

SONORAN INSTITUTE
THEODORE ROOSEVELT CONSERVATION PARTNERSHIP



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The Sonoran Institute promotes community decisions that respect the land and people of western North America. Facing rapid change, Western communities recognize and value the importance of their natural and cultural assets assets that support resilient environmental and economic systems. The Sonoran Institute offers tools, training and sound information for managing growth and change and encourages broad participation, collaboration and big-picture thinking to create practical solutions. Decisions about using land, water and other resources affect our prosperity and quality of life today and in the future.



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The Theodore Roosevelt Conservation Partnership is a coalition of leading conservation organizations and individual grassroots partners working together to preserve the traditions of hunting and fishing by expanding access to places to hunt and fish; conserving fish and wildlife and the habitats necessary to sustain them; and increasing funding for conservation and management.

All life in the wilderness is so pleasant that the temptation is to consider each particular variety, while one is enjoying it, as better than any other. A canoe trip through the great forests, a trip with a pack-train among the mountains, a trip on snow-shoes through the silent, mysterious fairy-land of the woods in winter each has its peculiar charm.

Theodore Roosevelt

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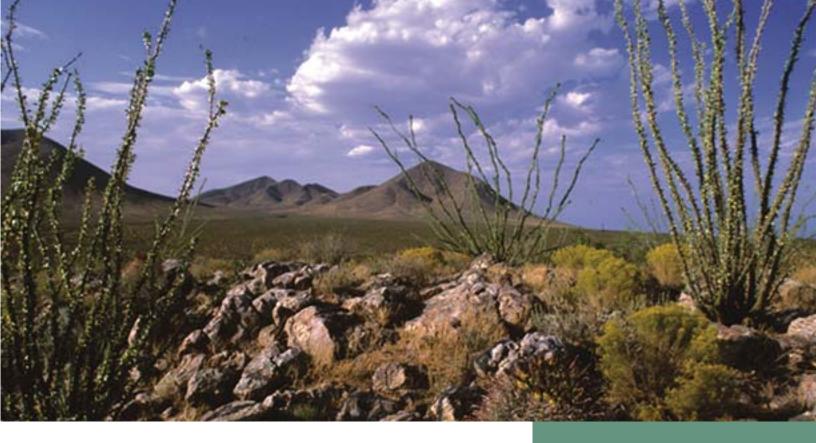
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he western United States has a proud and rich tradition of conserving wildlife and the habitat on which they depend. Hunters and anglers are the bedrock of this tradition. Sportsmen and their organizations, exemplified by the Theodore Roosevelt Conservation Partnership, have long supported wildlife and habitat conservation in the West through their volunteer efforts, their leadership and their wallets.

As this report demonstrates, fishing and hunting have a significant positive impact on the prosperity of Western states and communities. Licenses, fees and taxes fund our game and fish departments and their wildlife management programs. Many businesses, large and small, local and national, depend on sportsmen. Hundreds of small, rural Western communities rely on money spent by hunters and anglers.

The economy of the West is changing rapidly. Former mainstays, such as logging and ranching, have been surpassed by retirement income and the "knowledge economy." As Western states adapt to compete in a global market, relatively untrammeled lands — public and private — are increasingly an economic asset, attracting hunters, anglers, new residents and visitors looking for open spaces, majestic scenery and outdoor recreation in pristine settings.

Our backcountry is an important resource, in and of itself, for hunters and anglers and for everyone who enjoys the freedom of the West's public lands. Policies that conserve wildlife habitat protect valuable assets that enhance prosperity and quality of life now and into the future.

Jim Range Chairman Theodore Roosevelt Conservation Partnership Luther Propst Executive Director Sonoran Institute

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
INTRODUCTION America's Wildlife Conservation Heritage	
SPORTSMEN PAY TO PLAY Hunting and Fishing Are Economic Activities	
THE ECONOMIC IMPACT OF SPORTSMEN IN WESTERN STATES	5
BACKCOUNTRY BOUNTY Pristine Public Lands	12
Attract Hunters, Anglers Roadless Lands Conserve	
Habitat and Wildlife Counties with Protected Areas Grow the Fastest	
CONCLUSION	
ENDNOTES	 . 16

ish, wildlife and protected lands are important assets in America, contributing to the country's ecology, beauty, culture, recreation and economy. Significant economic benefit in the West is due to protected public lands, which offer quality hunting and fishing experiences. Public lands, including roadless areas, attract and retain sportsmen and the businesses that serve them.

