

Recreation on the Lower Yellowstone River: An Economic Opportunity



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Highlights

*In 2020, no state's economy relied more on outdoor recreation than Montana's; outdoor recreation represented **4.3%** of state GDP, falling well above the US as a whole, in which 1.8% of GDP is attributable to outdoor recreation*

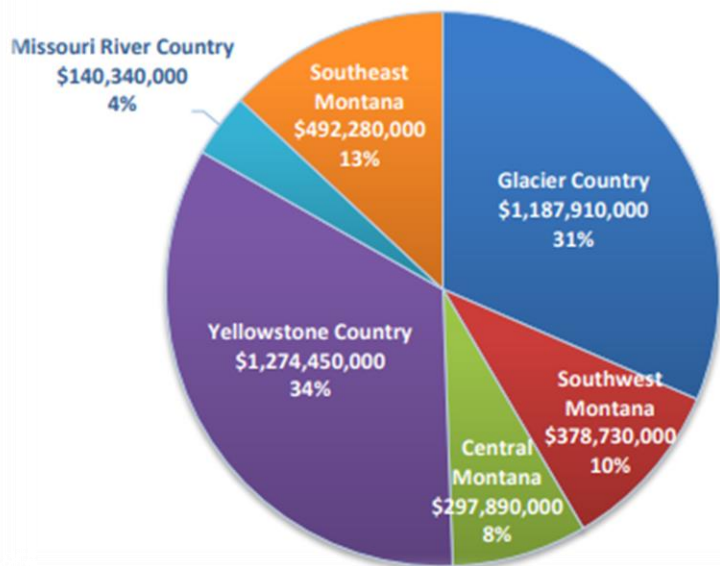
13% of all nonresident traveler spending occurred in Southeast Montana region in 2019, placing it third behind Yellowstone Country and Glacier Country.

36% of those regional dollars went to fuel

15% to hotels

15% to restaurants

2019 Estimate of Nonresident Traveler Spending



Economic Impact of Nonresident Spending in Southeast Montana 2019

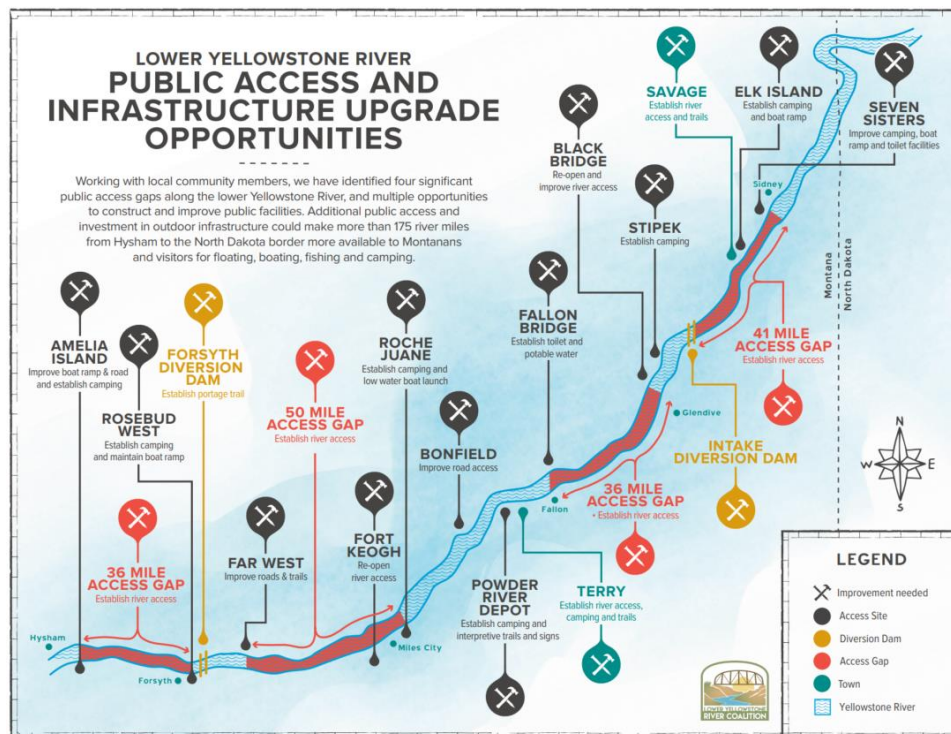
Total Visitor Spending	\$492,280,000
Industry Output	\$627,728,000
Employment	5,240 jobs
Employee Compensation	\$157,685,000

Of vacationers who stayed at least one night in Southeast Montana in 2021, 24% indicated open spaces and uncrowded areas as their primary attraction to the state. While many visitors' primary draw to Montana may be a national park, many have ancillary reasons for visiting as well. Nearly half (46%) indicate rivers as one of their reasons for visiting.

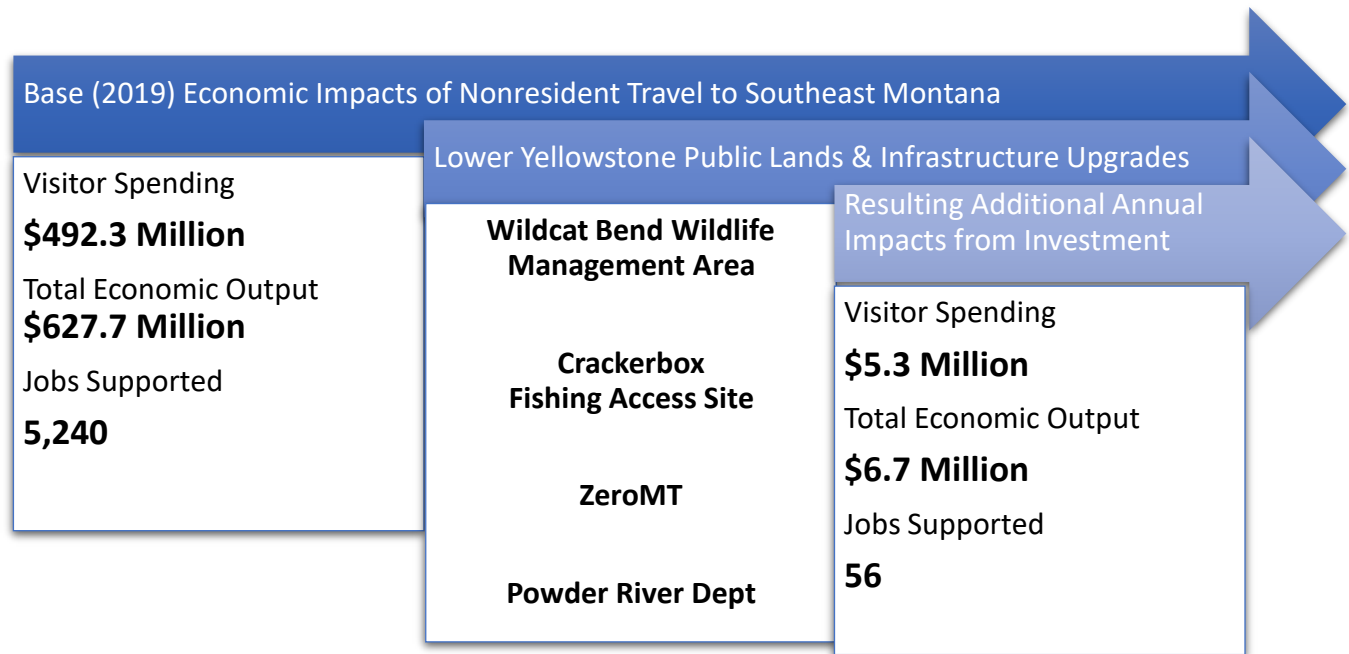
Such observations suggest that improving and expanded open spaces and river-based recreation opportunities may result in positive economic impacts stemming from nonresident recreation increases in the region.

Proposed investments along the Lower Yellowstone River to expand river access, increase recreation, and improve habitat present a range of potential benefits.

Wildcat Bend Wildlife Management Area	<ul style="list-style-type: none"> • Rosebud County • Approximately 350 acres of riparian wildlife habitat • Walk-in and boat-in access for fishing, hunting, and other recreation
Crackerbox Fishing Access Site	<ul style="list-style-type: none"> • Dawson County • Access to the river at one of the longest stretches without public access • Conservation of around 20 acres for wildlife habitat
Zero MT	<ul style="list-style-type: none"> • Prairie County • Long-term easement on approximately 20 acres of state land • Increased public access FAS
Powder River Depot	<ul style="list-style-type: none"> • Confluence of the Powder and Yellowstone Rivers • Up to 700 acres of federal, state, and private lands at the river corridor to form the first unit of the Lower Yellowstone River State Park • Critical importance for fisheries conservation and other forms of recreation • Cultural and educational significance



Investments along the Lower Yellowstone are expected to increase visitor spending by:
\$5.3 Million Annually



Summary

Much of Montana's economy has been and continues to be dependent upon environmental quality and the amenities that environment provides. While the value of this amenity has evolved in definition from early days of extractive-based industries to much of today's value being exhibited via non-consumptive means, the importance of the natural environment remains integral to the Montana ethos. In today's Montana economy the natural environment plays both a role in attracting new businesses and improving resident quality of life as well as being a major draw of tourism to the state and generating substantial opportunity and economic impacts from those additional dollars being brought into Montana.

