

AQUIFER RECHARGE

METHANE DEVELOPMENT DONE RIGHT



Northern Plains Resource Council's campaign to protect Montana's family farms and ranches, water resources, soil, and wildlife from the impacts of irresponsible coal bed methane drilling

The lighter area of an alfalfa field near Miles City shows damage from the use of irrigation water containing coal bed methane discharge water on clay soils in the Tongue River Valley.

Aquifers in southeastern Montana are threatened with depletion from coal bed methane production. Methane gas is held in coal seams by high-pressure groundwater, which is pumped out to release coal bed methane. Aquifer recharge is a form of injection where the water is pumped back into the aquifer from which it came. Recharging allows coal bed methane development to occur while not depleting our aquifers or polluting our rivers and streams. It is both practical and affordable to return coal bed methane water to the ground by way of reinjection or shallow injection so the water is available for future generations.

The 480-billion-gallon question: Why waste it?

An average methane well pumps between 5 and 20 gallons of water per minute over its 10-year lifespan. If 18,300 coal bed methane wells, a mid-range estimate, were operating in Montana at 5 gallons per minute they would pump 480 billion gallons of groundwater from southeastern Montana over a 10-year period, lowering the region's aquifers by up to 600 feet. This will dry up critical water wells, natural springs, and seeps.

Coal bed methane wastewater is generally suitable to drink, but contains too much sodium and other salts for irrigation and aquatic life. Until recently, most of the wastewater had been discharged into rivers and streams or unlined impoundments; the sodium in the wastewater over time can permanently alter soils, rendering them unable to support agriculture. However, in

May 2010, the Montana Supreme Court ruled unanimously that coal bed methane wastewater must be treated before discharge to comply with the federal Clean Water Act.



In July 2008, a state district court ruled that coal bed methane practices that waste groundwater, such as evaporation ponds, are unconstitutional. Now, companies cannot legally waste groundwater, and if they discharge it, they must treat it first.

While these cases show that the courts agree that something must be done to prevent soil damage by sodium-laced discharges, they are not enough. Companies may be required to treat the water they are discharging, but the discharged water is still being pumped from our aquifers, sucking eastern Montana dry.

WATER FOR FUTURE GENERATIONS

Solution: Put it back

The good news is coal bed methane development and agriculture can coexist. By requiring coal bed methane producers to recharge the aquifer from which the water was pumped out, Montana can protect the long-term value of farming and ranching to our state's economy. Our wildlife and fisheries can continue to thrive, too.

In fact, as stated in the BLM's regulations of oil and gas development on federal and Indian lands, the preferred wastewater disposal method is injection:

All produced water from Federal/Indian leases must be disposed of by (1) injection into the subsurface; (2) into pits; or (3) other acceptable methods approved by the authorized officer, including surface discharge under NPDES permit. ***Injection is generally the preferred method.*** [Bold and italics added]

How you can help

Support conservation and protection of Montana's groundwater for future generations by requiring coal bed methane producers to recharge the aquifer with the water that was pumped out from coal bed methane wells. They must stop discharging the water into our rivers and streams. With aquifer recharge, Montana's farmers and ranchers can continue to work as they have done for generations, contributing to our local economies, and our wildlife and fisheries can be preserved. Call Northern Plains and find out more on how you can help.

Keep informed! Take action! Join

Northern Plains Resource Council is a conservation and family agriculture group that organizes Montana citizens to protect our water quality, family farms and ranches, and unique quality of life.

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The Tongue River in southeastern Montana is used as a dumping channel for highly saline water produced by coal bed methane companies upstream.

Farmer losing alfalfa crop to saline water

Roger Muggli has worked his family's 1,700-acre farm near Miles City for 60 years, and he relies on the Tongue River to grow alfalfa and barley.

Several years ago, the river's sodium-laced water began ruining the clay soil. The sodium in the water seals the clay so that water cannot penetrate down to the roots. Within weeks large sections of Muggli's crops turned yellow and died.

Muggli and Montana state regulators believe the high sodium content is at least partly the result of groundwater pumped to the surface by coalbed methane operations upstream and dumped into tributaries of the Tongue.



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