

Powder River

THREAT: COAL BED METHANE EXTRACTION

Summary

The burgeoning coal bed methane (CBM) industry in the Powder River basin creates an unusual threat for a Western river: too much low-quality water that enters the river at the wrong time of year. Federal and state agencies are making important decisions this year that will set critical guidelines for the CBM industry in the Powder River basin in Wyoming and Montana. With at least 51,000 methane gas wells anticipated by 2010, public officials must ensure that CBM development proceeds responsibly and that its byproduct water is properly managed to protect the Powder River and its tributaries.

The River

The Powder River has its headwaters in central Wyoming, west of Casper, and flows north into eastern Montana, where it empties into the Yellowstone River. The Powder is a healthy remnant of the once vast and unspoiled river ecosystem that spanned the Great Plains. The sagebrush and mixed grass prairie of the Powder River basin supports abundant elk, mule deer, pronghorn antelope, bobcat, swift fox, and imperiled black-tailed prairie dogs, as well as domestic cattle and sheep ranching operations.

In 1999, The Nature Conservancy reported that, "In an inventory of all streams in the Great Plains of Wyoming, the Powder River was found to support the most intact assemblage of fish species." Several of these species are now so rare that they have been considered for the protection of the Endangered Species Act.

The Risk

The Powder River basin is home to a booming industry based on the extraction of natural gas from coal aquifers. The industry's rapid growth is linked to two developments — a period of high prices for natural gas, and new technologies that allow gas to be extracted cheaply and quickly from coal seams. Once a

well site has been identified, a truck-mounted drilling rig bores into the aquifer and begins pumping the water to the surface, which liberates the trapped gas. During the first stage of the extraction process, approximately 15,000 gallons of groundwater are pumped out of a CBM well every day.

Generally too salty for irrigation, the water is typically dumped into artificial reservoirs or nearby creeks — accelerating erosion in the tributaries, and altering the natural flows and salinity levels in the mainstem of the Powder River. Declining water quality in the river concerns ranchers and irrigators in Wyoming and in Montana. Moreover, 80% of Wyoming residents get their drinking water from wells, but little is known about the effects of massive water withdrawals from coal aquifers on the region's water supply.

Many rural and semi-urban landowners do not own their land's subsurface mineral rights, and therefore cannot prevent gas developers from acquiring the right to drill on their property. The Bureau of Land Management (BLM) has predicted that the total number of CBM wells in just the Wyoming portion of the Powder River basin could reach as many as 139,000 wells by 2010. Despite this rapid growth, federal and state agencies have yet to formulate an adequate plan for minimizing the effects of CBM drilling in the Powder River basin.

What Can be Done

More than 50% of the mineral estate in the Powder River basin is owned by the United States. The BLM, which manages the federal mineral estate, will complete an Environmental Impact Statement (EIS) for CBM production in the Powder River basin in 2002. This document will assess the cumulative impacts of the 51,000 CBM wells that are expected to be permitted and drilled in the basin within the next eight years, evaluating their effect on water and air quality, aquifer recharge,



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fisheries, wildlife, drinking water, and agriculture.

The EIS also will propose alternatives designed to minimize the impact of CBM drilling and mitigate environmental damage. The draft EIS, released in January 2002, is inadequate to protect the river. It effectively only evaluates two alternatives: 1) 51,000 wells and dumping the byproduct water on the ground — BLM's preferred alternative; and 2) 51,000 wells and disposing of the partially-treated water into unlined reservoirs. Neither alternative embraces new technologies for treating or reinjecting CBM water to effectively reduce the negative environmental impacts.

This is the largest oil and gas project the BLM has ever studied.

The agency's final EIS will chart new territory for agencies charged with the responsible stewardship of public land and mineral resources. In it, the

BLM should adopt the recommendations outlined by conservation groups in their proposal, "Protecting Wyoming's People, Land and Air: A Citizens' Proposal to Conserve Wyoming's Heritage in the Powder River Basin." Highlights include science-based adaptive management; a moratorium on new federal CBM leases; and a development process in which disturbed areas are reclaimed before drilling is allowed to proceed in new areas.

The BLM is accepting comments on its draft EIS through April 18, 2002. Concerned citizens can find more information and opportunities to take action at <http://www.amrivers.org/mostendangered/powder2002.htm>

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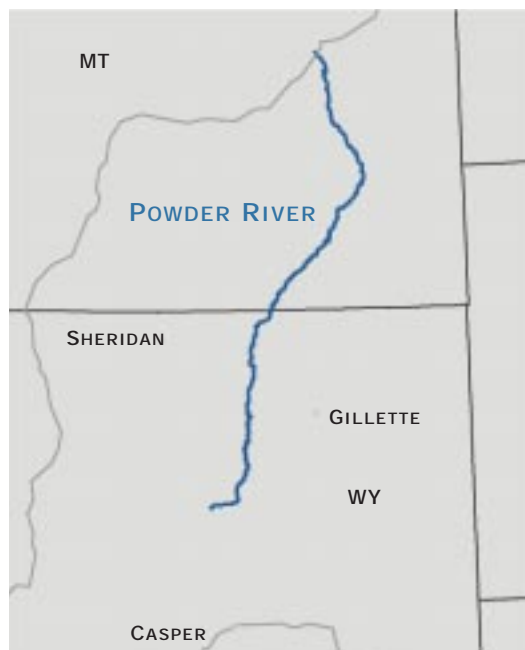


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COALBED METHANE WELLS CAN DISCHARGE 15,000 GALLONS OF POOR QUALITY WATER EACH DAY. THE BASIN COULD HAVE 51,000 WELLS BY 2010.



FOR LINKS TO MORE INFORMATION OR TO TAKE ACTION: WWW.AMERICANRIVERS.ORG/MOSTENDANGERED/POWDER2002.HTM