

National Parks and Hydraulic Fracturing

BALANCING ENERGY NEEDS, NATURE, AND AMERICA'S NATIONAL HERITAGE



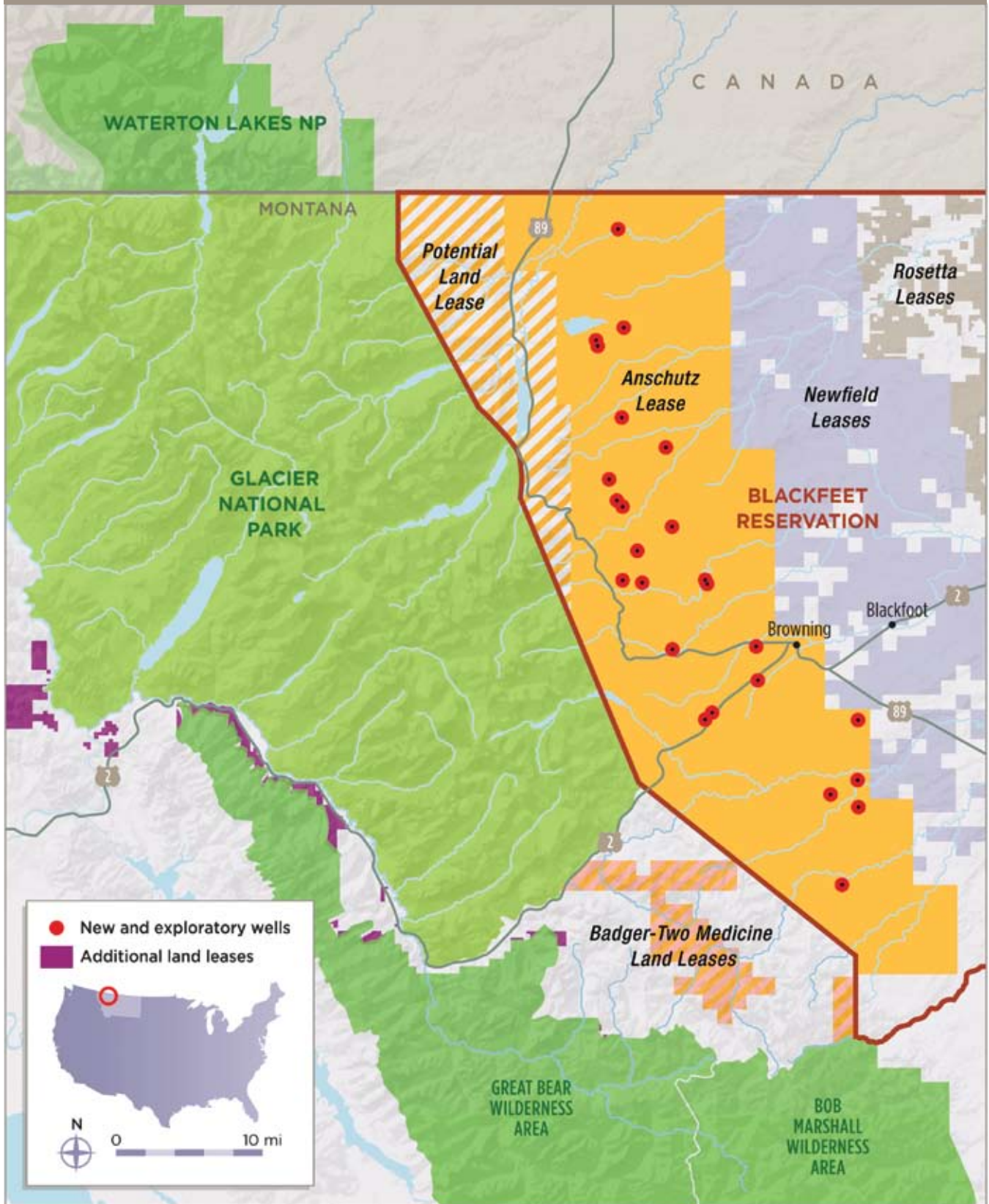
Glacier National Park, Montana



Glacier National Park is one of the planet's most extraordinary places. Its rugged mountains, clear alpine lakes, and shifting glaciers form the centerpiece of the surrounding "Crown of the Continent" ecosystem—one of the largest, most intact temperate ecosystems remaining anywhere in the world. Glacier's landscape draws visitors looking for breathtaking views and backcountry solitude. It has also attracted the attention of oil and gas interests, dating back to the park's inception. Historically, commercially productive wells have been few in number and small in scale. But with the development of hydraulic fracturing, the landscape surrounding Glacier has garnered renewed interest from exploration companies that have leased almost all of the lands along the park's eastern border. Currently, exploratory wells are being drilled one by one—right up to the park's boundaries—and if viable oil and gas fields are discovered, full-scale industrialization of the park's eastern edge seems likely.