Wildlife and Sportsmen Rely on Public Lands — Including Roadless Areas

The sheer size of the West's public lands defines their importance to wildlife. It is not surprising that hunters and anglers depend on these same public lands. The annual survey of hunting and fishing by the U.S. Fish and Wildlife Service finds that the vast majority of hunters pursue game on public lands. Roadless public lands — backcountry accessed by trails — offer protection for wildlife and quality opportunities for hunting and fishing.

Sportsmen Boost the Economy of the West

Well-maintained areas of wildlife habitat and public land provide economic activity to states and communities through hunting and fishing. According to the most recent survey, done in 2001, sportsmen in Arizona, Idaho, Montana, New Mexico, Wyoming, and Utah spent more than \$2.9 billion on these activities. Hunters also contribute to local economies and to conservation, education and habitat restoration through excise

taxes on equipment, which in 2005 added more than \$523 million nationally to the management of public lands.¹

Protected Public Lands Promote Prosperity

In the rapidly changing West, having public lands in or adjacent to a county is good for economic growth. The more protected these lands are, the faster the growth. For example, counties where more than 60 percent of the federal public land is in protected status grew 66 percent faster from 1970 to 2000 than counties where the same percentage of public land has no permanent protective status.

Sportsmen's Tradition of Conservation

During the presidency of Theodore Roosevelt — an avid hunter and outdoorsman — the National Forest system was expanded, five national parks were created, 18 national monuments designated, and 54 federal game and bird preserves dedicated. This conservation momentum continued after the Roosevelt presidency through legislation and the support of engaged citizens, such as sportsmen. Hunting and fishing associations have a long history of efforts to protect and conserve wildlife and habitat. Sportsmen also contribute to conservation funding through license fees and taxes.

A number of reasoned arguments can be made for conserving wild, roadless lands and the natural processes they support. One important argument is that these lands hold tremendous economic value by attracting hunting and fishing revenues.

Introduction

ildlife and the wild lands on which they live have ecological, cultural, recreational, aesthetic and economic value. They often provide a foundation for local prosperity, particularly in the American West. This report discusses the relationship between wild lands and hunting and fishing and their economic impact on the West:

- Hunters and anglers have generated more than \$10 billion through recreation-related licenses, taxes and fees to support federal, state and private-sector conservation.²
- The economic impact of hunting and angling and related industries in the West is significant, adding nearly \$3 billion combined in 2001 to the economies of Arizona, Idaho, New Mexico, Montana, Utah and Wyoming.³

Conservation of public lands in the West is critical to attracting and retaining these revenues.

America's Wildlife Conservation Heritage

During the 19th century, the American West saw a rapid increase in rural development, significantly impacting fish and wildlife resources in the region. In the late 1800s, sportsmen began public and private efforts to protect and conserve wildlife. Hunting and fishing associations were born and game preserves were established.

Sportsmen and America's conservation movement found a champion at the turn of the century when Theodore Roosevelt became president. During his tenure, this avid hunter and outdoorsman expanded the National Forest system, designated 18 national monuments, created five national parks and dedicated 54 federal game and bird preserves.⁴ The Roosevelt presidency solidified the bond between sportsmen and habitat conservation. By 1928 every state had laws on the books requiring hunters to purchase licenses, which still fund wildlife management today.⁵



In 1937 the Federal Aid in Wildlife Restoration Act created a tax on ammunition and sporting arms, which funded a special trust fund for state wildlife restoration projects that has generated more than \$5 billion. This tax was supported by the very people to be taxed — America's hunters and anglers. The Federal Aid in Sport Fish Restoration Act passed in 1950 created a parallel program for management, conservation and restoration of fishery resources, which has also generated more than \$5 billion. Funds from the Migratory Bird Hunting Stamp Act (the federal duck stamp) contributed to the purchase of more than 4 million acres of wetland habitat.6

The National Survey of Fishing, Hunting and Wildlife-Associated Recreation showed that the contribution made by licenses and taxes associated with hunting and angling for the year 2000 was more than \$3.7 billion. Every year, almost \$200 million in federal excise taxes are distributed to state agencies to support hunter education and safety classes, land purchases and wildlife management.

