Hydraulic fracturing — the injection of water, sand and chemicals at high pressures to fracture hard rock in order to reach trapped natural gas and/or oil — has been done for decades. Some form of fracking has been used in more than 1 million wells in the United States since the late 1940s. Even in water well drilling, (termed, blowing the veins to increase the flow of water in the casing). Those who oppose the practice say that chemicals in fracking fluids can pollute water tables which lie just a few hundred feet or less below the surface. In rock formations as in the Marcellus shale play, a deposit that runs up the Northeast and underlies parts of New York, Pennsylvania, Ohio and West Virginia, fracking takes place well below 7,000 feet and solid rock separates the shale deposits from shallow groundwater aquifers. The buffer makes contamination from fracking virtually impossible. In addition, the wells being drilled are constructed with at least four thick layers of steel casing and cemented in place to create a solid divider between gas production and the fresh water aquifers. The wells being drilled are constructed with at least four thick layers of steel casing and cemented in place to create a solid divider between gas production and the fresh water aquifers. Even the Energy Secretary, Steven Chu recently asserted: “We believe it’s possible … to extract shale gas in a way that protects the water, that protects people’s health. … And we can do this safely.

To produce natural gas from shale formations requires only a fraction of the water that’s required to produce other sources of energy such as coal and nuclear. In 2010, 3,500 shale-gas wells were drilled in the United States and used about 0.02 percent of total water used in this country. Companies drilling in the Marcellus and Utica shale formations are rapidly adopting wastewater recycling that allows the return of fracking fluids to be treated and reused in fracturing other wells, thus allaying other concerns over wastewater disposal. Some companies are now recycling as much as 70 to 100 percent of their wastewater, reusing the millions of gallons of water, as needed, to frac a well.

In locations where methane appears to have leaked into the water supply, the consensus among state environmental officials is that the problem was not in fracking of gas wells, but rather new water wells being drilled in areas with high natural levels of methane. Also, some small producers over the years didn’t take proper care in cementing their water wells or in plugging old water wells.

Today companies are using better well casing design methods and improved cementing practices to ensure that there is no contamination of shallow formations. Concurrently, state agencies have instituted a comprehensive regulatory framework for well construction and water management in order to prevent methane migration and to protect drinking water supplies.

Fracking itself — as distinct from wastewater disposal — is in no way responsible for the tremors or earthquakes. Federal officials have confirmed that fracking is not the source of tremors in Ohio and several other states where gas drilling is done. William Leith, senior science adviser for earthquake and geologic hazards at the U.S. Geological Survey, told National Public Radio recently: “The fracking itself probably does not put enough energy into the ground to trigger an earthquake. … That’s really not something that we should be concerned about.”

Developing our shale gas and oil resources across the nation will create economic opportunity and ultimately lessen our dependence on imported foreign oil. According to a study by IHS Global Insight, in 2010 alone, U.S. shale gas production had a $76 billion share of the GDP, $33 billion in capital investments, $18 billion in tax and federal royalty revenues, and supported 600,000 jobs. Experts estimate that nearly $2 trillion in capital investments will flow into the U.S. shale gas industry through 2035. The benefits of such massive investments will spread throughout communities, businesses and governments at all levels. I have never met anyone who wants to go back to the horse and buggy days or start riding bicycles to work and on vacations. I have always appreciated being able to pull up to a gas station and filling my vehicles for a long trip. With the coming future of Natural Gas Vehicles, I will again appreciate being able to fill my truck with CNG, and for that we can say thank you to the natural gas shale play in America. (Fuel Independence). With all the bad publicity, I can now understand why Henry Ford had such a hard time moving America from the horse and buggy to the horseless carriage.

Test Wells have already been drilled in North Georgia, for shale gas. Even with the possibilities of just a small portion of the shale market here in Georgia, we are ready to assist and promote that market for the new industries, jobs, taxes and revenues that will develop. Let us know your comments.
March 7, 2012


To Whom It May Concern:

In regards to the draft report, we offer the following comments. In reviewing the information presented we find the report lacking in other potential contaminant source investigation. We administer source water protection and technical assistance programs throughout Wyoming. We work with all water user constituents including communities, energy related companies and private well users.