While Much of Montana's tourism is related to the two major national parks, significant amounts of visitation seek out other areas of Montana's wide-open spaces, including state parks, national forests, areas of cultural significance, birding trails and places to enjoy Montana's dark night skies. These are the types of people that may be influenced by investments such as those described in this paper on the Lower Yellowstone River. Additionally, investments such as these provide an opportunity to capture additional time of travelers through the region and entice them to stay in the region longer, spend more money and support local businesses as they enjoy the unique recreation opportunities both current, and proposed.

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Cover Photo Provided by Sandy Darrah

Introduction

The Outdoor Recreation Economy

IN 2020, THE OUTDOOR RECREATION ECONOMY ACCOUNTED FOR \$374.3 BILLION (1.8%) OF GROSS DOMESTIC PRODUCT (GDP) SUPPORTING MILLIONS OF JOBS

BEA, 2021

Outdoor recreation is a powerful economic driver across the US, and particularly the Mountain West. As an industry, it represents activities including boating and fishing, camping, hunting, water sports (e.g., kayaking and rafting), and wildlife viewing (Figure 1). At the national level, the outdoor recreation industry has been estimated to account for \$374.4 billion (1.8%) of GDP in 2020, supporting millions of jobs as participants purchase equipment for their activities of choice, and often travel beyond their local communities, purchasing travel tickets, and often guides or outfitters.¹ This spending subsequently provides economic support to natural amenity rich regions who host these recreation opportunities. Like much of the US economy in 2020, GDP attributable to outdoor recreation was down for the 2019 high of \$465.2 billion.

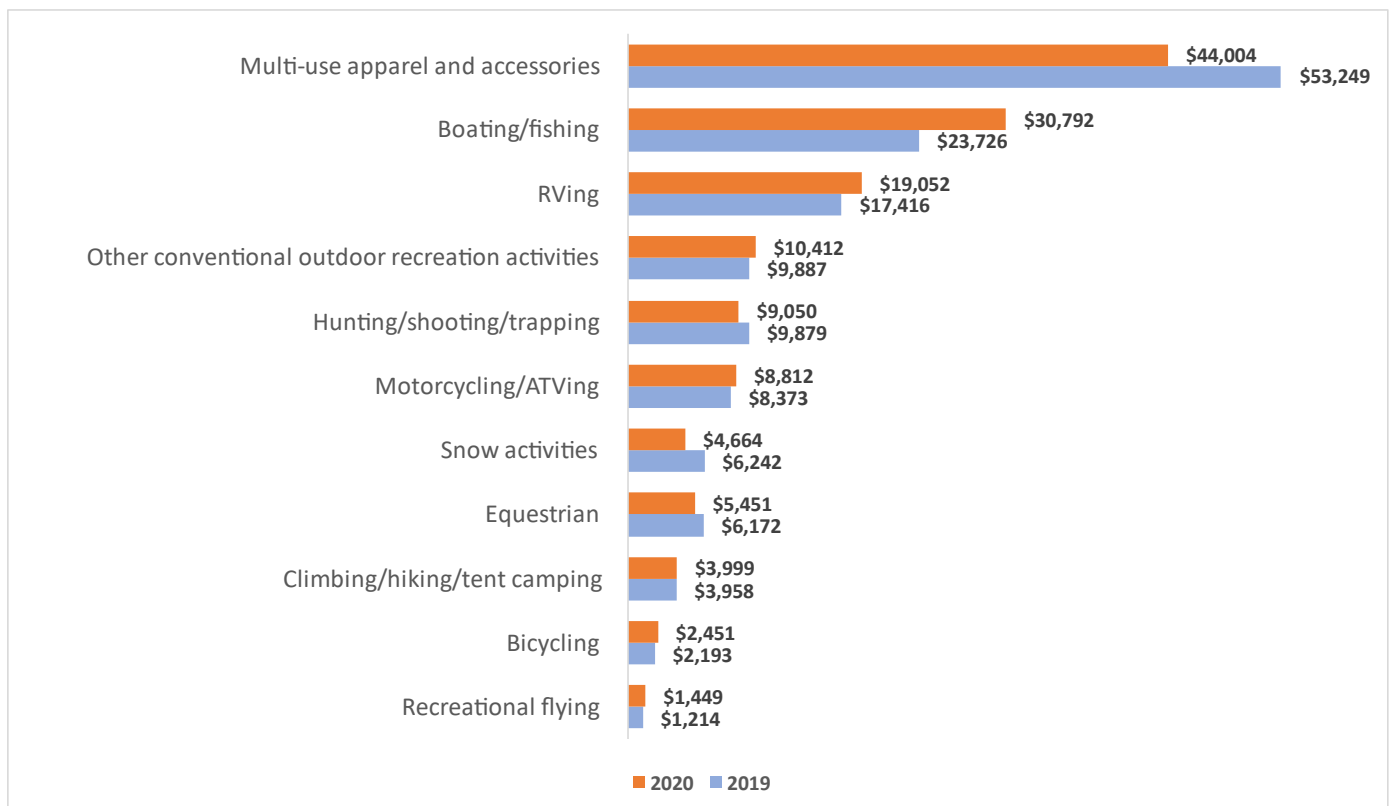


Figure 1. Outdoor Recreation Value Added by Activity in the US (Millions of current US\$)²

¹ Bureau of Economic Analysis (2021): <https://www.bea.gov/sites/default/files/2021-11/orsa1121.pdf>

² Multi-use apparel and accessories consists of backpacks, bug spray, coolers, general outdoor clothing, GPS equipment, hydration equipment, lighting, sports racks, sunscreen, watches, and other miscellaneous gear and equipment.

The outdoor recreation economy, like tourism, is a composite industry made up of not only numerous activities, but also numerous industries. In 2020, value added by conventional outdoor activities (shown in Figure 1) accounted for \$140.1 billion. Other outdoor recreation (e.g., sporting events, field sports, golf, tennis, etc.) added another \$62.7 billion. And finally, supporting industries for outdoor recreation (e.g., construction and travel) accounted for another \$171.4 billion, with trips and travel making up roughly 61% of that value added.³

As seen above, fish and wildlife related outdoor recreation contributes significantly to the larger outdoor recreation economy. Focusing more specifically on these activities, the US Fish and Wildlife Service (USFWS) has conducted two recent nationwide surveys in 2011 and 2016 on fishing, hunting, and wildlife-associated recreation. The original 2011 study surveyed over 48,000 households across the country. Detailed interviews were also conducted in waves to capture additional in-depth information from several types of participants identified as likely anglers, hunters, and wildlife watchers. The survey captures a variety of information, from participation rates to economic impact.

From the 2011 survey, the USFWS estimated 90.1 million participants, spending \$144.7 billion across both consumptive and non-consumptive wildlife-based recreation types.⁴ When repeated in 2016, the results suggest participation had grown to 103.7 million and expenditures to \$156.7. Both reports break wildlife related recreation in hunting, fishing, and wildlife watching, and identifies significant differences between activity type. As displayed, 2011 expenditures for wildlife watching equates to approximately \$54.9 billion, and hunting equates to approximately \$33.7 billion. Fishing as an activity alone accounted for approximately \$41.8 billion in expenditures (Figure 2) across 33.1 million participants (Figure 3).

In 2016, the study surveyed over 22,000 households and repeated many of the same metrics such that the estimates could be directly comparable to the 2011 study and represent a real shift in results.⁵ In 2016, fishing expenditures had grown to \$46.1 billion, an increase of 10% (not adjusted for inflation), and participation increased by 8%.

³ Value-added represents the difference between the price a good or service sells for, and the cost to produce that good. This value is distinct from, and should not be conflated with, total spending in an industry.

⁴ It is important to note that differences exist in the estimations between that of the OIA and the USFWS. These differences arise from multiple measurement factors, including how each entity defines or isolates a metric or category and what they choose to include within it. It is advised to compare within a survey, as opposed to across surveys conducted by different entities.

