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**Comments on the Scoping Materials for Initial Design of EPA Research Study on  
Potential Relationship Between Hydraulic Fracturing and Drinking Water  
Resources**

**U.S. Environmental Protection Agency**  
**Office of Research and Development**  
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The Croton Watershed Clean Water Coalition, Inc. (CWCWC) is a not-for-profit coalition of community, housing, environmental and religious groups throughout NYC, Westchester and Putnam Counties whose purpose is to protect and enhance source water quality throughout the Croton Watershed. In addition, CWCWC is concerned with water quality in the Catskill/Delaware watershed since it supplies most of the water to NYC and Westchester County.

We have the following comments on the above-referenced Scoping Materials.

1. EPA must insist that the drilling companies reveal all chemicals, as well as their composition and structure, that are used in the processes. Without this knowledge, it will be difficult, if not impossible to predict which pathways and how fast fluids that remain underground will migrate towards and pollute drinking water aquifers.
2. The disposal of flowback waters is a major problem since few, if any waste-water treatment plants, are equipped to treat them. This problem is further magnified by the afore-mentioned lack of knowledge of the chemicals in the original mix, in addition to those initially unknown chemicals picked up in the underlying shale during the process of hydraulic fracturing (fracking). As a result, some companies are experimenting with leaving up to 80% of the flowback waters underground and recycling most of the remainder. But this only exacerbates the problem mentioned in the previous paragraph - predicting the flow patterns of what will become a vast underground system of polluted water.
3. In NYS, there are tens of thousands of abandoned oil and gas wells many of which have been left unplugged. Toxic fracking fluids could be forced up these wells by underground pressure and into the aquifers and other sources of drinking water.
4. It should be mandatory that prior to any work being done on a proposed well, all nearby wells (e.g., within 1.5 miles of the drill rig), and all streams, reservoirs, lakes and ponds be tested by a recognized professional company for all potentially hazardous ingredients in the fracking fluid. Should any such water-body be found subsequently to

contain any fracking fluid, then the burden of proof that the contaminant did not originate from the fracking process shall be on the driller.

5. A serious gap in the proposed analysis is the omission of the effects of hydraulic fracturing on the areas contiguous to the operations. Fracking, particularly if horizontal drilling is included, requires millions of gallons of water. Local aquifers and streams might not have sufficient capacity to provide the needed supply. In that case, water has to be trucked onto the site by hundreds of large, heavy, diesel-spewing trucks. Air pollution due to these and other causes such as methane release from the well-head, is an on-going, serious problem that needs to be fully addressed. It is not sufficient for the scope only to examine water pollution problems.

6. Hydraulic fracturing is likely to have a profoundly negative effect on the land itself and its surroundings. For example, the NYS Marcellus Shale Fairway is mostly forest and/or farmland (e.g., the NYC watershed is 75% forested). The network of roads and pipes, and the heavy, intensive use of the spacing units will fragment the forests and increase their vulnerability to invasive species and disease. They will no longer be viable. However, it is a well-established, scientific fact that forests are among the best producers of clean, potable water. Loss of forest will undoubtedly result in degraded, polluted water. This will have serious economic impacts since treating polluted water is far more expensive than protecting clean water at the source. Even if the fracking could be accomplished without a single spill or pollution of any water-body, the loss of forest would be sufficient to guarantee the loss of water quality.

7. Loss of forests, loss of their CO<sub>2</sub>-absorbing capacity, and their contribution to global cooling should be discussed in the Scoping. After the wells have been closed, the Scoping should also discuss the very important issue of whether the land can recover its former uses (forestry, farming) and if so, how long that would take.

Thank you for the opportunity to submit these preliminary comments.

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