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PUBLIC LANDS

Federal lands, including national parks, forests, wildlife refuges and monuments embody one quarter of the United States and provide habitat for nearly two-thirds of all species that are listed as threatened or endangered. Twelve percent of these species are restricted largely to federal public lands, on which they depend for survival.¹ These lands, then, are critical for biodiversity conservation. The visitors they attract are also critical for local and regional economies.

Federal lands are managed primarily by five agencies: the Fish and Wildlife Service (USFWS), which manages the National Wildlife Refuge System; the Bureau of Land Management (BLM), which is responsible for national monuments; the National Park Service (NPS); the Forest Service (USFS); and the Department of Defense (DoD). While these agencies have different missions and are guided by different regulations, all are mandated to conserve and sustain the natural resources found on their lands.

With the exception of military bases, most federal lands are open to the public and to vehicle traffic. More than 300 million people visited national parks in 1999 alone.² More than 38.8 million visitors came to national wildlife refuges and hatcheries in 2001. Refuge visitation is expected to increase to more than 61.2 million by 2009.³

FEDERAL LANDS HIGHWAY PROGRAM

The task of providing safe and adequate access to public lands is shared by the individual agencies and Federal Lands Highway Program (FLHP), which is responsible for some 90,000 miles of roads that are owned by public authorities or the federal government and are not under state or local responsibility. The agency is administered by the FHWA as an adjunct to the Federal-Aid Highway Program. FLHP also provides modest funding for alternative transportation programs in national parks, such as shuttle buses, ferries and bicycle and pedestrian trails.⁴

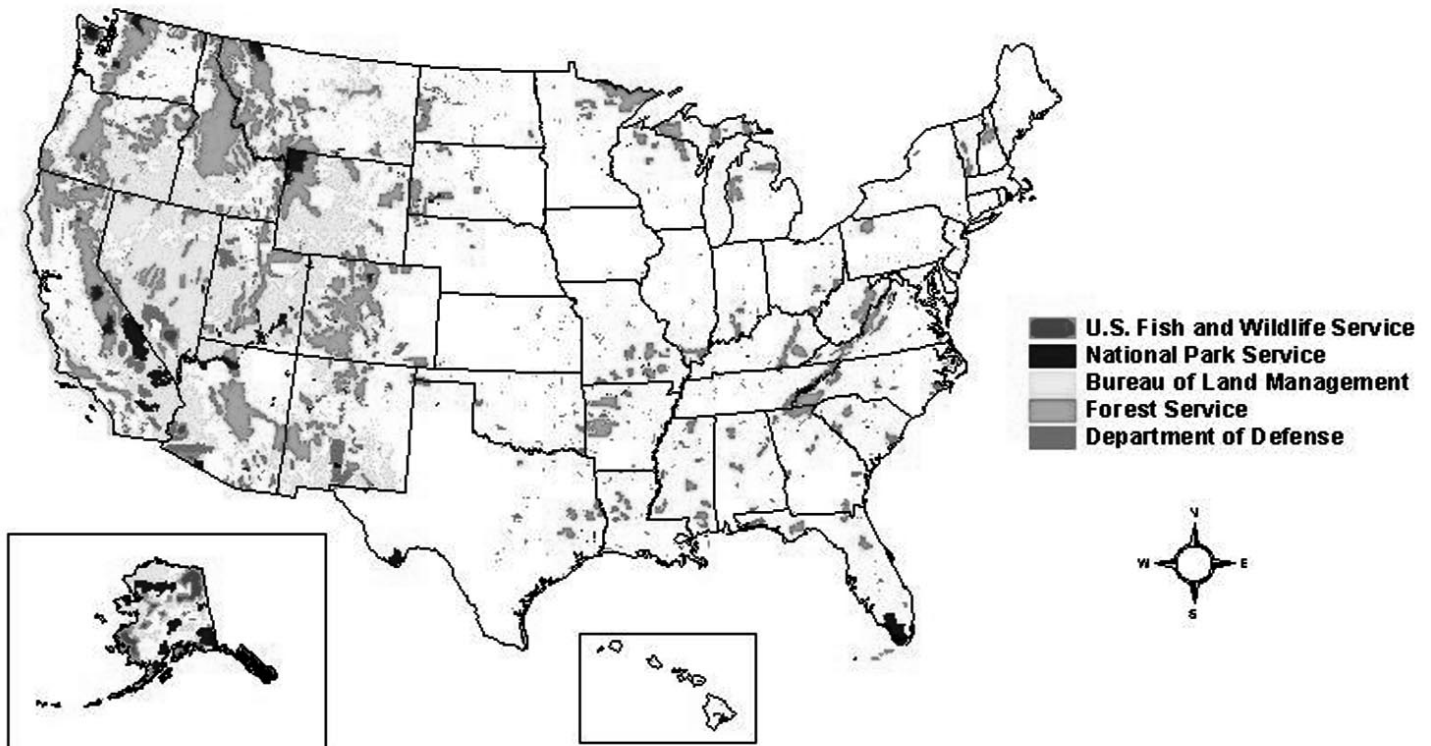
Because FLHP has been largely devoted to building roads instead of providing access and mobility, America's public lands are increasingly threatened by vehicle overcrowding, traffic congestion and air pollution. As outdoor recreation becomes more popular, millions of Americans flock to public lands every day. However, transportation options within public lands are limited, diminishing the overall visitor experience and environmental quality. Many areas are readily accessible only by personal vehicle, leaving visitors mired in traffic jams, rather than enjoying the activities and scenery. In Great Smoky Mountains National Park, it can take four to six hours to drive an 11-mile loop.⁵