⁵ USFWS, 2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation
<https://www.census.gov/content/dam/Census/library/publications/2018/demo/fhw16-nat.pdf>

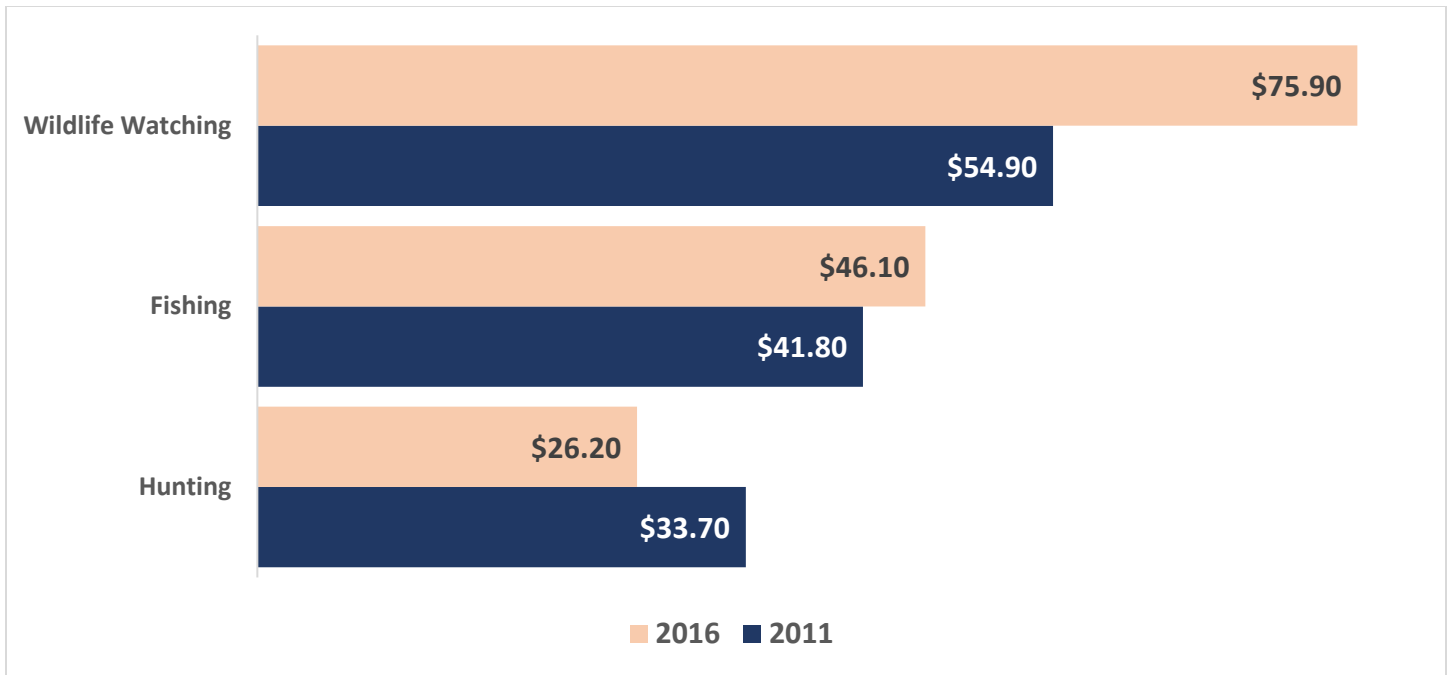


Figure 2. Expenditures (Billion US\$) by Wildlife Recreation Category.

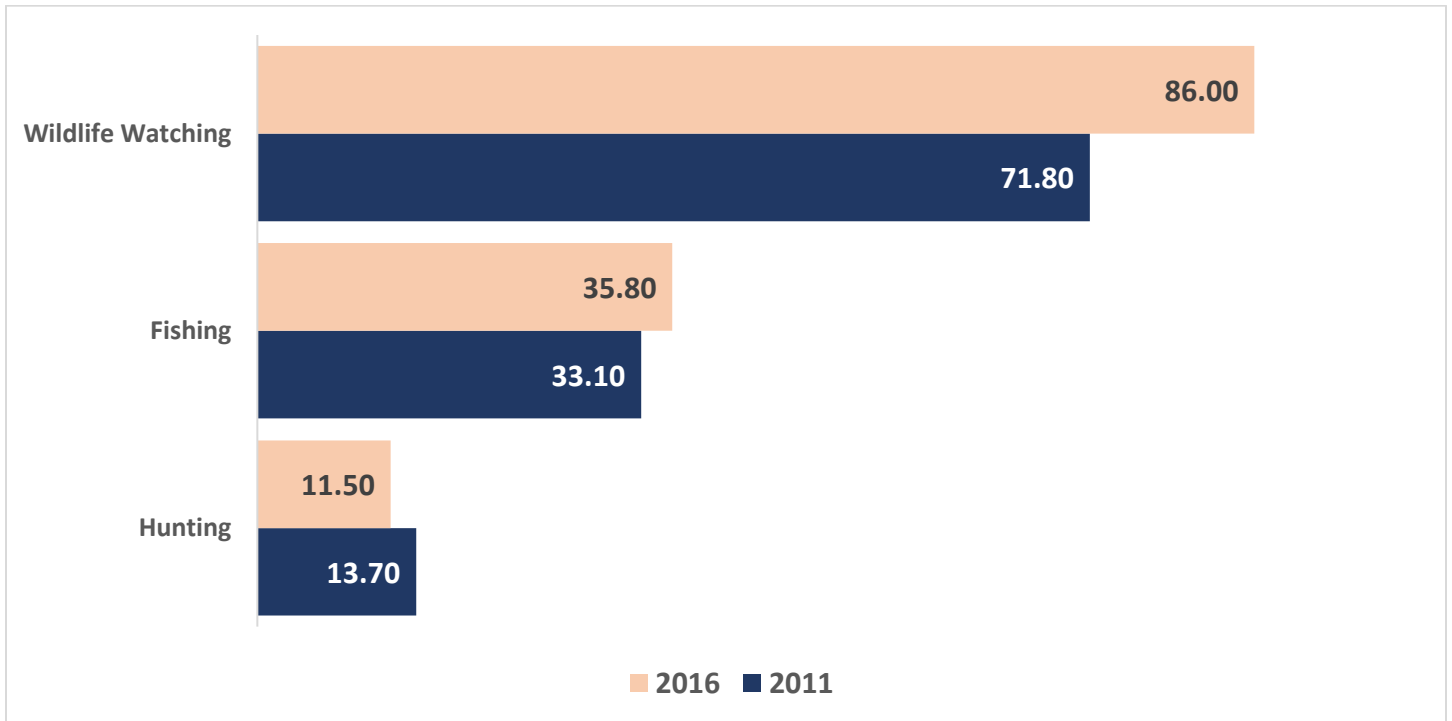


Figure 3. Participants (millions) by Recreation Category.

When breaking down these expenditures from the original 2011 survey, each activity program tends to spend the most on equipment (nearly 50% of all spending per group) with trip-related activity comprising approximately 31-36% of total spending. All other spending ranges from 16-19% of the total.

In 2016, the proportion of what participants spent their money on changed as well, with a larger share of every group spending more on equipment (52-73% of total), and trip-related spending decreasing overall. The USFWS reports do not indicate or suggest a cause of the change but do identify that equipment has become very specialized for outdoor recreation which contributes to the increase in expenditures just on equipment alone.

Wildlife watching is a broad category that includes people participating at home as well, whereas fishing hunting is seldom performed at home and often requires anglers to travel at least some distance to a different location to participate. When such travels occur outside of a participant's home community, they often directly generate economic impacts to the communities where they travel. In 2016, 96% of hunters hunted within their own state and 16% hunted in other states. The numbers do not add to 100% as some participants hunt both in-state and out of state. Meanwhile 90 percent of anglers fished in their home state and 25% fished out of state. Twenty-eight percent of all wildlife watchers took trips away from home to watch wildlife and of those, 31% took trips to other state that involved wildlife watching.

In summary, the FWS studies indicate significant interest in both consumptive and non-consumptive recreation. Both types of wildlife-related activities draw a large volume of participants and expenditures. Fishing appears to be growing at a faster rate than hunting, in terms of both expenditures and participation; in fact, nationally, hunting appears on the decline based on a 5-year spread of results from the FWS studies between 2011 and 2016. This observation has been broadly observed for several decades and is largely reflective of a changing national demography. Baby Boomers have typically made up approximately one-third of hunters in the US and many are now aging out of hunting. Additionally, as the US becomes more urbanized hunting participation declines.⁶

For the purposes of this study, the national data from both the BEA and the USFWS display a large interest in river-based outdoor activities including boating, wildlife viewing, and fishing. It is likely that the similar trends are seen with angling on the Lower Yellowstone River, and may even be higher due to Montana's large participation in outdoor recreation and its contribution to state GDP, as well as a local-area emphasis on fishing, boating, and other river-centric recreation. Such areas generate significant economic impact as a result of visitors travelling to areas of exceptional angling opportunities, such as the Lower Yellowstone. It is important to note that the numbers presented above are national numbers and we may expect variation for Montanans and visitors to Montana. Increased detail on Montana specifically is outlined below.