We are considered a neutral party to the Pavillion area investigation by the Agency, the energy industry and ourselves. Our mission is to ensure the protection of Wyoming’s water – our most precious resource. It is for this neutrality that the EPA and the energy industry requested our assistance in arranging for alternate sources of drinking water deliveries to affected homes in the investigation area.

It is with this neutrality that we offer our observations and comments on other potential contaminant sources:

1. In taking into account USGS and other geology related organizations observations of water flow in the area, an unlined landfill used for decades by the Town of Pavillion, area residents and the energy industry is in a direct water flow to the affected area of contamination. It is not out of reason to believe that a leachate plume could be part of the contamination issue. Many of the constituents referred to in the report would or could be found in a landfill used to discard household products, agricultural products and or energy related products. We would encourage investigation of potential leachate composition and plume flow from this adjacent unlined landfill. It should be
noted that Wyoming Department of Environmental Quality has determined that most if not all of Wyoming’s landfills are leaching into ground water.

2. The main irrigation water supply comes from the Midvale Irrigation Ditch constructed prior to the beginning of energy development in the area. The primary reason for the ditch was to supply usable agricultural use water as “existing local water supplies are too high in several substances including alkali to allow for crop growth”. This information is anecdotal but would suggest poor water quality based on naturally occurring compounds dating to the early 1900’s and was gleaned from the Midvale Irrigation website.

The area where the irrigation ditch gets its water would hold with existing local knowledge of water quality in the area. The ditch water comes from south and west of the affected area approximately 40 miles of ditch in order to find usable water to use for crop growth. Local creeks in the area were given names by tribal members and interpreted by white trappers entering the area in the 1800’s. Local knowledge knows there is good reason for the naming of Poison Creek and Bad Water Creek in the vicinity.

Local knowledge also holds that participants from outside the area who would have occasion to travel to the area for athletic competitions in the 1940’s and 1950’s have remarked that they would carry their own water in as the local water was not drinkable “and the local kids loved that we brought extra”.

3. Local agricultural products used have many of the same constituents or chemical compounds and our Source Water Protection planning and technical assistance in this area have included highlighting these potential contaminant sources for several years (in all areas of Wyoming).

We also note housekeeping issues in agricultural operations could be strengthened. Wellhead protection notations have been made at a few of the agricultural operations in the affected investigation area. Potential agricultural product contamination could have occurred at some of the affected home sites by poor housekeeping practices in close proximity to household drinking wells.

4. Local knowledge in many areas of Wyoming indicates naturally occurring compounds are prevalent and are/have affected water quality in many areas of Wyoming.

5. Drinking water well drilling practices in the area have resulted in iron bacterial contamination at several wells within the investigation area and should be studied more as it relates to this draft report.

6. Septics. Wyoming Department of Environmental Quality is responding to issues regarding septic by undertaking a complete rewrite of small wastewater system rules. Our Source Water Protection work have identified issues with septic (high nitrates and household compounds) as a major source of potential contamination in many areas of Wyoming including the Pavillion area for several years. Several severe outbreaks of water borne illnesses have occurred in Wyoming due to improperly maintained or failed septic systems.

7. Poor documentation on water well development in the area may have contributed to providing avenues for contamination travel. While many water wells were tested in the investigation area (at least 44); Wyoming water well permits can be located for only a handful of wells. While permits to drill water wells did not exist prior to 1972, it is quite plausible that many water wells were drilled and not properly abandoned/plugged or sealed over the years which may have afforded naturally occurring, agricultural and or
energy related compounds avenues of access to water aquifers. The geologic specifics of the area also most likely contributed to exacerbating improperly drilled or the lack of casing in water wells allowing for pathways of contaminants.

We offer the above points in addition to further investigation and review of energy related practices in the area. We would rather see voluntary or required lining and leachate collection/treatment of waste pits in energy production fields, better documentation of water wells so that energy related drilling can be planned away from existing (un)marked water wells and lessen the chances of inadvertent pathways for contaminants.

Respectfully,

[Signature]

Mark Pepper
Executive Director