Due to the volume of vehicles, public lands suffer from air quality problems that rival major metropolitan areas. According to the National Parks Conservation Association (NPCA), in 2001 Sequoia and Kings Canyon National Park in the southern Sierra Nevada in California recorded 61 days when the air was unhealthy to breathe because of ground-level ozone.⁶

High road density and traffic volume threaten wildlife on some federal lands, as well as the people who visit. Many species are restricted to

public lands because suitable habitat is not available elsewhere. Among these species, the grizzly bear (*Ursus arctos*), gray wolf (*Canis lupus*), and caribou (*Rangifer tarandus*) are known to avoid areas adjacent to highways because of the noise and human activity associated with roads. In fact, road density is among the most reliable predictors of wolf habitat. As road density increases within our public lands, habitat quality decreases exponentially. Increased attendance and increased vehicle traffic also increase the number of animals

Federal Lands in the U.S.



killed by vehicles. According to a NPS study, 939 large mammals were killed by vehicles within Yellowstone National Park between 1989 and 1996.⁷ Eventually, public lands will cease being suitable habitat for some of the most magnificent of wildlife species.

Without wildlife and the high quality habitat they need, public lands will also cease being suitable vacation destinations for tourists. Gateway and surrounding communities rely heavily on adjacent public lands for tourist dollars.⁸ Visitors come from across the country and around the globe to enjoy America's natural wonders.

Wildlife associated recreation supports rural economies and added \$50 billion to the national economy in 1996 alone, according to a Forest Service report.⁹ National Park Service analysts estimated that the 1.4 million visitors to Shenandoah National Park in 1992 spent more than \$45 million in surrounding counties. In addition, combined spending by NPS and by the concessionaire operating businesses on Skyline Drive was estimated at \$10.2 million.¹⁰

More than 82 million U.S. residents aged 16 and older fished, hunted, or watched wildlife in 2001, spending \$108 billion. This amounted to 1.1 percent of the Gross Domestic Product (GDP). Of the total amount spent, \$28 billion was for travel, \$64 billion for equipment, and \$16 billion for other items. Hunting and fishing drew \$70 billion in 2001 — \$36 billion on fishing, \$21 billion on hunting, and \$14 billion on items used for both hunting and fish-

ing. Wildlife watchers spent \$38 billion on trips, equipment, and other items.¹¹

Recreational and educational visits to national wildlife refuges generate substantial



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economic activity. In fiscal year 1995, there were more than 27.7 million such visits. Visitor spending generated \$401.1 million of sales in regional economies. As this spending flowed through the economy, more than 10,000 people were employed and \$162.9 million in employment income was generated. In some areas, refuge visitors are major stimuli to the local economy. Visitors to Chincoteague National Wildlife Refuge, for example, generate almost 3 percent of the earned income in Accomack County, Virginia. Within the Chincoteague zip code, more than one-third of the jobs are attributable to refuge visitation.¹²