⁶ Moore, Andrew, 2021. Decline in Hunting Threatens Conservation Funding. <https://cnr.ncsu.edu/news/2021/01/decline-in-hunting-threatens-conservation-funding/>

MONTANA'S OUTDOOR RECREATION ECONOMY GENERATES

26,169 DIRECT JOBS

\$1.1 BILLION IN WAGES AND SALARIES

4.3% OF STATE GDP

BEA, 2021

Montana's Outdoor Recreation Economy

In 2020, no state's economy relied more on outdoor recreation than Montana's; 4.3% of state GDP. This places the state well above the US as a whole, in which 1.8% of GDP is attributable to outdoor recreation (Figure 4). These values represent not only residents taking part in outdoor activities in and around their communities, but also is an indicator of the type of attractants that bring visitors to the state and get Montanans out beyond 50 miles from home. Of the nearly \$800 million in GDP from outdoor recreation-related travel activities in Montana, 76% is attributable to travel over 50 miles, directly infusing new money into Montana communities that may not otherwise be captured (economic impact). This infusion of funds supports more than 25,000 jobs annually throughout the state, across multiple industries, including hospitality and retail.⁷

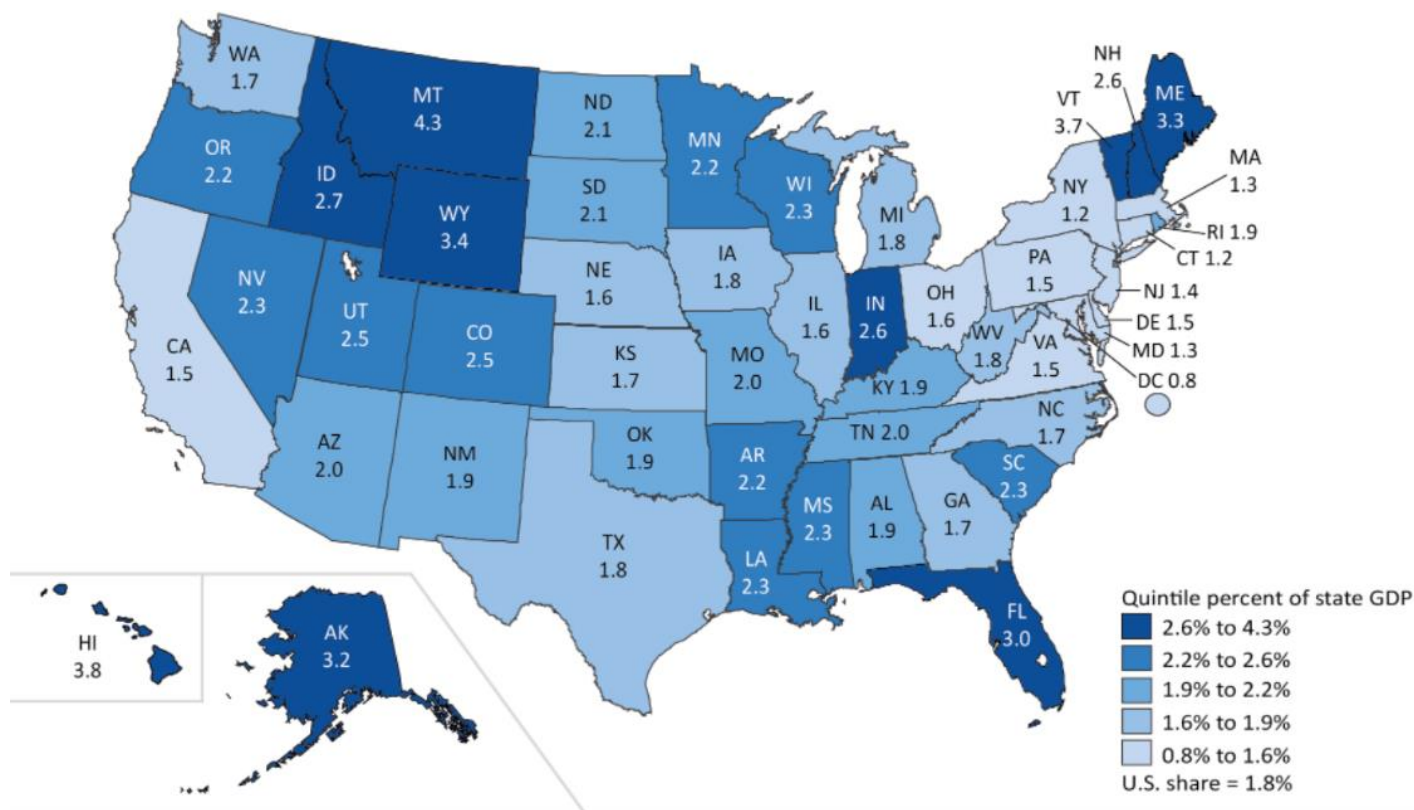


Figure 4. State Outdoor Recreation Value Added as a Percent of State GDP, 2020.

⁷ Bureau of Economic Analysis, Outdoor Recreation Satellite Account and Regional Economic Accounts as reported by Headwaters Economics: <https://headwaterseconomics.org/economic-development/trends-performance/outdoor-recreation-economy-by-state/>

Montana's Tourism Economy

12.5 MILLION VISITORS TO MONTANA

\$5.15 BILLION IN VISITOR SPENDING

48,000 JOBS SUPPORTED

ITRR, 2021

Though not perfectly synonymous, Montana's outdoor recreation economy and its tourism economy share considerable overlap. This impacts each region of the state differently. To examine this, we turn focus to the state's total tourism and then narrow in on the Southeastern Montana Tourism Region (Figure 5), then Yellowstone, Custer, and Dawson Counties specifically. The goal here is to consider the varying roles of outdoor recreation in tourism, with particular interest in river-based recreation; notably fishing.²

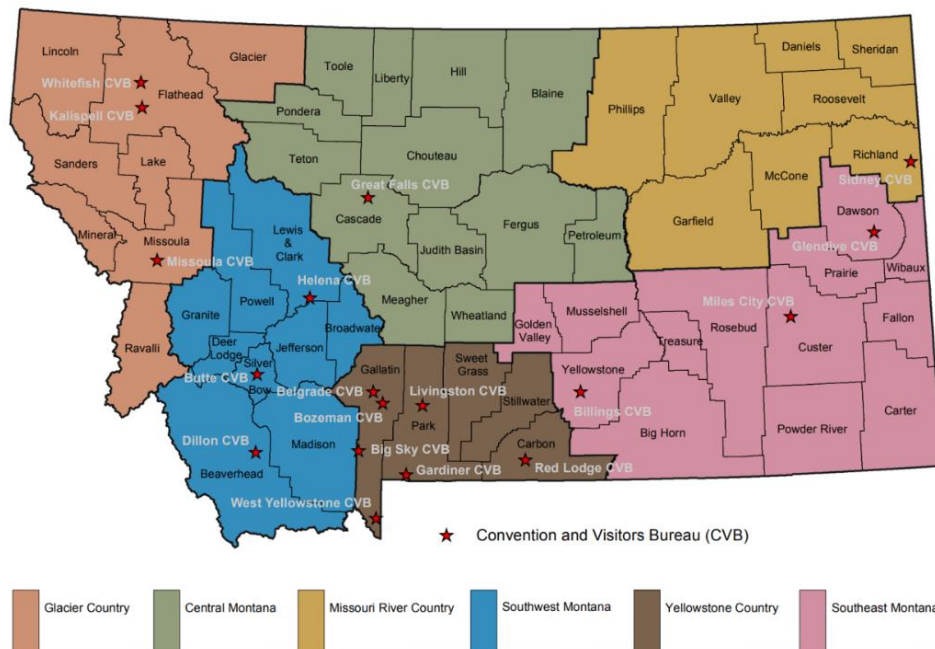


Figure 5. Montana Tourism Regions.