Above: Commercial energy development could intrude on the picture-perfect landscapes of Glacier National Park.
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Fracking Near Glacier National Park (MT)



Sources: BIA; BLM

What's At Stake

Encompassing more than a million acres, Glacier National Park is part of an even bigger matrix of public lands that extends from Montana into Canada. Adjacent to Glacier's southern boundary is the Bob Marshall Wilderness complex, a combination of three wilderness areas totaling almost 1.6 million acres. To the west is the Whitefish Range, a working forest of recreational amenities, timber lands, and roadless areas managed by the National Forest system. To the east is the Blackfeet Indian Reservation. North of the border and to the east is Canada's Waterton Lakes National Park.

This larger landscape is known as the "Crown of the Continent," an area of nearly 28,000 square miles that hosts an intact community of wildlife and an impressive level of biodiversity. In addition to the 65 species of mammals found in the Crown, there are 270 species of birds, 27 species of fish, 12 species of amphibians and reptiles, and more than 1,200 species of vascular plants.¹

Nearly two million recreational visitors come to Glacier National Park each year to hike backcountry trails, view wildlife, learn about the region's historic communities, and drive the Going-to-the-Sun Road. Although there is no designated wilderness within Glacier, about 930,000 acres are managed as wilderness.

Because it's surrounded on many sides by other protected lands, much of Glacier remains insulated from nearby oil and gas development. But its eastern flank borders the Blackfeet Reservation, which is largely open to oil and gas development. On reservation lands, within a stone's throw of Glacier's boundary, companies are using hydraulic fracturing and horizontal drilling to investigate the Upper Cretaceous Core Member of

the Marias River Shale.² This region has been drilled in the past, resulting in several dry holes, a small number of producing wells, and several marginal-to-producing wells that are now capped. But in recent years, several dozen wells have been drilled on park-adjacent reservation lands, which has led to heavy vehicle traffic and human activity.



Above: Important grizzly habitat is at stake along Glacier's eastern border. ©sekernas/ISTOCKPHOTO

Fracking and Park Resources

Glacier's fish and wildlife don't always remain within park boundaries; they range into adjacent waters and lands. Territories along the eastern boundary (where fracking is occurring) serve as important habitat for the park's grizzly bears, wolves, elk, and other species of mammals and birds (including species listed as threatened or endangered under the Endangered Species Act). Clear, cold streams born from high-country glaciers flow northeast out of the park and into lands being explored for oil and gas. These streams provide critical habitat for native fish species. The expanding oil and gas development poses potential threats to the region's water quality and wildlife: Increased traffic, noise, potential interactions with humans,

and degraded waterways may negatively impact Glacier's remarkable ecosystem.

It is difficult to know precisely how Glacier's wildlife may be affected by well development, since drilling projections remain vague (park managers don't yet know the total number of wells intended for full-field

development). But fracking projects currently underway in Wyoming, Colorado, and Utah reveal a glimpse of potential impacts at Glacier. Those locations have experienced increased levels of ozone and a host of other air pollutants. Similar emissions near Glacier would violate its status as a Class I Airshed, as designated by the Clean Air Act.

Park scenic views are also at risk. Companies have leased land right up to the park boundary, with no buffer except around Chief Mountain, a site of cultural significance to the Blackfeet. If industrialization of the park's boundary occurs, the scenic quality of the park will decline dramatically. The infrastructure needed for fracking—such as roads, power lines,

pipelines, tanks, and holding ponds full of contaminated water—will compete at close range with the park’s mandate of preservation.

Polluted air and waterways could also threaten Glacier’s wildlife. The park preserves the highest density of grizzly bears in the lower 48 states—a population listed as threatened under the Endangered Species Act. The U.S. Fish and Wildlife Service has designated the plains outside of Glacier (and within the Blackfoot Reservation) as part of a grizzly Recovery Zone.³ In a Recovery Zone,⁴ the welfare of the bears will be taken into consideration when management decisions are made.

The primary threat to grizzly bears from oil and gas development is from human-caused mortality through vehicle

collisions, poaching, or habituation (bears that frequently encounter people become habituated, and often must be killed to safeguard human safety). For example, garbage around construction sites becomes an attractive and attainable food source, leading bears to pursue trash cans in town. Those bears will be killed.

Bull trout is another species found within Glacier that is listed as threatened under the Endangered Species Act. But some of the watersheds bull trout depend upon extend outside park boundaries, into the Saint Mary drainage located on the Blackfoot Reservation. The Blackfoot Tribe is committed to the conservation of bull trout; however, Anschutz has leased this drainage for energy exploration.

Bull trout need clear, cold water to survive and are considered a good indicator species of water quality.⁵ The hydraulic fracking process requires abundant water, but it is unclear where this water will come from and what cumulative impacts there might be over the entire well field. In addition to water consumption, water quality is also a concern, particularly from accidental spills of drilling wastewater. Accidents happen: In 2009, an energy corporation was fined when a reserve pond of used fracking liquid overflowed.⁶ If spills flow into native bull trout streams, the contamination could be disastrous to the fish and its habitat.

Below: Regional water quality and quantity could be affected by drilling operations. ©epicurean/ISTOCKPHOTO



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