The reintroduction of wolves to Yellowstone has been a boon to surrounding communities and businesses. The Fish & Wildlife Service projected that wolf watching will continue to attract record numbers of visitors to Yellowstone National Park and add an additional \$23 million annually to the local economy.¹³

ALTERNATIVE TRANSPORTATION ON PUBLIC LANDS

The interests of gateway communities, tourism, visitors and wildlife will be best served

by improvements that recognize their interdependence. In order to address traffic congestion, air pollution, and continued threats to biodiversity, resource agencies and the FLHP should consider providing more visitor friendly and environmentally sensible transportation options on public lands. Instead of continuing with the roadbuilding agenda that has precipitated these problems, resources would be better spent on a system designed to meet the current and future needs of both human visitors and non-human residents. It is possible to improve mobility and visitor experience, and at the same time mitigate the impacts of existing roads.

Alternatives to the private vehicle are now offered at many public lands. According to the NPCA, more than 90 national parks now offer some form of public transportation for visitors. The Fish and Wildlife Service offers alternative transportation at ten or more national wildlife refuges.¹⁴ Another alternative is improved access for pedestrians and bicyclists. Many visitors may prefer to walk or bike, but find no sidewalks or trails from gateway communities to the facility. This forces many people to drive to and from the facility, adding to traffic tie-ups. With additional support, alternative transportation can reduce the burden of traffic congestion within public lands, improve visitor experience and protect biodiversity.

ZION NATIONAL PARK

Not long ago, Utah's Zion National Park was overwhelmed by cars, RVs, and tour buses.



NATIONAL PARK SERVICE

Traffic congestion, lack of parking, air and noise pollution, and damage to natural resources frustrated managers and visitors alike. The park now offers a free shuttle bus along the Zion Canyon Scenic Drive from early April through the end of October. Private vehicles are not allowed during peak visitation hours. All other parts of the park are open to private vehicles. The shuttles operate in two loops, one making six stops in the town of Springdale and the other making eight stops at points of interest in the park. Each bus is fully accessible and can carry two bicycles. There is room onboard for packs, coolers and strollers. Two trams in the fleet are electric-powered.

“Initially, people [visiting Zion] were a little hesitant and didn’t know if they’d like being separated from their cars, but our members have told us it works very well,” said Ralayne Fairclough of the Utah office of the American Automobile Association (AAA).¹⁵

SANTA ANA NATIONAL WILDLIFE REFUGE TRAM

For more than 15 years, an open air, interpretative tram has taken visitors through Texas’ Santa Ana National Wildlife Refuge. The tram runs four times daily from Thursday through Monday during peak season, and private vehicles are prohibited on the drive when the tram is in service. The tram holds up to 30 people and makes a tour loop of 7.5 miles. The tram fare is \$3 for adults and \$1.50 for children, and free for school groups.

The tram service is a cooperative effort with the Valley Nature Center (VNC), a local, non-profit organization dedicated to environmental education, which supplies a driver and a narrator for each tour. Annual ridership exceeds 6,000 passengers, earning about \$18,000 in fares for VNC. The Santa Ana NWR supplies the tram, gasoline, and maintenance for the vehicle, with an annual budget of \$5,000.

CONCLUSION

Public lands are the cornerstones of our natural heritage, providing Americans with recreation, food and fiber, watersheds and scenic beauty. These lands hold a wealth of amenities, not the least of which is a repository for our nation’s imperiled biodiversity. These lands should not be sequestered, but must remain accessible to Americans who support them. However, attempts to accommodate visitors should not destroy the very amenities that draw them in the first place.

Public lands support local communities, the travel and tourism industries and resident wildlife in a mutually beneficial relationship. That which threatens one, threatens all. Solutions to traffic congestion, polluted air and degraded habitat will not be found in continuing to focus on private vehicles as the only mode to visit public lands. To maintain mobility and environmental quality, resource agencies and the FLHP must provide visitors with environmentally sensible transportation options. Increase mobility, not lane miles. Accommodate visitors, not vehicles.