Statewide Tourism

Across the state of Montana more than 12.5 million nonresident visitors arrived in 2021, nearly reaching pre-pandemic highs achieved in 2019 (Figure 6). These visitors contributed more to Montana's economy via their spending than in any previous year. Visitors spent \$5.15 billion dollars, directly contributing to nearly 48,000 jobs across the state. They spend across a variety of businesses and industry sectors in the state. While fuel is the highest expenditure category at the state level (23% of total), sectors made up of many small businesses like restaurants (20%), hotels (13%), outfitters and guides (10%), or retail outlets (8%) make up considerable portions of visitors' spending portfolio (Figures 7 & 8).⁸

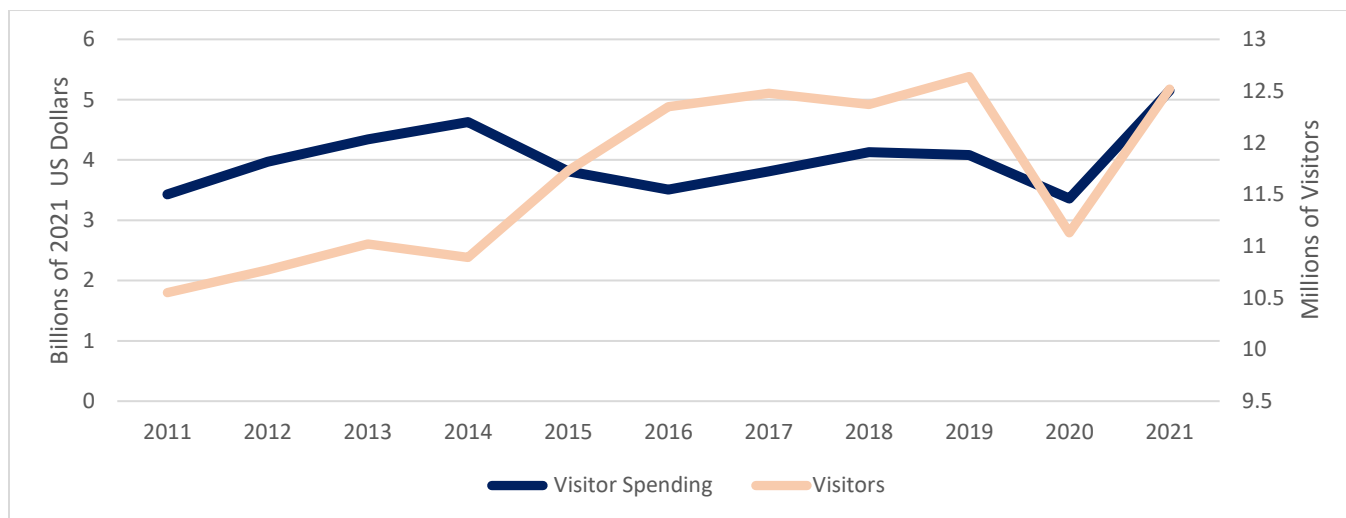


Figure 6. Montana Visitor Volume and Spending (inflation adjusted).

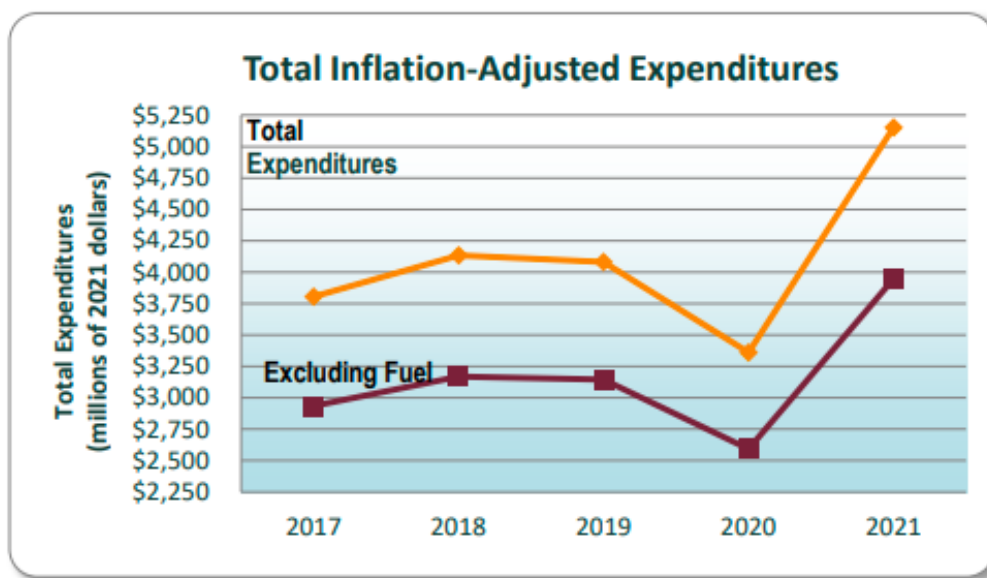


Figure 7. 2017-2021 Montana inflation-adjusted fuel expenditures

⁸ Institute for Tourism and Recreation Research, 2021 Nonresident Visitation, Expenditures, and Economic Impact Estimates: https://scholarworks.umt.edu/cgi/viewcontent.cgi?article=1431&context=itr_r_pubs

<i>Expenditure Category</i>	<i>Total Expenditures</i>	<i>Percent of Total</i>
Gasoline, Diesel	\$ 1,204,670,000	23%
Restaurant, Bar	\$ 1,021,820,000	20%
Hotel, Motel	\$ 663,160,000	13%
Outfitter, Guide	\$ 506,100,000	10%
Groceries, Snacks	\$ 489,030,000	9%
Retail sales	\$ 392,110,000	8%
Auto Rental	\$ 250,110,000	5%
Rental Cabin, Condo	\$ 209,670,000	4%
Licenses, Entrance Fees	\$ 142,240,000	3%
Made in MT Products	\$ 128,900,000	3%
Other	\$ 144,120,000	3%
Estimated Total	\$ 5,151,930,000	

Figure 8. Montana Visitor Spending by Category

The “Outfitter, Guide” category highlighted in Figure 8 is made up of numerous types of activities, including hunting and fishing, white-water rafting, wildlife watching, hiking. Though only a small portion of visitors hire an outfitter or guide, these visitors tend to be in market (in the state) longer and spend more than a typical visitor.⁹ On average, over the past five years (2017-2021), roughly 5% of visitors to Montana report having hired an outfitter of some type.¹⁰

Unfortunately, visitors are not specifically asked for which activity they hired an outfitter or guide. However, they were asked what activities they participated in while in Montana. Figure 9 below highlights several of the key activities in which a visitor might hire an outfitter or guide. As can be seen in the figure below, those visitors who hire an outfitter or guide also take part in an array of outdoor activities; in fact, they do so at much higher rates than the typical visitor. For example, 41% take part in fishing/fly fishing (41%), while only 11% of the typical Montana visitors do so.

In 2017, the 5.4% of all visitors that took a guided outdoor recreation-based experience spent a total of \$791 million while in Montana, accounting for nearly 25% of all visitor spending. These groups spend 5-6 times as much in Montana compared to the average group.

⁹ Sage, Jeremy L.; Bermingham, Carter; and Nickerson, Norma P., "Montana's Outfitting Industry - 2017 Economic Contribution and Industry-Client Analysis" (2018). Institute for Tourism and Recreation Research Publications. 376. https://scholarworks.umt.edu/itr_r_pubs/376

¹⁰ Five-year average was used to increase the observed sample size (n=520).

Montana businesses and entrepreneurs offer a wide array of guided or outfitted experiences. Visitors taking part in these experiences generate some of the highest yielding spending of all visitors to the state. While outdoor recreation-based activities are routinely among the most popular of all activities for Montana visitors in general, they are even more popular for those also hiring guides.

The demand for these outdoor recreation-based activities subsequently serves as a major contributor to the economic impacts of tourism.

Of visitors to Montana who hire an outfitter/guide:

50%
also engage in wildlife watching.

41%
also engage in fishing.

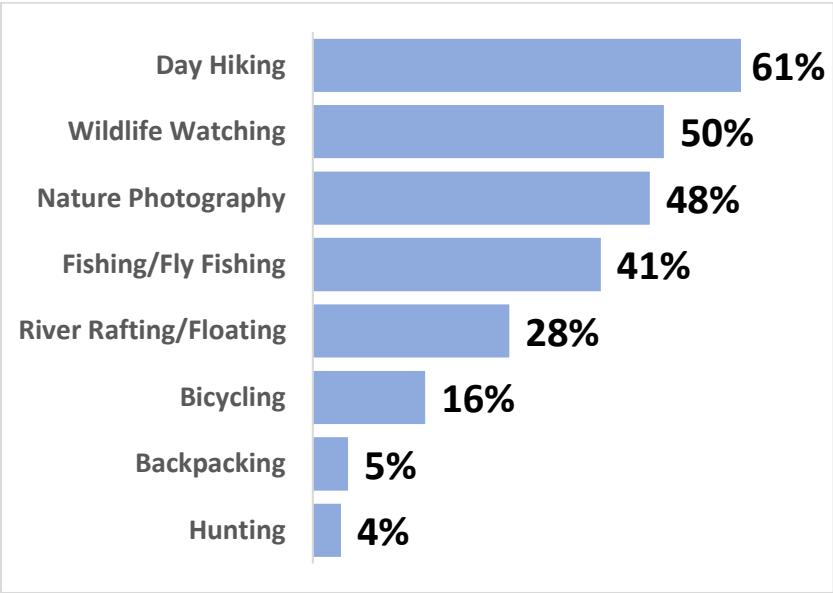


Figure 9. Activity Participation Rates by Visitors who also Hired Outfitters/Guides While in Montana.