American sportsmen have a long history of advocating for better stewardship of natural resources. They back up their conservation ethic with conservation money, a significant contribution to the economy of the new American West.

American sportsmen back up their conservation ethic with conservation money.

Sportsmen Pay to Play







HUNTING AND FISHING ARE ECONOMIC ACTIVITIES

ost recent data pegs the number of hunters and anglers in the nation at 38 million, and they contribute more than revenues from licenses, taxes and fees. Sportsmen "pay to play," spending an average of \$1,851 annually on hunting and fishing activities, according to a 2001 study by the International Association of Fish and Wildlife Agencies (IAFWA). Nationally, this amounts to nearly \$70 billion, including \$276 million on lodging alone.⁸

This \$70 billion figure means that if hunters and anglers were a corporation, it would rank #11 on the Fortune 500 list — above Home Depot and AT&T — according to the Congressional Sportsmen's Foundation. The group also points out that hunters and anglers support more jobs nationwide than Wal-Mart, the country's

largest employer; that hunters support more jobs than all of the nation's top airlines combined; and that anglers support more jobs than Exxon-Mobil, General Motors and Ford combined.9

Freshwater fishing is the most popular type of angling, with 28 million men and women visiting lakes, rivers and streams across the country to try their luck in 2001, while saltwater fishing spots attracted 9 million anglers. All together anglers spent \$35.6 billion in 2001 — nearly 50 percent of it for equipment, 10 percent for transportation and 17 percent for food and lodging. Equipment expenditures increased by 39 percent since 1991.

The nation's 13 million hunters spent more than \$20 billion dollars — 50 percent of it for equipment, while 10 percent was for food and 9 percent was for transportation.

... if hunters and anglers were a corporation, it would rank #11 on the Fortune 500 list.

TYPES OF HUNTERS AND NUMBER OF HUNTING DAYS

	TYPE OF GAME	NUMBER OF HUNTERS	HUNTING DAYS IN 2001
Big-game hunters	Deer, elk, bear, moose	10.9 million (84%*)	153 million days
Small-game hunters	Squirrels, rabbits, quail, pheasant	5 million (42%*)	60 million days
Migratory-bird hunters	Waterfowl, doves, woodcock	3 million (23%*)	29 million days
Other animal hunters	Raccoons, woodchucks	1 million (8%*)	19 million days

^{*} Percent identifying themselves as hunters of this type of game. Totals more than 100% due to hunters selecting more than one category.



ccording to the International Association of Fish and Wildlife Agencies, hunting generates more than \$1.3 billion in personal wages and salaries in 11 Western states. ¹⁰ The states of Arizona, Idaho, Montana, New Mexico, Utah and Wyoming are presented here as case studies to demonstrate the regional economic impact of hunting and fishing activities. It is clear those activities contribute significantly to local economies through both in-state and out-of-state residents.

The tables on the following pages show estimates from the 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, the most recent data available. Total expenditures, average expenditures and days of activity are displayed for each state, along with other selected characteristics where applicable. ¹¹





Total annual expenditures for hunting and fishing in Arizona exceed \$548 million.

ANGLERS	HUNTERS
419,000 anglers (84% state residents and 16% nonresidents)	148,000 hunters (81% state residents and 19% nonresidents)
4.2 million fishing days – average of 10 days per angler (91% residents and 9% nonresidents)	1.7 million hunting days – average of 11 days per hunter (91% residents and 9% nonresidents)
\$336 million total expenditures (54% equipment, 42% trip-related, 4% other)	\$212 million total expenditures (59% equipment, 31% trip-related, 10% other)
\$828/680 average expenditure per angler (residents/nonresidents)	\$1,821/1,380 average expenditure per hunter (residents/nonresidents)
\$33/33 average trip expenditure per day (residents/nonresidents)	\$51/38 average trip expenditure per day (residents/nonresidents)
2.9 million fishing trips in 2001	1.1 million hunting trips in 2001



In Arizona, 121,000 hunters (82 percent) identify themselves as public-land hunters. Of 1.7 million hunting days, 1.4 million are spent on public lands in Arizona. In general, sportsmen in Arizona are between 35 and 55 years of age. Sportsmen households earn between \$30,000 and \$75,000 annually, and most sportsmen have a high school degree, some college, or a college degree.

