

# National Parks and Hydraulic Fracturing

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



## Big South Fork National River and Recreation Area and Obed Wild and Scenic River, Kentucky-Tennessee Border



Natural gas development around Big South Fork could diminish the park's visitor appeal. ©Pat & Chuck Blackley

Oil and gas drilling has existed for many years on Tennessee's Cumberland Plateau, occurring within park boundaries and adjacent to the Big South Fork National River and Recreation Area and Obed Wild and Scenic River. Both parks contain privately owned oil and gas wells within their boundaries, and both are seeing oil and gas development on lands adjacent to their borders. Concerns about future projects—including hydraulic fracturing—are also mounting. Recently, wells were drilled into the Chattanooga shale (the southernmost reaches of the Marcellus shale). A drop in the price of natural gas has delayed more drilling. As the price of natural gas increases, the Chattanooga shale in or adjacent to the parks will be drilled, and impacts to the parks and their resources will likely continue.

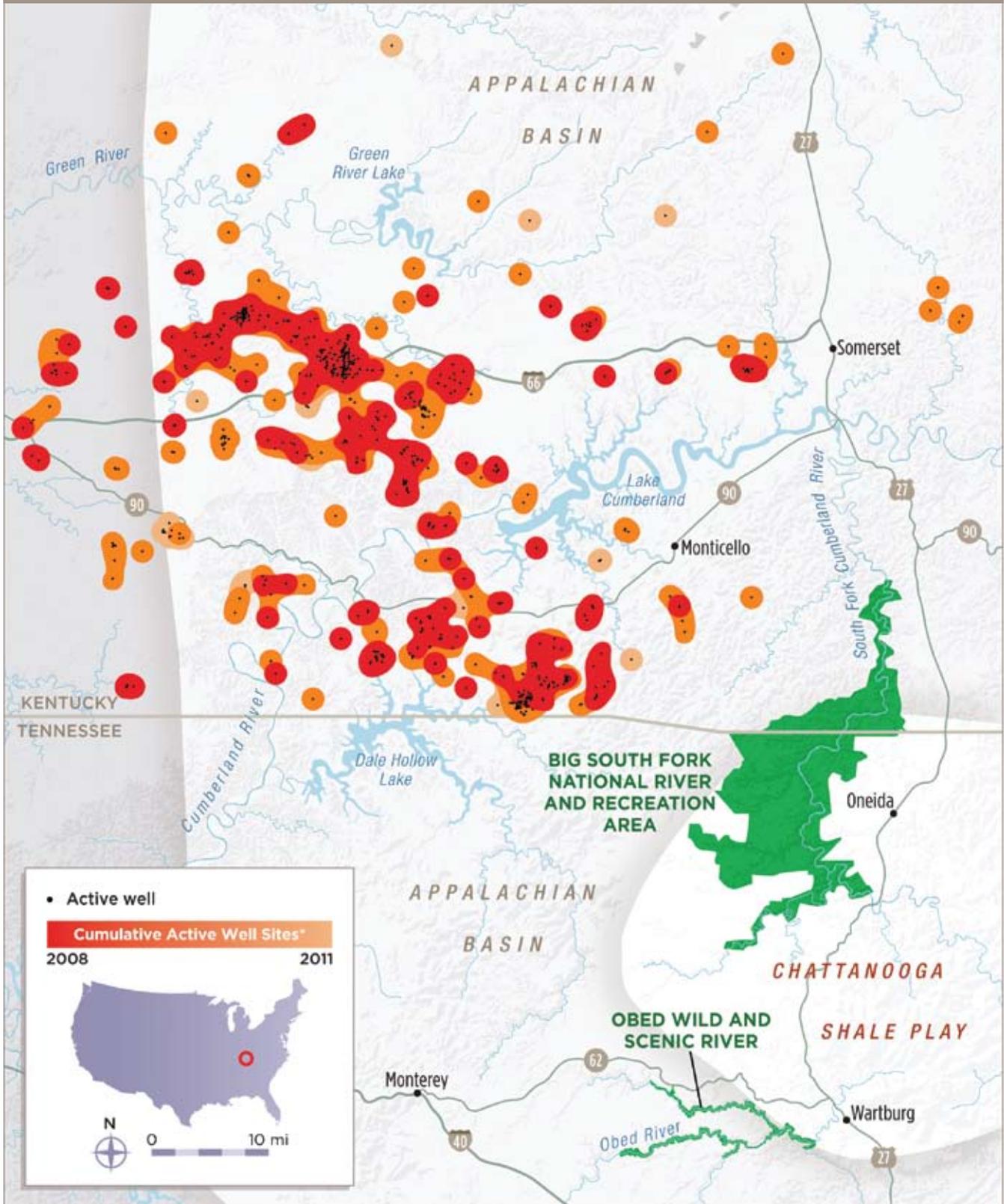
### What's At Stake

Hardwood forests, free-flowing rivers, and steep gorges fill the 125,000-acre Big South Fork National River and Recreation Area, situated on the Cumberland Plateau spanning the

