocations will be achieved and maintained and the means by which any new or increased pollution loadings not accommodated in the TMDL will be offset."[8] For the reasons outlined above, in order to satisfy this requirement, Bay jurisdictions must address sedimentation resulting from oil and gas activities on the Marcellus Shale in developing and submitting their Phase II WIPs.

[8] Guide for Chesapeake Bay Jurisdictions for the Development of Phase II Watershed Implementation Plans, March 30, 2011.

Thank you for your cooperation in working towards the water quality goals embodied in the Chesapeake Bay TMDL.

Sincerely,

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