When the workload allows, I look forward to stalking the wily trout in the backcountry. Arizona is blessed with over a million acres of inventoried roadless lands that contain the pristine watersheds that nurture our best wild and native fish populations and shelter some of our healthiest big-game herds.

Anglers, American Indian tribes and government agencies have invested millions of dollars to preserve our state's rare native fish — it is counterproductive to spend all that money only to put them in jeopardy by allowing more roads to be constructed through the last of Arizona's best wild places.

Hunters and anglers in Arizona are asking to keep areas inventoried as roadless in their present form — to keep the land as it is. We are not asking to limit access or close existing roads or trails. Keeping these lands intact ensures our hunting and angling heritage is maintained for generations to come.

Fred A Fillmore of Mesa Arizona is a senior software engineer

In the 20 years I have been in Arizona, the population has grown dramatically. With the explosion of ATVs, campers, bikers, hunters and fisherman, it is apparent that to maintain quality habitat for wildlife we need to maintain roadless areas in our National Forests. I see the dramatic differences in areas that have seclusion. Whether for nurturing calves and fawns or simply as an escape from the constant pressures of humanity, we need to preserve what remains. What we decide today will have permanent impacts on our children's futures.

John Koleszar of Gilbert, Arizona, is a business owner and hunter.





ANGLERS	HUNTERS
416,000 anglers (60% state residents and 40% nonresidents)	197,000 hunters (76% state residents and 24% nonresidents)
4.1 million fishing days – average of 10 days per angler (72% residents and 28% nonresidents)	2.1 million hunting days – average of 11 days per hunter (83% residents and 17% nonresidents)
\$311 million total expenditures (39% equipment, 37% trip-related, 24% other)	\$231 million total expenditures (42% equipment, 36% trip-related, 22% other)
\$882/718 average expenditure per angler (residents/nonresidents)	\$1,113/1,136 average expenditure per hunter (residents/nonresidents)
\$26/29 average trip expenditure per day (residents/nonresidents)	\$28/40 average trip expenditure per day (residents/nonresidents)
3.3 million fishing trips in 2001	1.7 million hunting trips in 2001

In Idaho, 173,000 hunters (88 percent) identify themselves as public-lands hunters. Most of those (93 percent) are residents. Of 2.1 million hunting days, 1.76 million, or 84 percent, are spent on public lands. Sportsmen in Idaho are, in general, white, male and non-Hispanic. They are mostly 25 to 55 years old, and their average household incomes are primarily between \$30,000 and \$75,000 annually. Most sportsmen in Idaho have a high school degree or higher education.¹¹



Roadless areas are extremely valuable to me as a sportsman and conservationist. Last week I hiked into a roadless area on the Payette National Forest to hunt wild turkeys. Each fall my friends and I seek out roadless areas to archery hunt elk and deer. In the summer I love to fish trout and salmon on remote streams in roadless areas. These areas provide a quality outdoor experience for me and my friends, and they provide excellent habitat for wildlife. Species like elk greatly benefit from areas where they can drop their calves and graze undisturbed. Fish species like the wild steelhead and cutthroat trout do best in streams that have few roads nearby. As a practicing conservationist, I have documented that special ecological areas are most often found in roadless areas. In contrast, I've documented extensive weed invasions transferred by ATVs and trucks on roadways leading into Hells Canyon and the Owyhees.

Arthur Ray Talsma is a sportsman and works in fish and wildlife management in western Idaho.



For me, hunting and fishing are synonymous with wildness. And true wildness is only found in roadless or wilderness areas. These untamed public lands are the last bastions of what the world once was. They are the landscapes that still work naturally, providing a benchmark of normalcy against which all management plans can be judged. My tiny community of 500 souls owes its continued existence to money brought in from hunters and anglers due to the roadless and wilderness lands that surround our area. Without continued protection of these lands, our community's economic and social vitality would be dealt a death-blow.

Holly Endersby, an Idaho grandmother of two, spends as much time as possible with her pack string in roadless and wilderness areas hunting, fishing and hiking.