RECOMMENDATIONS

- Maintain roads on public lands in a manner consistent with the management of surrounding natural resources, including wildlife, both terrestrial and aquatic.
- Practice context-sensitive solutions in roads and highways on public lands. Retrofit existing roads to reduce their intrusion on the landscape and increase habitat connectivity.
- Weigh the need for additional roads against the increased impact on natural resources.
- Increase public awareness of wildlife needs through reduced speed limits, signage and informational pull-outs.
- Reduce the need for individual motorized access to public lands by improving multi-modal infrastructure, such as bike paths, hiking trails and trams.
- Use only native species in right-of-way vegetation management on public lands.

RESOURCES

USFWS Refuge Roads <http://refuges.fws.gov/roads/index.html>

Roads, Parking Lots, Bridges and Trails: Conditions and Future Needs U. S. Fish and Wildlife Service, July 2002 <http://refuges.fws.gov/roads/ResourcePaper.pdf>

National Parks Conservation Association http://www.npca.org/across_the_nation/visitor_experience/tea21.asp

Federal Lands Highway Program <http://www.fhwa.dot.gov/flh/>

Alternative Transportation in the National Parks
<http://www.nps.gov/transportation/alt/index.htm>

Federal Lands Alternative Transportation Systems (ATS) Study: Summary of National ATS Needs <http://www.fta.dot.gov/library/policy/fedland/v3/asses.pdf>

PUBLIC LANDS AND TEA-21

Authorizations for FLHP in TEA-21 totaled \$4.1 billion for fiscal years 1998 through 2003. Funding is provided for the three existing categories of Federal Lands highways — Indian Reservation Roads (IRR), Park Roads and Parkways, and Public Lands Highways (discretionary and Forest Highways) — and for a new category; Refuge Roads, which are federally owned public roads that provide access to or within the National Wildlife Refuge System. FLHP funds can be used for alternative transportation facilities within public lands, national parks, and Indian reservations and can also be used as the state or local match for most types of Federal-aid highway projects. Procedures and a fund allocation formula for the IRR program are developed through negotiated rulemaking with Indian tribal governments.

OPPORTUNITIES FOR REAUTHORIZATION

- Reauthorize and fully fund the National Scenic Byways, Emergency Relief for Federally Owned Roads, Recreational Trails and Transportation Enhancements programs, all of which support public lands.
- Increase funding for repair and maintenance of transportation facilities on public lands. Specify that funding is NOT to be used for additional road-building.
- Provide dedicated funding for alternative transportation on public lands.

1. <http://www.defenders.org/publiclands/>
2. National Parks Conservation Association, http://www.npca.org/about_npca/
3. The number of visitors for FY 2001 was based on information obtained from the Refuge Management Information System. The estimated number of visitors for FY 2002 is based upon the average rate of growth during the 1995-2001 time period. Roads, Parking Lots, Bridges and Trails Conditions and Future Needs U. S. Fish and Wildlife Service, July 2002
4. Federal Lands Highway Program, <http://www.fhwa.dot.gov/flh/>
5. NPCA, http://www.npca.org/across_the_nation/visitor_experience/tea21.asp
6. Code Red: America's Five Most Polluted National Parks, NPCA
7. Influence of Vehicle Speed and Vegetation Cover-Type on Road-Killed Wildlife in Yellowstone National Park. 2001, Gunther, Kerry A. The Wildlife Society Annual Meeting.
8. Gateway communities are cities and towns that border late public land holdings such as national and state parks, forests, or wildlife refuges.
9. Flather, C.H., S.J. Brady and M.S. Knowles. 2000. Wildlife Resource Trends in the United States.
10. Code Red: America's Five Most Polluted National Parks, NPCA
11. 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, USFWS
12. Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation, USFWS, 1997
13. Duffield, J. W. and C.J. Nehu. 1996. Economics of Wolf Recovery in Yellowstone National Park. Transaction of the 61st North American Wildlife and Natural Resources Conference.
14. Personal communication with Sean Furniss, Refuge Roads Coordinator, 2003.
15. At more parks, visitors leave the car behind, By Todd Wilkinson, The Christian Science Monitor