



Via Email (hanlon.edward@epa.gov) and U.S. Mail

Mr. Edward Hanlon
Designated Federal Officer
EPA Science Advisory Board (1400F)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

February 28, 2011

Re: Comments on EPA's Draft Hydraulic Fracturing Study Plan

Dear Mr. Hanlon:

Riverkeeper is a member-supported watchdog organization dedicated to defending the Hudson River and its tributaries and protecting the drinking water supply of nine million New York City and Hudson Valley residents. For decades, Riverkeeper has worked with local, state and federal agencies on a variety of enforcement and permitting issues to further our mission to protect water quality.

On March 29, 2010 we submitted comments on EPA's "Proposed Research Approach for Studying the Potential Relationships Between Hydraulic Fracturing and Drinking Water Resources" for consideration by the Science Advisory Board (SAB.) Pursuant to the Federal Register Notice published February 9, 2011[FRL-9264-5], Riverkeeper hereby submits the following comments on EPA's Draft Hydraulic Fracturing Study Plan (Draft Plan.)

Our March 2010 comments proposed the following specific topics for SAB consideration during the advisory process:

1. The adverse impacts to groundwater supplies associated with all aspects of hydraulic fracturing; including but not limited to groundwater consumption; wastewater containment and disposal; potential contamination through existing pathways such as abandoned wells and existing geological faults and fractures; and spills and leaks.
2. The adverse impacts to surface water supplies associated with all aspects of hydraulic fracturing, including but not limited to surface water consumption, wastewater containment and disposal, the addition of impervious surfaces, stormwater impacts, and spills and leaks.
3. The cumulative impacts to drinking water resources (both groundwater and surface water supplies) from region-wide industrial gas drilling utilizing hydraulic fracturing.
4. The need for actual field studies to supplement any review of existing literature and data.

We were pleased to note that the Draft Plan included all of our recommended topics and we commend the SAB for planning to analyze impacts to water supplies throughout the entire natural gas production cycle. The only shortcoming we have identified in the Draft Plan is the lack of robust analysis of the cumulative impacts on water quality. While the Draft Plan thoroughly examines cumulative impacts to surface and groundwater quantity and quality associated with water withdrawals, there is little specific analysis of impacts to surface water quality associated with issues other than water withdrawals. These issues would include impacts arising from deforestation, road construction, vehicle emissions, the addition of impervious surfaces at well sites, and stormwater runoff during the life cycle of drilling operations, from low density well spacing to build-out conditions. The prospective scenario analyses should include changes in land use as gas exploration expands and well densities increase to build-out on a regional level. The land disturbances associated with intensive gas development on cleared land with erodible soils and/or steep topography would likely impair surface water quality to a greater degree than would surface or groundwater withdrawals, especially as well densities increase over time. For this reason, we recommend that the SAB include in the final Plan a prospective (as well as retrospective) analysis of the cumulative impacts of land disturbances on surface water quality as ancillary drilling activities and well densities increase within the shale play regions. These analyses would complement the SAB's *in situ* studies to provide a thorough assessment of the impacts to water quality associated with gas drilling operations.

We commend EPA for recognizing the crucial role that public participation plays in development of science-based environmental policy. Thank you for the opportunity to comment on these important issues.

Sincerely,



William Wegner
Staff Scientist