ANGLERS	HUNTERS
349,000 anglers (61% state residents and 39% nonresidents)	229,000 hunters (74% state residents and 26% nonresidents)
4.1 million fishing days – average of 12 days per angler (86% residents and 14% nonresidents)	2.4 million hunting days – average of 11 days per hunter (84% residents and 16% nonresidents)
\$292 million total expenditures (37% equipment, 51% trip-related, 12% other)	\$238 million total expenditures (42% equipment, 45% trip-related, 13% other)
\$917/818 average expenditure per angler (residents/nonresidents)	\$946/1,027 average expenditure per hunter (residents/nonresidents)
\$18/37 average trip expenditure per day (residents/nonresidents)	\$25/44 average trip expenditure per day (residents/nonresidents)
3.1 million fishing trips in 2001	1.9 million hunting trips in 2001

In Montana, most hunters (156,000 or 68 percent) hunt on public lands. This accounts for 65 percent, or 1.6 million, of 2.4 million hunting days. Sportsmen in Montana typically are white, male and non-Hispanic and between 35 and 55 years of age. Thirty-two percent of sportsmen earn an average household income between \$20,000 and \$40,000, and 22 percent earn between \$50,000 and \$75,000. Most hunters and anglers in Montana have a high school education.¹¹



As an avid hunter and life-long Montana resident, I recognize that inventoried roadless areas provide enormous ecological, economic and political benefits. Overwhelming scientific evidence shows that large, unroaded areas are essential for fish and wildlife conservation. Roadless National Forest lands support thousands of jobs here by providing high-quality hunting, fishing, camping and outdoor recreation. Montanans across the political spectrum support wildlife conservation — protecting roadless areas and the hunting and fishing opportunities they afford is neither a "blue" nor a "red" issue, but rather a "purple" one.

Pelah Hoyt of Missoula, Montana, is a founding member and vice-president of Hellgate Hunters and Anglers.

I fish the Madison, Jefferson, Missouri and Yellowstone rivers, but enjoy the Big Hole River the most. Part of what makes the Big Hole so spectacular is that it runs clear nearly all the time because of the intact, roadless watershed upland. Protected roadless areas are critical to overall watershed health, clean drinking water, clear rivers and wildlife habitat. In addition to the Big Hole's blue-ribbon trout fishery, the watershed includes high-quality elk habitat with high bull-to-cow ratio and excellent hunting opportunities.

Tony Schoonen has more than 50 years experience as a fly-fishing guide in western Montana.

Total annual expenditures from hunting and fishing in New Mexico exceed \$329 million.



ANGLERS	HUNTERS
314,000 anglers (63% state residents and 37% nonresidents)	130,000 hunters (80% state residents and 20% nonresidents)
2.5 million fishing days – average of 8 days per angler (84% residents and 16% nonresidents)	1.7 million hunting days – average of 13 days per hunter (91% residents and 9% nonresidents)
\$176 million total expenditures (44% equipment, 51% trip-related, 5% other)	\$153 million total expenditures (48% equipment, 39% trip-related, 13% other)
\$913/551 average expenditure per angler (residents/nonresidents)	\$1,506/1,164 average expenditure per hunter (residents/nonresidents)
\$37/36 average trip expenditure per day (residents/nonresidents)	\$28/36 average trip expenditure per day (residents/nonresidents)
1.9 million fishing trips in 2001	1.1 million hunting trips in 2001

In New Mexico, 94 percent of hunters (122,000) hunt on public lands. Of 1.7 million hunting days, 1.6 million, or 95 percent, are spent on public lands. New Mexico sportsmen are generally white, male, non-Hispanic, and between 35 and 55 years of age. Annual household incomes are generally \$40,000 to \$75,000, and sportsmen usually have a high school education, some college or a college degree.¹¹

New Mexico is a fairly arid, high-desert land where conserving and protecting water resources play an important role in our daily lives. Water is of particular importance to both hunters and anglers in New Mexico, as our riparian corridors sustain our wildlife. Because of never-ending development throughout the West, protecting our roadless and wilderness areas has become vital if we are to hold on to our hunting and angling traditions. These areas have become the last strongholds for our native trout, they keep our wildlife populations strong, and they allow our aquifers to recharge and our streams to run cold. If New Mexico is to remain a place of beauty where people want to live and visit, a place where our children and their children will want to live, a place where the recreation and tourism industries will remain strong, we must hold on to the small portions of the state that remain roadless. Wild lands represent a huge asset on the balance sheet of New Mexico; an asset that we can no longer afford to trade for short-term gain.

