

My name is Lynn Thorp and I am the National Campaigns Director for Clean Water Action. We appreciate the opportunity to provide comments to the Environmental Protection Agency (EPA) Science Advisory Board Hydraulic Fracturing Research Advisory Panel. Clean Water Action is a national organization working in fifteen states on a wide range of health and environmental challenges, with a particular focus on drinking water issues.

Clean Water Action is concerned about the risks which hydraulic fracturing presents to drinking water and ground water. We do not believe that current state or federal oversight is sufficient to prevent endangerment of underground sources of drinking water, contamination of surface drinking water sources, stresses on an already-constrained resource and other drinking water and ground water impacts. We therefore support EPA's approach to the *Study of Potential Impacts of Hydraulic Fracturing on Drinking Water Resources*, including consultation with the Science Advisory Board, to ensure that the *Study* uses the best available science in a transparent, peer-reviewed process. The findings of this *Study* will greatly inform our understanding of the potential impacts of this activity.

The five stages of the hydraulic fracturing water cycle and the primary and secondary research questions associated with them are appropriate for responding to the charge given to EPA by Congress, though they do not represent the full range of research needed to understand the impacts of hydraulic fracturing on water resources, public health and natural resources. We urge EPA to be as rigorous and comprehensive as possible in conducting the *Study* as designed and we believe this is an appropriate and in fact critically needed use of EPA resources.

We recognize that the Panel's consultation with EPA is around specific charge questions driven by the effort to ensure that the *Study* represents the highest quality of scientific research. We ask the Panel and EPA to step back for a few moments to consider that these are rooted in very real outcomes that are of particular concern to Clean Water Action, to our members and to the general public. For example:

- Potential impacts of Water Acquisition on drinking water availability matter greatly to communities where drinking water sources are already stressed by drought.

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- Potential impacts of Wastewater Treatment and Waste Disposal can lead to challenges to Public Water Systems and the consumers they serve. For example, disinfection byproducts are known to cause cancer and reproductive and developmental health affects, which is why Public Water Systems must comply with regulations to reduce these byproducts. If hydraulic fracturing wastewater contributes to the formation of disinfection byproducts in drinking water treatment plants, that can mean increased exposure and health risk to those drinking that water. This is by no means an abstract problem if you are a person drinking that water. It is also not an abstract matter to the Public Water System which has to figure out how to adjust treatment which has been thrown out of balance. Better understanding of brominated disinfection byproduct precursors and hydraulic fracturing wastewater will help prevent increased public health risks, disruption of carefully designed drinking water treatment approaches and increased costs to consumers resulting from treatment changes.
- Potential impacts from Well Injection activities include the possibility of subsurface migration of fluids or gases into underground sources of drinking water and contamination as a result of insufficient well construction requirements and well failure. People relying on groundwater for drinking water need our understanding of both of these issues to be far more informed than it currently is.

An underlying principle in Clean Water Action's work on drinking water is that we must do a far better job of considering the impacts of our activities on our drinking water before we undertake those activities. When we do not do this, and it seems that we seldom do it sufficiently, the burden is placed on people and on Public Water Systems in the form of increased public health risks, the need for increasingly expensive water treatment, higher water bills and water shortages. *EPA's Study of Potential Impacts of Hydraulic Fracturing on Drinking Water Resources* is an important scientific contribution to understanding the potential risks of this particular activity in order to inform policymakers on how best to prevent negative impacts and unintended consequences to this most fundamental public resource.

Thank you for the opportunity to provide these comments.

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