BENEFITS TO PEOPLE

At a Glance Report

Bighorn National Forest

Why are forests and grasslands important?

National forests and grasslands provide public benefits (also known as ecosystem services) such as timber, clean air and water, forage, and energy production. National Forest System lands also provide recreation, cultural and heritage opportunities that play an important role in how communities come together for physical and mental health, family, and to connect to the land. In many rural areas, the infrastructure, employment, goods and services provided are a basis for the structure of the community. The purpose of this report is to explain the benefits to people of National Forest System lands and complement the Jobs & Income At a Glance Reports[1]. This is a brief snapshot of Bighorn National Forest benefits using national data sets. The reader is encouraged to explore more detailed information from their local Forest Service office, the Benefits to People StoryMap, and at the national forest's website[2].

Setting

The map on the left shows the Bighorn National Forest. The surrounding area is included to demonstrate the wider area of potential benefit outside the forest. All four counties overlapping the national forest's boundaries are non-metro containing less than 50,000 residents. On the Bighorn National Forest, the largest land use type[3] is forest (68%), of which 87% is timberland and 7% is reserved. Nonforest (32%) and water (0.3%) are the other land use types. Rangeland cover is found on 26% of the Bighorn National Forest, across forest and nonforest land use types.

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[1] Jobs & Income At a Glance Reports can be found at https://www.fs.fed.us/emc/economics/contributions/at-a-glance.shtml

[2] Find the Bighorn National Forest website at http://www.fs.usda.gov/bighorn/

[3] Forest land use is defined as land that is at least 10% stocked by forest trees of any size, or land formerly having such tree cover, and not currently developed for a nonforest use. Timberland is forest land that is producing or capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment. Reserve forest land is permanently reserved from wood products utilization through statute or administrative designation. Nonforest land is land that does not support or has never supported, forests and lands formerly forested where use of timber management is precluded by development for other uses

Partnerships

National forests and grasslands provide a venue for communities to build relationships with land management agencies, state and local governments, other organizations and with each other. Building relationships and partnerships makes communities more resilient to change and improves their ability to adapt to challenge and change.

Partnerships and stewardship agreements are examples of the Forest Service building community relationships.

In 2017, the Bighorn National Forest had 49 partners under open agreements.

Recreation Opportunities & Scenery

The top activities for approximately 430,000 visitors to the Bighorn National Forest are viewing natural features, pleasure driving, and snowmobile. For a list of the recreation sites on the forest, visit the Benefits to People StoryMap and at the forest's website[4].

Recreationists, outfitters, and guides benefit directly from National Forest System land while local businesses benefit from spending by forest visitors. Total spending by visitors to the Bighorn National Forest is about $16.2 million annually.

Visits to the forest related to wildlife (hunting, fishing and wildlife viewing) was 19% of total visits. These people benefit from healthy ecosystems that contribute to wildlife related recreation.

Landscapes and features of the Bighorn National Forest provide scenic resources appreciated by local residents, recreationists, artists, people seeking inspiration and other visitors. In addition, scenery on the Bighorn National Forest contributes to community identity, a sense of place, quality of life, the tourism industry, and supports property values.

Cultural & Heritage Resources

The cultural and sacred features of National Forest System landscapes provide people an understanding of their place in natural and cultural environments. By providing access and integrity of heritage sites, the forest provides connections to the land of ancestors, a sense of place, opportunities for interpretive learning, and fosters traditional uses. The Forest Service also manages and protects paleontological resources for scientific and educational purposes.

Research and Education

National Forest System lands provide opportunities to advance scientific knowledge and transfer that knowledge used to learning and educational activities. For example, the forest had about 287 audience members for conservation education programs.

Access

Locals and visitors benefit from access to the forest and its resources. There are 1,436 miles of roads and 1,114 miles of trails on the Bighorn National Forest, providing access for recreation, subsistence, and other resource uses.

[4] Find the Bighorn National Forest website at http://www.fs.usda.gov/bighorn/

Tradeoffs

Managing National Forest System lands often results in changes to ecosystems, resources, or benefits. These tradeoffs in benefits are important to consider in the context of all benefits provided by forests and grasslands. For example, use of forest lands for timber product benefits may imply tradeoffs in benefits to recreation and other uses that benefit from standing timber. Understanding benefits to people helps clarify the implications of these tradeoffs.