William Schudlich of Santa Fe, New Mexico, is an angler and the financial director for Mariah Media, publisher of Outside magazine.



Wild lands represent
a huge asset on the
balance sheet of
New Mexico.

Utah

ANGLERS	HUNTERS
517,000 anglers (75% state residents and 25% nonresidents)	198,000 hunters (89% state residents and 11% nonresidents)
5.2 million fishing days – average of 10 days per angler (90% residents and 10% nonresidents)	2.5 million hunting days – average of 12 days per hunter (95% residents and 5% nonresidents)
\$393 million total expenditures (50% equipment, 44% trip-related, 6% other)	\$292 million total expenditures (57% equipment, 30% trip-related, 13% other)
\$943/728 average expenditure per angler (residents/nonresidents)	\$1,731/1,467 average expenditure per hunter (residents/nonresidents)
\$33/33 average trip expenditure per day (residents/nonresidents)	\$34/36 average trip expenditure per day (residents/nonresidents)
3.9 million fishing trips in 2001	2.2 million hunting trips in 2001

Hunters in Utah spend 81 percent of their hunting days on public lands. Of the 198,000 hunters, 170,000 (86 percent) identify themselves as public-lands hunters. Utah sportsmen are mostly male, white, non-Hispanic and between 18 and 55 years old, with almost half between 25 and 45 years old. Sportsmen's household incomes in Utah are also generally upwards of \$30,000, with more than a quarter earning between \$50,000 and \$75,000. Many sportsmen have a high school diploma, and most have some college education.¹¹



For the past 20 years, I have owned and operated Western Rivers Flyfisher, a specialty retail store and outfitting service. Fishing rates second only to skiing in recreational revenues generated in Utah. Not bad for a desert. Obviously the health and welfare of the habitats are key to the experience our anglers have and to the monies that they spend. Many think of the West as having limitless natural resources, yet most of the resources that I rely upon are at maximum carrying capacity from a recreational standpoint. Growth in the West has put incredible demands on our limited supply of water and, consequently, the habitats that these waters support. I have great concerns about the future of our wild places and Utah's natural resources and about their ability to support a significant segment of Utah's economy.

Steve Schmidt has fished and spent time outdoors in Utah since moving there in 1973.

Fishing rates second only to skiing in recreational revenues generated in Utah. Not bad for a desert.

Total annual expenditures from hunting and fishing in Wyoming exceed \$335 million.



ANGLERS	HUNTERS
293,000 anglers (40% state residents and 60% nonresidents)	133,000 hunters (49% state residents and 51% nonresidents)
2.5 million fishing days – average of 9 days per angler (71% residents and 29% nonresidents)	1.3 million hunting days – average of 10 days per hunter (62% residents and 38% nonresidents)
\$212 million total expenditures (34% equipment, 45% trip-related, 21% other)	\$123 million total expenditures (29% equipment, 58% trip-related, 14% other)
\$1,114/714 average expenditure per angler (residents/nonresidents)	\$967/890 average expenditure per hunter (residents/nonresidents)
\$30/38 average trip expenditure per day (residents/nonresidents)	\$29/54 average trip expenditure per day (residents/nonresidents)
1.7 million fishing trips in 2001	713,000 hunting trips in 2001

Hunters in Wyoming spend 74 percent of their hunting days (960,000 days) on public lands. Most hunters, 86,000 out of 133,000, identify themselves as public-land hunters. In Wyoming, most sportsmen are white, male and non-Hispanic. In general, they have a high school degree or some college. Many (24 percent) have four or more years of college. The annual household incomes of sportsmen are mostly between \$30,000 and \$75,000.

When I first visited Wyoming with my father to fish along the Green River in 1955, I was captivated by the wildlife and great, unpopulated open space. I've been fortunate to have spent more than 30 outdoor seasons introducing new friends to wild rivers and their grand surroundings. It's like going to a birthday party every day. I derive great satisfaction watching people relax from the daily grind. I know that my small operation and others like it are the economic foundation to many Western communities. I'm proud that even if I weren't deriving financial gain from guiding, I'd still fight to maintain wild places for everyone who is thrilled when they visit this big, wonderful West — from blue-collar types to CEOs to traveling empty-nesters.