Tennessee-Kentucky border. Here, the headwaters of the Cumberland River (which supplies water to metro Nashville) flows through a massive gorge that serves as the scenic centerpiece of the park. More than 91 percent

of the park is federally owned. Lands adjacent to Big South Fork's western side are public (state and federal), while territory along the park's eastern border is almost exclusively private. The park is also home to a rich

# Fracking Near Big South Fork NRA and Obed Wild & Scenic River (KY/TN)



Sources: EIA; KY Geological Survey; NPS

assemblage of federally listed threatened and endangered species.

In Tennessee, south of Big South Fork, is Obed Wild and Scenic River, which feeds into the Emory River. Most of this region's rivers are dammed, but not the free-flowing Obed, which attracts canoeists, rafters, and kayakers.<sup>1</sup> This park unit protects 45 miles of free-flowing streams and the plants and wildlife associated with them. In total, nearly 3,500 acres of the park's 5,173 acres are federal.<sup>2</sup> Ownership of lands adjacent to the park is mixed.<sup>3</sup>

The scenic beauty and recreational opportunities of these rivers attract, on average, nearly three-quarters of a million visitors annually.

### Fracking and Park Resources

Big South Fork and Obed are no strangers to oil and gas development, and both parks currently have active nonfederal energy leases within park boundaries. The legislation that created Big South Fork prohibits energy and mineral extraction in the gorge (which occupies about half of the park), but allows for past and future prospecting elsewhere. Consequently, there are more than 300 well site and approximately 150 wells in Big South Fork, many of which were drilled during the 1970s and 1980s. Within Obed, there are five active wells, all of which are within a half-mile of the river. Many more wells are located outside the park but within one mile of the river corridor. Existing wells within the parks are considered

unsuitable for modern, high-pressure fracturing due to their age.

The Marcellus shale, an epicenter of natural gas development in West Virginia, Pennsylvania, and New York, extends southward into Kentucky and Tennessee (where it's known as Chattanooga shale). The current low cost of natural gas has hindered a strong push to develop the natural gas resources of the Chattanooga shale; it is currently more profitable to tap into the shale underlying northeastern states. But if prices for natural gas climb, attention may shift to the lands surrounding Big South Fork and Obed. Within Big South Fork, there are currently 20,000 acres of privately held mineral rights. There is a chance that oil and gas exploration using fracturing technology in new wells will take place within Big South Fork or in close proximity to Obed.

Both parks are rife with waterways that sustain a host of plants and wildlife, including ten species of fish, mollusks, and plants that have been listed as either threatened or endangered under the Endangered Species Act. Visitors also enjoy the lush scenery and river recreation. Anything that degrades this watery ecosystem poses a serious concern, which is why fracking deserves close scrutiny.

Historically, the region's oil and gas development required well pads about 1.5 acres in size; if hydraulic fracturing arrives on the scene, the sizes of the well pads will increase to approximately

4 acres<sup>4</sup> in order to accommodate larger equipment (storage tanks, pumps, mixing equipment).

That difference in scale produces a series of wide-ranging effects. Large holding tanks are problematic in a region characterized by steep hillsides, because rainstorms send high volumes of water flowing downstream and can cause retaining ponds to overflow. Larger pads would require more forest to be cleared, and the roads servicing those pads would receive higher volumes of traffic and larger vehicles. Excessive vehicle noise can interfere with animals' communication (bird songs, for example) as well as foraging and mating behaviors. Increased truck traffic would also result in more wildlife injuries and deaths from collisions. It may also affect how visitors use park roads and trails, and could diminish the overall visitor experience at these parks. Current, small-scale drilling operations use existing roads and lanes, which are often unimproved. But companies hauling fracking equipment aren't likely to find the existing infrastructure to be suitable, and that could put an end to the serenity of park byways.

Polluted air is another potential impact. In other parts of the country, intensive oil and gas development is linked to air quality problems, meaning fracking in and around Big South Fork and Obed could produce elevated concentrations of ground-level ozone and visibility-impairing haze—hardly what park visitors prefer or expect to find there.

1. <http://www.nps.gov/obed/playyourvisit/outdooractivities.htm>, accessed 10/1/12

2. The National Parks Index: 2009-2011, pg. 80.

3. NPS. 2012. Big South Fork National River and Recreation Area and Obed Wild and Scenic River: Final non-federal oil and gas management plan/environmental impact statement.

4. NPS. 2012. Big South Fork National River and Recreation Area and Obed Wild and Scenic River: Final non-federal oil and gas management plan/environmental impact statement, pg. 56.



[npca.org](http://npca.org)

CENTER FOR  
Park Research