Forest Products

Many rural communities have depended on the timber industry to support their livelihoods, culture and heritage. Outside these communities, forest products are widely used in construction. Timber harvest is sometimes done as a means of forest restoration, improving habitat, ability to store carbon, and resilience to wildfire, disease, and invasive species. Opportunities to collect fuelwood on National Forest System lands supports family traditions and provides an affordable fuel source for households that depend on wood heating. 791,800 cubic feet of Sawtimber, 309,800 cubic feet of commercial fuelwood, and 18,200 cubic feet of pulp, posts/poles and other wood products were harvested from the forest in 2015. Other forest products, such as mushrooms, berries, boughs and plants, provide medicinal benefits, subsistence, and recreational activities.

Water & Air

National Forest System lands play a critical role in protecting the nation's water resources. People and animals that live in and downstream from the forest rely on this resource. People that recreate on or depend on these lands for their livelihood, such as farmers, fisherman, and recreation guides, benefit from this water as well. The Environmental Protection Agency designates protected areas where public water systems draw their drinking water from surface and groundwater supplies. Water goes to about 29,000 people served by protected areas overlapping the forest by at least 25% (at the subwatershed scale). In the larger area, water from all ownerships supplies additional uses, including 7% for municipal use, 83% for agriculture, 1% for industry and mining uses, and 9% for other uses such as aquaculture and thermoelectric needs.

National forests play a critical role in protecting the nation's air resources: not only for the people and animals that live within the national forest but also for those off National Forest System Lands. Trees and other vegetation on the Bighorn National Forest provide air through respiration and capture common air pollutants.

Forage

Forage is important to ranchers who rely on National Forest System lands for their commercial operations and small-scale subsistence. Rangeland on the forest provided grazing for about 24,500 cattle, horses, and bison and 17,600 sheep, goats, donkeys, and mules in 2015. Well-managed grazing allotments preserve a rural heritage and way of life, aesthetic vistas, wildlife habitats and critical migration corridors for big game herds, and other rangeland uses like hunting, fishing, wildlife, and maintaining open space.

Minerals & Energy

National Forest System lands provide access for commercial development of a variety of mineral resources. This includes locatable minerals (such as silver and gold), saleable minerals (such as stone, sand and gravel) and leasable minerals (such as coal, oil and gas). People benefit from opportunities for recreational mineral collection on these lands through panning, dredging, sluice-box and metal detector use. In 2015, the top two minerals by sales value, on the Bighorn National Forest were crushed stone (common variety), valued at $300, and construction sand and gravel valued at $12.

Other Benefits

Additional benefits, like wilderness character, provide intangible and spiritual values to society that the Wilderness Act describes as the benefits of an enduring resource. 17% of the forest is wilderness, which is a benefit for people that value preservation, untrammeled areas, wildlife habitat, and solitude. Additional benefits of forests and grasslands include values not associated with use, the option to use the land and resources in the future, and to pass on the benefits to future generations. For example, people benefit from knowing that wildlife habitat and wildfire resilience will exist in the future and that they can pass on these benefits to future generations.

Additional Information

Headwaters Economics[5] maintains area profiles that can be consulted for a deeper dive into the social and economic characteristics of the area; including important information for consideration of Civil Rights and outreach and effects to Environmental Justice populations.

See the Jobs & Income At a Glance Reports[6] for more information on the economic contributions of forest activities and the Benefits to People StoryMap for a geographical and more comprehensive representation of forest benefits.

Visit us on the web at: https://www.fs.fed.us/emc/economics/index.shtml.

The National Visitor Use Monitoring Program[7] has info on recreation visitation and the Forest Service maintains Ecosystem Services resources[8].

This report was created using recent data from various sources. Data and references are available in the sources file found at the website containing this report.

Contact Information

For general inquiries, contact Washington Office Ecosystem Management Coordination social scientists and economists:

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For region-specific inquiries, find your regional social science and economics contact:

https://www.fs.fed.us/emc/economics/contactus.shtml

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What are other unique forest benefits?

[5] Area profiles from Headwaters can be found at https://headwaterseconomics.org/tools/economic-profile-system/about/
[6] Jobs & Income At a Glance Reports can be found at https://www.fs.fed.us/emc/economics/contributions/at-a-glance.shtml
[7] More information on recreation use can be found at https://www.fs.fed.us/recreation/programs/nvum/
[8] More information on ecosystem services can be found at https://www.fs.fed.us/ecosystemservices/