Paul Bruun of Wyoming owns and operates the earliest floatfishing outfitting permit for the lower Snake River through Bridger-Teton and Targhee National Forests.



Backcountry Bounty



Federally Managed Public Lands in the Western United States



PRISTINE PUBLIC LANDS ATTRACT HUNTERS, ANGLERS

While wildlife call both public and private lands home, the sheer size of public lands in the West makes them indispensable habitat to a multitude of species. More than half the region's land is in public ownership and managed by the Bureau of Land Management, the Forest Service, the National Park Service, and the U.S. Fish and Wildlife Service. In mountainous regions, some counties are as much as 80 percent publicly owned, and in states such as Nevada that number is as high as 90 percent.

Accordingly, it is not surprising that hunters and anglers depend on public lands to pursue their sport, especially those lands with the highest-quality fish and wildlife habitat. The annual survey of hunting and fishing by the U.S. Fish and Wildlife Service finds that the vast majority of hunters pursue game on public lands. In New Mexico, for example, 94 percent of hunters surveyed said they hunted on public lands. In other Western states the percentages are also high: Arizona (82%), Idaho (88%), Montana (86%), Utah (81%), and Wyoming (74%).

ROADLESS LANDS CONSERVE HABITAT AND WILDLIFE

Hunters and anglers and the species they pursue gravitate toward the same habitat — public lands that are pristine, wild, roadless backcountry accessed by trails. Approximately 58.5 million acres of federal roadless lands are managed by the Forest Service. Non-commercial hunting and fishing are allowed in all of these lands.

Roadless public lands, because of their relatively pristine state, offer important protection for wildlife and quality opportunities for hunting and fishing. In Idaho, for example, the majority of remaining healthy populations of native trout, as well as steelhead trout and Chinook salmon, are found in roadless public lands, according to Trout Unlimited. Sixty-eight percent of the state's bull trout habitat is in roadless areas, while 94 percent of the streams listed as sedimentimpaired or degraded are found outside of roadless areas.¹²

Road-related variables have been implicated as increasing elk vulnerability in virtually every study that examines the influence of roads. Bull elk vulnerability is highest in areas with open roads, reduced in areas with closed roads, and lowest in roadless areas.¹⁶

Roads are well-documented to have significant impacts on wildlife. In addition to altering animal behavior and disrupting habitat, roads can promote the spread of exotic and invasive species into an area.¹⁷ Road-building causes soil, water and air pollution, as well as erosion, stream sedimentation, and slope instability, all of which affect wildlife populations. Alterations to the dynamics in stream flows and debris slides significantly impact fish habitat.¹⁸

Roads invite human activity of all sorts, and can lead to poaching, over-hunting and over-fishing of areas that would otherwise be adequately managed and hunted within legal bounds. ¹⁹ Wildlife can easily become isolated by the development that frequently follows road building.







Hunters, anglers and wildlife gravitate toward public lands that are pristine, wild, roadless backcountry accessed by trails.

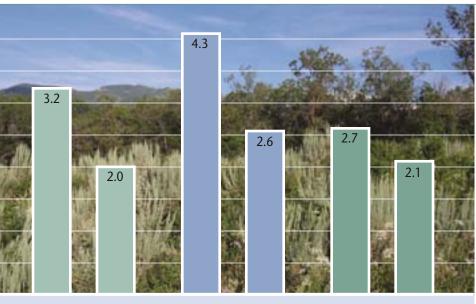
It is a similar story in Montana, where the healthiest habitats and populations of bull trout and westslope cutthroat trout are found in roadless areas and on protected public lands, where many rivers have their headwaters. In Colorado's roadless areas, 76 percent of streams are home to greenback cutthroat trout, and 71 percent are home to Colorado River cutthroat.¹³

Roadless areas provide habitat for big game in the West; more than half of the summer elk herd is concentrated on them, for example. Hany bull elk in Montana that live near highly roaded areas do not live more than 5.5 years, and only five percent survive to maturity. When roads are closed, the population age-structure is extended to more than seven years, and 16 percent of the population survives to maturity. To

Other important impacts of roads are:

- *Direct loss of habitat:* Construction of roads disrupts and changes natural ecosystems.
- Degradation of habitat quality: Roadways and drainage systems upset stream hydrology and flow.
- Habitat Fragmentation: Roads dissect continuous areas used by wildlife.
- Road mortality/population loss: Due to perilous road crossings, an estimated 1.5 million deer/vehicle collisions occur annually in the nation.
- Reduced access to habitats: This is particularly a problem for wideranging species that rely on a variety of ecosystems to survive.

