

Upper Green River Valley Coalition

Pinedale RMP and Water Quality

Draft plan ignores industry's contamination and depletion of irreplaceable water resources

Water is one of the most important resources in the Pinedale Resource Area, the block of public land comprising much of Wyoming's Upper Green River Valley. People and wildlife could not live in the region without clean ground and surface waters, which are vulnerable to depletion and contamination from oil and gas development and other activities authorized by the federal Bureau of Land Management. Much of the valley contains "high sensitivity" aquifers—ground waters that are close to the surface and have porous soils that allow infiltration of contaminants. In its proposed revision to the Pinedale Resource Management Plan (RMP), the BLM envisions permitting 8,000 natural gas wells here in the next 10 to 15 years. The resulting network of roads, pipelines and drill pads will render parts of the Pinedale area one of the nation's most heavily industrialized tracts of public land.

Contaminating a Precious Resource

The natural gas industry often uses highly toxic materials—including numerous cancer-causing and genetic mutating chemicals—to drill, complete and "stimulate" its wells. These chemicals can remain in the ground and contaminate ground waters. Each gas well may be hydraulically fractured (or "frac'ed") a dozen times, with each frac job injecting up to 1 million gallons of fluids containing toxins such as benzene, toluene and MTBE. Roughly 30 percent (up to 300,000 gallons) of the frac fluids remain in the ground. With thousands of gas wells being frac'ed repeatedly, the amount of fluids left in the ground from gas-field development around Pinedale may exceed 1 billion gallons, posing a serious risk to ground water, which is very difficult if not impossible to de-contaminate.

Nevertheless, the RMP's Draft Environmental Impact Statement contains no analysis of potential impacts to ground or surface waters from the use of harmful frac'ing chemicals. This important document does not disclose what chemicals are used, the quantities used, how much remains in the ground or are spilled on the surface, or how much ground water could be rendered undrinkable. The Draft EIS actually states ground waters are not important to the decision on the new RMP.

Each gas well also requires construction of a large waste or reserve pit to store hazardous materials, including the portion of drilling and frac'ing fluids that do come back to the surface. These fluids are mixed with condensate (light oil) and saline "produced water" that is too toxic for even cows to drink. Produced water and cuttings brought to the surface from gas wells also carry radioactive materials such as radium, radon and uranium. These pits frequently leak or overflow.

The amount of produced water that emanates from Upper Green gas wells is mind-boggling. The BLM predicts that within 10 years, the Jonah and Pinedale Anticline gas fields will generate more than 30 million barrels—1.2 billion gallons—of produced water each year. If all the produced water were stored in a single location, it would create a contaminated saltwater lake a mile across and more than 100 feet deep by the time the revised RMP expires around 2025. Transporting this water from

the wells will require more than 2 million tanker truck trips, some of which could be involved in accidents and spills. And yet, the Draft EIS fails to analyze potential impacts from leaking pits or from the produced waters. The Draft does not even disclose how much produced water would be generated, much less describe how it would be disposed of. Indeed, all the direction the BLM gives regarding water quality consists of nothing more than "examples of mitigation that could be applied" to individual projects. In other words, any guidance in the revised RMP would be discretionary.

Aquifer Depletions

Sublette County residents depend on ground water for drinking, for irrigation, and for watering livestock. The county has 2,500 water wells, most for domestic use. Wildlife also relies on ground water that emerges from springs to form wetlands. Ground water also feeds the Green and New Fork rivers. The BLM anticipates that ground water table would be drawn down 10 to 30 feet in areas of natural gas development. Industry uses large quantities of water to make cement and to suppress dust from the heavy truck traffic on dirt roads. Drawing down the water tables will dry up some ground water wells. This will also cause springs to run dry and reduce river flows, thereby harming wildlife and fish. The BLM mistakenly claims the water table would recover quickly after gas drilling stops. However, the "recharge" rate for ground waters here is less than 1 inch per year. It will take decades or centuries for the water tables to recover.

Recommendations

To adequately protect the region's precious water resources, the revised RMP should

- Apply an "unavailable for leasing" designation to all lands along the Wind River Front and areas at the base of the Wyoming Range, Gros Ventre Range and Hoback Rim that are important for recharging aquifers used for human consumption.
- Apply "no surface occupancy" (NSO) designation to all lands with high-sensitivity aquifers.
- Apply NSO designation to all lands within 2 miles of any water well used for human consumption and within 1 mile of any well used for livestock or irrigation.
- Prohibit the transport of hazardous materials along the East Green River Road and along the Piney Cutoff west of the New Fork River bridge.
- Require the use of non-toxic drilling, completion and frac'ing fluids.
- Use available technology that allows oil and gas wells to be drilled without pits.
- Require previously approved pits—and any residual sludges—to be removed and disposed of at appropriate hazardous-waste facilities, rather than burying them on site.
- Treat produced waters to drinking water standards before discharging them.
- Require best available water conservation measures.
- Hold ground water withdrawal to a rate that will be balanced by natural recharge.
- Require energy operators to disclose the types and quantities of chemicals they use and to post bonds sufficient to fully remediate any contamination from spills or leaks from pits, storage tanks, transport vehicles, pipelines and evaporation ponds.
- Require water quality protections to be measurable, non-discretionary, and enforceable through mandatory monitoring. There must be measurable non-compliance triggers and assurance of sufficient funding and personnel to carry out the monitoring

More information: see www.uppergreen.org

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