



County of Fairfax, Virginia

MEMORANDUM

DATE: July 14, 2014

TO: Board of Supervisors

FROM: Stella Koch, Chairman *Stella M. Koch*
Environmental Quality Advisory Council

SUBJECT: EQAC position on the potential for hydraulic fracturing in the George Washington National Forest

Recommendation

At its meeting on May 14, 2014, the Environmental Quality Advisory Council approved, by a unanimous vote of members present (with three recusals), a recommendation that the Board of Supervisors join other localities in support of the proposed ban on horizontal drilling in the George Washington National Forest until environmental concerns are addressed. The members who recused themselves from the vote were: Robert McLaren (At-Large); Richard Weisman (Sully); and Larry Zaragoza (Mount Vernon). After further discussion, EQAC confirmed that position at its June 11 meeting by a unanimous vote of members present (please note that Robert McLaren and Richard Weisman were not present at that meeting). At its July 9 meeting, EQAC approved this letter to transmit this position to the board, again by a unanimous vote of members present, with Robert McLaren and Richard Weisman recusing themselves from the vote (please note that Larry Zaragoza was not present at the July meeting).

Brief Examination of Issues, Concerns and Suggestions

The U.S. Forest Service is in the process of revising its management plan for the George Washington National Forest. As part of that effort, the Forest Service is considering the extent to which, if any, horizontal drilling should be allowed within the national forest. Portions of the national forest are located above the Marcellus shale formation, which is a natural gas-bearing formation that extends from southern New York State to eastern Kentucky. Hydraulic fracturing or “fracking” is typically used in conjunction with horizontal drilling. Horizontal drilling and fracking would be needed to extract the natural gas from this formation. The Draft Forest Plan for the national forest would establish that horizontal drilling for gas or oil (which would include fracking) would not be allowed. The oil and gas industry has, however, recommended that this proposed ban be removed, arguing that extraction of natural gas can

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occur in a manner that would have minimal environmental impact. The Forest Service's proposed ban is being considered at this time.

The draft management plan and associated oil and gas decisions were subject to an Environmental Impact Statement, and the comment period for the draft plan and EIS closed in 2011. At this time, the Forest Service's Regional Forester is considering the fracking issue; it is uncertain when she will issue a report with a decision on this question. While no new comments are being accepted on the draft plan and EIS, the Forest Service will accept comments, outside of the official comment period, from any interested party.

The question of horizontal drilling and fracking in the George Washington National Forest is important to Fairfax County because a substantial portion of the national forest is located within the watershed of the Potomac River. Fairfax County relies on the Potomac River as its largest water supply resource, so the contamination of the Potomac would have a significant impact on Fairfax County residents, businesses and organizations.

At EQAC's May 14, 2014 meeting, the council heard from representatives from the American Petroleum Institute, Earthworks and Fairfax Water. Based on this discussion and its subsequent consideration of the horizontal drilling and fracking issue, EQAC members identified a series of concerns that they indicated should be addressed before horizontal drilling and fracking should be allowed within the national forest, or anywhere within the watersheds supplying water to the people of Fairfax County. The issues were discussed further at the June 11 EQAC meeting, with the assistance of the former Director of the Virginia Department of Mines, Minerals and Energy (participating in the discussion as an informed individual/resource and not representing DMME). Potential impacts being studied by United States Environmental Protection Agency (USEPA) and additional concerns raised by EQAC members are as follows:

Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water

Resources: The USEPA is engaged in a study to evaluate the following water supply issues.

- Water acquisition: What are the possible impacts to drinking water resources of large volumes of water withdrawals from ground and surface waters?
- Chemical mixing: What are the possible impacts to drinking water resources of hydraulic fracturing fluid surface spills on or near well pads?
- Well injection: What are the possible impacts to drinking water resources of the injection and fracturing process?
- Flowback and produced water: What are the possible impacts to drinking water resources of flowback and produced water (collectively referred to as "hydraulic fracturing wastewater") surface spills on or near well pads? (Note this is of particular concern to Fairfax County as discussed below)
- Wastewater treatment and waste disposal: What are the possible impacts to drinking water resources of inadequate treatment of hydraulic fracturing wastewater?

Additional EQAC Concerns:

In addition to the potential impacts being evaluated by USEPA, individual EQAC members raised these additional concerns:

- **Financial Assurance:** There is a need for site-specific financial assurance so that communities will be protected from the liability of cleanup of releases of contaminants. These financial assurances should be of magnitudes that are commensurate with the risks posed by facilities. Current law sets minimum financial assurance amounts at levels that are inadequate to address spills, leaks and other pollution.
- **Monitoring:** In order to assess the impacts of horizontal drilling and fracking, baseline monitoring of the environment before fracking begins is critical. This baseline assessment must be complete and performed by a neutral party to ensure that the baseline information will be credible.
- **Chemicals Used:** The Virginia Department of Mines, Minerals and Energy (DMME) is in the process of updating Commonwealth regulations in order to ensure that the gas and oil regulation reflects current industry best practices. Disclosure of ingredients used in gas and oil well stimulation and completion on permitted gas and oil operations in the Commonwealth is being considered. On June 4, 2014, an EQAC member attended the first meeting of the DMME advisory panel addressing this issue. Disclosure of chemicals and contaminants that will be used in the horizontal drilling and hydraulic fracturing process is important to protecting the county's Potomac River drinking water source.
- **Risk to Fairfax County's Water Supply:** The USEPA study will assist in evaluating the risk of fracking. One such potential and debated risk is specific to the drinking water treatment processes used by Fairfax Water. Bromide has been identified in groundwater and surface water associated with fracking in Pennsylvania. The source of the bromide is contested. Fairfax Water uses ozone to assist in providing safe drinking water. Bromide when combined with ozone, forms bromate, a chemical that could impact the health of Fairfax County residents. While EQAC cannot resolve the debate on this and other issues, special caution is advised to protect Fairfax County's Potomac River drinking water source.

Other Considerations

Natural gas may play a key beneficial role in our nation's clean energy future. Fracking should provide these benefits only if it includes regulations that protect the environment and public health.

Risk Study Recommended

From the speakers who addressed fracking at our meeting on May 14, 2014 and further information gathered at the EQAC meeting on June 11, 2014, it is clear there is controversy over the potential impact of fracking on water supplies. EQAC is not able to resolve this controversy. Nevertheless, DMME's intended regulatory action and USEPA's on-going study indicates that careful evaluation before proceeding is the prudent course. Due to the importance of issues specific to Fairfax County, EQAC concludes that a risk study specifically addressing impacts to Fairfax County's drinking water is needed to find the correct path forward. Before drilling is allowed, risk analyses by state regulators, federal regulators or other neutral third party should be required that includes assessments of risks to downwater users and specifically to the Fairfax County's drinking water.

Join Other Localities

EQAC recommends that the Board of Supervisors join other localities in support of the proposed ban on horizontal drilling in the George Washington National Forest until the concerns identified above are addressed; that is, until a risk analysis of fracking specific to Fairfax County's Potomac River drinking water source is conducted and reasonable protections for health and the environment are instated. If fracking is to provide the benefits that natural gas offers, it must be regulated and monitored to protect public health and the environment. EQAC further recommends that this position be communicated to the appropriate personnel in the Governor's Office, General Assembly, DMME, the U.S. Congress and the U.S. Forest Service. While the public comment period on the draft management plan for the forest and associated EIS has closed, the Forest Service will continue to accept comments on this matter outside the official comment process, and we expect that all comments will be considered carefully.

cc: Edward L. Long, Jr., County Executive
David J. Molchany, Deputy County Executive
EQAC file, July 2014