BACKCOUNTRY BOUNTY



60% or more 10% or less ALL PUBLIC LANDS

60% or more 10% or less **PROTECTED**

60% or more 10% or less

NOT PROTECTED

Average annual percentage growth in real person income, 1970 to 2000, by percent of the county with federally managed public lands of different types (based on all 417 counties in 11 Western states, excluding Alaska and Hawaii).

Source: Produced for this report from data sets used for Public Lands Conservation and Economic Well-Being²⁰ (www.sonoran.org).

Protected public lands are part of a mix of ingredients that make the economies of Western communities vibrant.

COUNTIES WITH PROTECTED AREAS GROW THE FASTEST

Protected public lands are part of a successful mix of ingredients that make the economies of Western counties vibrant. In fact, the more public lands a county has, the faster its economic growth, according to a recent study by the Sonoran Institute.

The study also showed that the economy of the West, including the rural West, has changed significantly. Resource extraction has added few new jobs and income, and few counties depend on resource development. Local economies adjacent to public lands managed for conservation grow much faster than in places where the land is managed for resource development, according to the Institute's study.

One important measure of the economy is the real annual growth in total personal income. The chart shows that in the West average personal incomes in counties with:

- 1. a higher percentage of public lands grow faster than those with few public lands.
- 2. a higher percentage of protected lands grow the fastest.
- 3. a high percentage of unprotected lands grow the slowest.

In the West, having public lands in and adjacent to a county is good for economic growth. The more protected these lands are, the faster the growth. For example, counties where more than 60 percent of the federal public land is in protected status (Wilderness, National Parks, etc.) have grown 66 percent faster from 1970 to 2000 than counties where the same percentage of public land has no permanent protective status.²¹



Wild, public lands hold tremendous economic value by attracting hunters and anglers and businesses that serve them.

uch of the most important wildlife habitat in the United States exists on public lands in the West. In a very real sense, we are all co-owners of the land and have the joys of ownership. We can drop a line in a stream after work, or we can go hunting with our friends on the weekend. With ownership also comes responsibility for stewardship, to ensure that our wildlife heritage is passed on to our children and grandchildren.

To continue our legacy of wildlife conservation and stewardship in the West, it helps to understand the economic role of fishing and hunting. The evidence shows that conservation of our most pristine public lands is not only good for fish and wildlife, it is good for business and people:

- Expenditures by hunters and anglers, most of whom depend on public lands, represent a substantial positive impact to the economy of the West.
- Local economies adjacent to public lands managed for conservation grow much faster than in places without protected land.

Wild, public lands have biological, intrinsic, historical and cultural value. As this report illustrates, these lands also hold tremendous economic value by attracting hunters and anglers and the businesses that serve them.

Endnotes







- Revenue is derived from a tax on manufacturers of boating, tackle, rods, reels, arms, ammunition, etc. The Federal Aid in Sport Fish Restoration Program (also known as Dingell-Johnson and Wallop Breaux) has been funded from FY 1952 through FY 2006. The Federal Aid in Wildlife Restoration Program (also known as Pittman-Robertson) is the companion program for hunting. It has been on the books from FY 1939 through FY 2006. The United States Fish and Wildlife Service administers these two programs and the money is distributed annually to the states for conservation. http://federalasst.fws.gov/apport/apport.html
- ² ibid.
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- ⁴ Hunting and Fishing: An American Conservation Heritage. http://www.sierraclub.org/huntingfishing/ timeline.asp (Accessed April 12, 2006)
- ⁵ Hunters: Founders and Leaders of Wildlife Conservation. http://www.npca.org/pub/ba/ba377 (Accessed April 12, 2006)
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The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired in value.

Theodore Roosevelt















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