Yellowstone County, Custer County, and Dawson County Tourism¹¹

24% of all visitors to Southeast Montana indicate their primary reason for visiting Montana is to experiences wide open spaces and uncrowded areas.

Nearly half of all visitors to the region indicate rivers as one of their attractants to the state.

Having explored the visitor spending profiles of all those visitors coming to Montana and specifics of those coming for vacation and recreation, we can now look closer at those who specifically travel through or stay in Southeast Montana. On average, over the last five years, the Lower Yellowstone River has remained one of the major draws for river-based recreators to Montana as a whole. Its importance, and that of fishing more specifically, increases as river access is increased.

When considering just those visitors who spend at least one night in Southeast Montana in 2021, 40% were in the state for vacation or recreation; just slightly under the state rate by 1%. Vacationers staying at least one night in Southeast Montana in 2021 stayed in state an average of 7 nights, with 31% of those night in Southeast Montana.

Of those vacationers who stayed at least one night in Southeast Montana in 2021, nearly a quarter (24%) indicate open spaces and uncrowded areas as their primary attraction to the state, followed by 22% to visit Glacier National Park, and 13% who indicate Yellowstone National Park as their primary destination.

While the primary draw for many visitors may be a national park, many have ancillary reasons as well. Nearly half (46%) indicate rivers as one of their reasons for visiting (Figure 10). Mountains and forests are a large secondary draw to the area, with 73% of visitors reporting these wild areas as an attraction to Montana.

Though not all visitors arrive in the state on vacation or for recreation, many do. In fact, in 2021, 41% of visiting groups indicated that their primary reason for coming to Montana was for vacation and recreation. These vacationing visitors spend more than the typical visitor daily; \$237 per day versus \$177. They additionally stay more than a day longer on average; 6.3 days compared to 5.2 in 2021.¹²

¹¹ The most recent nonresident spending data available from ITRR at the Tourism Region and County level is from 2019. This results from COVID impacts on data collection. For the state level, 2021 data is reported.

¹² Data Source: ITRR Interactive Data Report: <https://itrr.umt.edu/interactive-data/default.php>

In most of Montana, Glacier and Yellowstone National Parks are far and away the primary reason, for visiting the state. However, in Southeast Montana in 2021, the desire for open spaces and uncrowded areas led the way as the primary reason for visiting, with 24% of the responses.

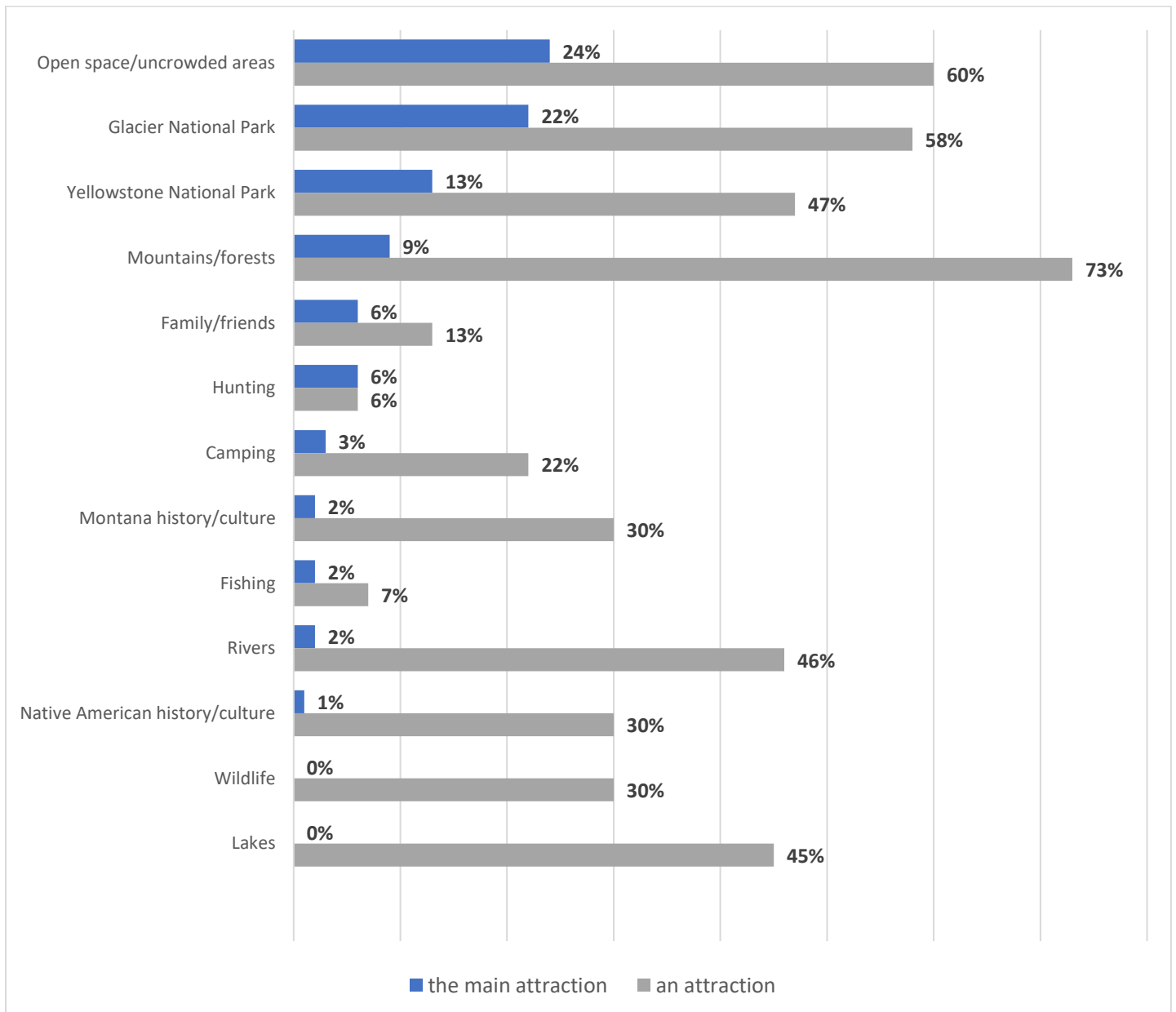


Figure 10. Vacationers Reasons for Visiting Montana.

Southeast Montana Visitor Spending



ITRR, 2020

Due to the COVID pandemic, and disruptions created for data collection by ITRR, the most recent comparable spending data at the regional or county level is for 2019. In 2019, 13% of visitor spending (\$492.3 million) was spent in Southeast Montana; the third highest of all tourism regions behind Yellowstone Country and Glacier Country. When broken out by county, Yellowstone County received the largest share of visitor spending in the region (63.5%), followed by Custer (13.8%), Dawson (13.1%), and Big Horn (5.2%) (Figure 11). Note, only counties with an estimated visitor spending volume of \$20 million or more are included for analysis by ITRR. The remaining counties not included (Wibaux, Prairie, Fallon, Carter, Powder River, Rosebud, Treasure, Golden Valley, Musselshell) make up the remaining 4.4% of Southeast Montana visitor spending.

This spending in Southeast Montana directly contributed to 3,710 jobs and \$100.5 million in employee compensation in the region. Accounting for Indirect and induced impacts, these values increase to 5,240 and \$157.7 million respectively (Figure 12).¹³

Similar to the state level, in which fuel is the highest spending category, in Southeast Montana, gasoline and diesel make up the top category at \$178.02 million (36%), followed by hotels and motels at \$75.7 million (15%). The latter is closely followed by spending at restaurants and bars, at \$72.5 million (~15%). This spending distinction is important, as it indicates a destination where time and activities are being spent in the region, as opposed to passing through and stopping only for fuel. It is important to note that the proportion of the visitor dollar going to fuel in southeast Montana is about 11% higher than that on average for the whole state. The activities participated in by those who hired an outfitter or guide (\$15.6 million, 3%) and visited Southeast Montana remain remarkably similar to those as the state level as previously shown in Figure 8.

¹³ Grau, Kara, "2019 Economic Contribution of Nonresident Travel Spending in Montana Travel Regions and Counties" (2020). Institute for Tourism and Recreation Research Publications. 411. https://scholarworks.umt.edu/itrr_pubs/411

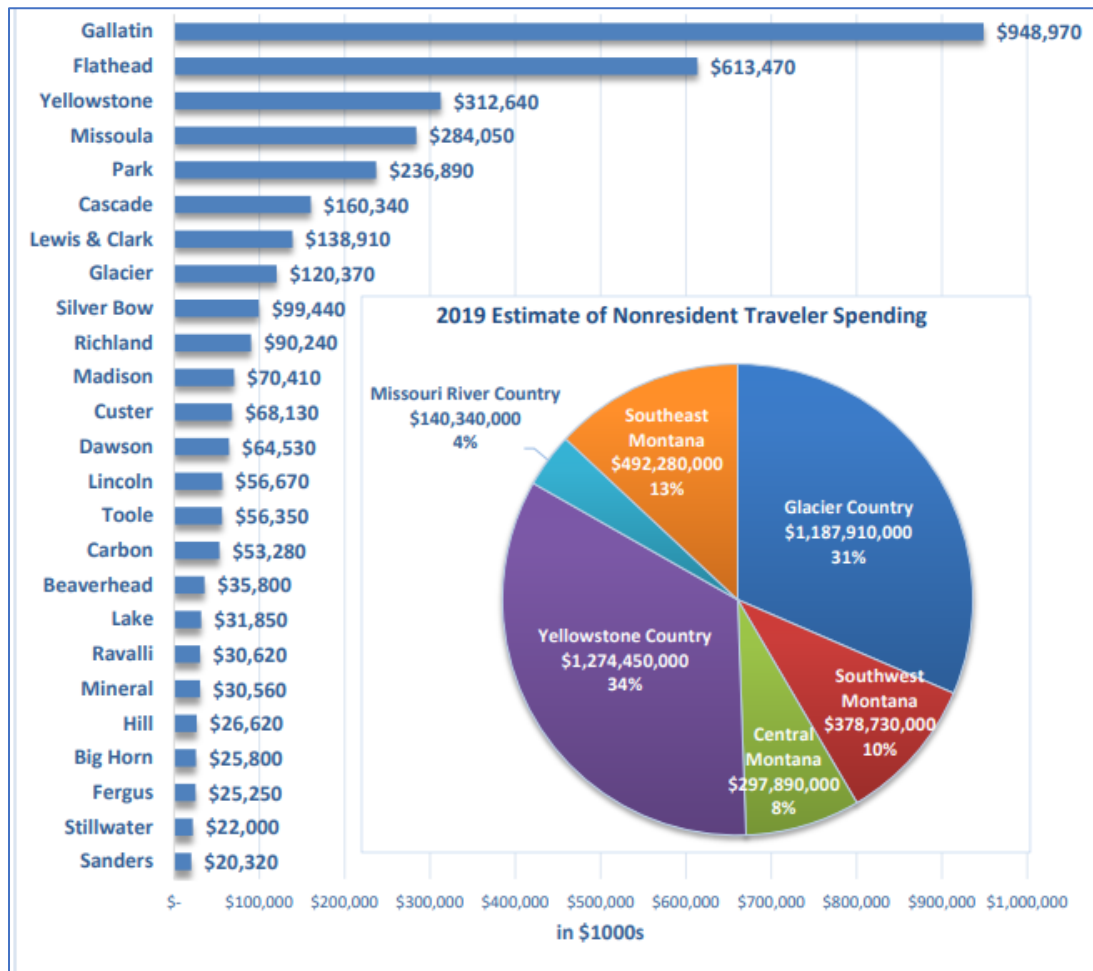


Figure 11. 2018-2019 Estimate of Nonresident Traveler Spending by Region and County (counties with at least \$20 million).

2019 Nonresident Traveler Expenditures & Economic Contribution in Southeast Montana Travel Region

by Kara Grau, M.S.

2019 Nonresident Traveler Expenditures in Southeast Montana Travel Region



2019 Nonresident Expenditure Percentages in Southeast Montana Travel Region

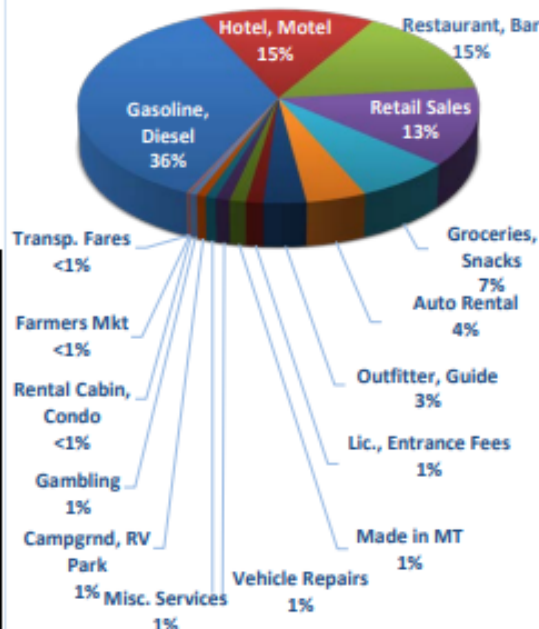


Table 1 - Total Nonresident Spending in Southeast Montana*

Gasoline, Diesel	\$178,028,000	Made in MT	\$5,978,000
Hotel, Motel	\$75,697,000	Vehicle Repairs	\$5,143,000
Restaurant, Bar	\$72,530,000	Misc. Services	\$3,896,000
Retail Sales	\$64,582,000	Campground, RV Park	\$3,434,000
Groceries, Snacks	\$34,947,000	Gambling	\$2,653,000
Auto Rental	\$22,027,000	Rental Cabin, Condo	\$1,040,000
Outfitter, Guide	\$15,673,000	Farmers Market	\$181,000
Lic., Entrance Fees	\$6,315,000	Transportation Fares	\$155,000
TOTAL		\$492,279,000	

2019 Contribution of Nonresident Traveler Expenditures in Southeast Montana Travel Region

- 2019 average spending* in Southeast Montana by nonresident visitors to Montana totaled \$492.2 million.
- This \$492.2 million in local spending directly supports \$393.1 million of economic activity in the region, and supports an additional \$234.6 million of economic activity, indirectly.
- The total contribution of nonresident spending to the regional economy was \$627.7 million.

Table 2 - 2019 Economic Impact	Direct	Indirect	Induced	Combined
Industry Output	\$393,126,000	\$127,311,000	\$107,291,000	\$627,728,000
Employment (# of jobs)	3,710	750	780	5,240
Employee Compensation	\$100,506,000	\$27,697,000	\$29,482,000	\$157,685,000
Proprietor Income	\$12,456,000	\$8,506,000	\$4,927,000	\$25,889,000
Other Property Type Income	\$55,817,000	\$18,931,000	\$18,563,000	\$93,311,000
State & Local Taxes [^]	—	—	—	\$30,286,000

Direct impacts result from nonresident traveler purchases of goods and services; **Indirect impacts** result from purchases made by travel-related businesses; and **Induced impacts** result from purchases by those employed in travel-related occupations.

Industry Output is the value of goods & services produced by an industry which nonresidents purchase. **Employment** is full- and part-time average annual jobs. **Other Property Type Income** consists of payments for rents, royalties and dividends.

*Data is collected at the state level. The two-year average of expenditures (2019 \$s) was used to help account for small and varying sample sizes at the county level.

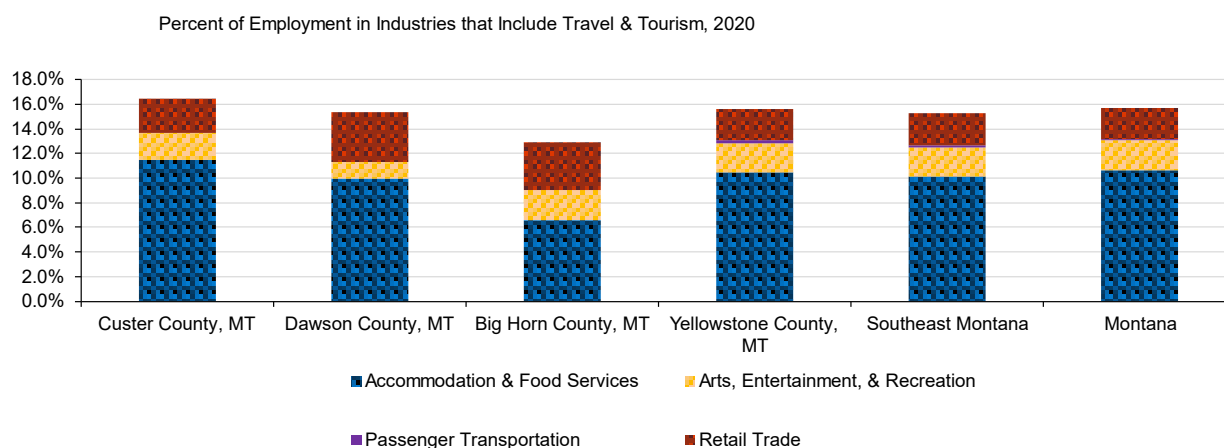
^Expenditure category totals may not add to overall total due to rounding. ^ Comparison to previous years is not advised.

Figure 12. 2018-2019 Estimate of Southeast Montana Nonresident Traveler Spending and Economic Impacts.

Tourism Supporting Jobs

The tourism industry is an aggregate of multiple sectors that provide not only goods and services for those travelling to and through a region, but also for those that live in the region. Headwaters Economics uses definitions supported by the Federal Reserve Bank of Kansas City to consider travel and tourism as generally consisting of retail trade (gas stations, clothing and accessory stores, miscellaneous store retailers), accommodations and food (ski resorts, hotels, casino hotels, campgrounds, guest ranches, food service and drinking places), passenger transportation (air transportation, scenic and sightseeing transportation) and amusement and recreation services (performing arts and spectator sports, museums, parks and historical sites, amusement, gambling, and recreation).¹⁴

In 2020, a little over 15% of Yellowstone, Custer, and Dawson counties' private employment was based in tourism supporting industries. Big Horn is roughly 13%. As a region (including all region counties), Southeast Montana aligns rather close to Montana as a whole (Figure 13).¹⁵ For each of the counties and Montana, Accommodations and Food Services made up the bulk of employment in tourism supporting industries. Retail Trade and Arts, Entertainment, & Recreation each compose around 2% of all employment in the combined area and in the state of Montana.



Note: Custer, Dawson, Big Horn, and Yellowstone Counties are shown here as they are those counties identified in ITRR generated spending reports.

Figure 13. Percent of Total Private Employment in Industries that include Travel & Tourism, 2020.¹⁶

¹⁴ Headwaters Economics: Economic Profile System - <https://headwaterseconomics.org/eps>

¹⁵ Only these counties are detailed as they match with the economic contribution reporting from ITRR.

¹⁶ Data Sources: US Department of Commerce. 2021. Census Bureau, County Business Patterns, Washington, D.C., reported by Headwaters Economics' Economic Profile System, headwaterseconomics.org/eps.

Recreation on the Lower Yellowstone River: An Economic Opportunity

Since 2001, employment in retail, as well as accommodations and food services hold a significant standing in Southeast Montana's employment base. Retail trade (#3) and food and accommodation (#4), both top tourism-supporting industries, fall only behind government and health/social care employment (Figure 14).

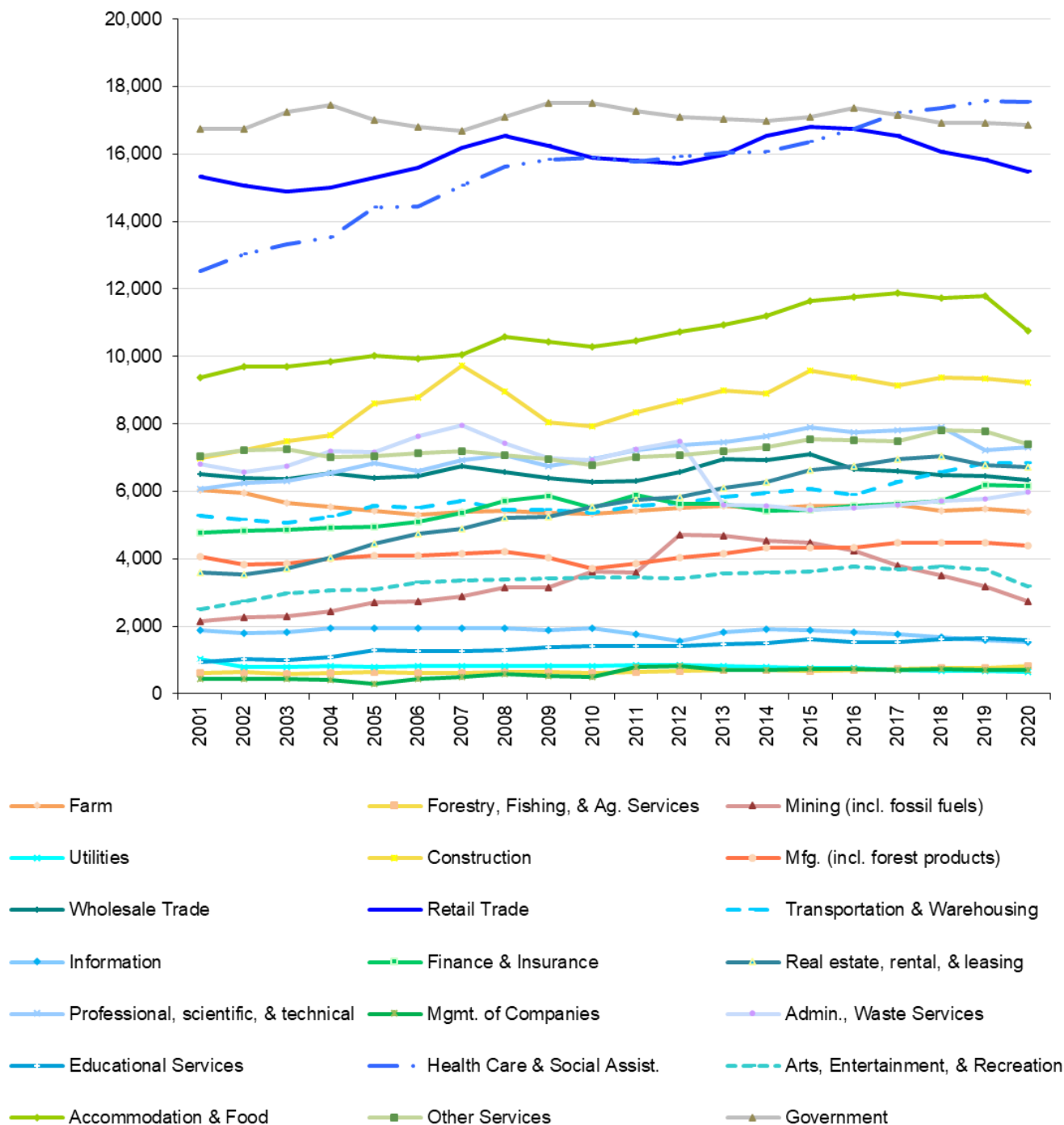


Figure 14. Southeast Montana Employment by Industry, 2001-2020.¹⁷

¹⁷ Data Sources: US Department of Commerce. 2021. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C., reported by Headwaters Economics' Economic Profile System, headwaterseconomics.org/eps.

Digging below the total employment, individual median annual wages can also be explored. Within the identified tourism-related industries, the retail trade sector yields the highest average at \$28,576, followed by accommodations and food at \$20,479, and arts, entertainment, and recreation at \$20,458 (Figure 15).

Beyond just those involved in these three sectors, the service industry on average yields average annual wages (2020) of \$50,029, while non-services related yields \$68,527.¹⁸ It is often assumed that services sector jobs are low wage; especially in food service and other leisure and hospitality sectors. However, it is also important to recognize that many of the tourism supported industries are seasonal, in line with tourism and recreation themselves.

Why is it Important?

It is sometimes assumed, particularly in rural areas, that the only high-wage jobs are in manufacturing and natural resource industries (e.g., timber, fossil fuel energy development, and mining). While these jobs often provide high average wages, some services-related industries also offer high wages (e.g., information, financial activities, and professional and business services).

Nearly all new jobs created since 1990 have been in services-related industries, but they are not equally distributed across the country, and not all areas are able to attract and retain the relatively high-wage service-related jobs. The elements required to attract and keep high-wage service-related workers may include access to reliable transportation including airports, amenities, recreation opportunities, a trained workforce, and good schools.

In some areas, the highest-paying jobs are in the public sector. During recessions, government jobs may serve as an economic buffer against declining employment and earnings in the private sector.

~Headwaters Economics – Economic Profile System, Socioeconomic Trends

¹⁸ Data Sources: US Department of Labor. 2021. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Washington, D.C., reported by Headwaters Economics' Economic Profile System, headwaterseconomics.org/eps.

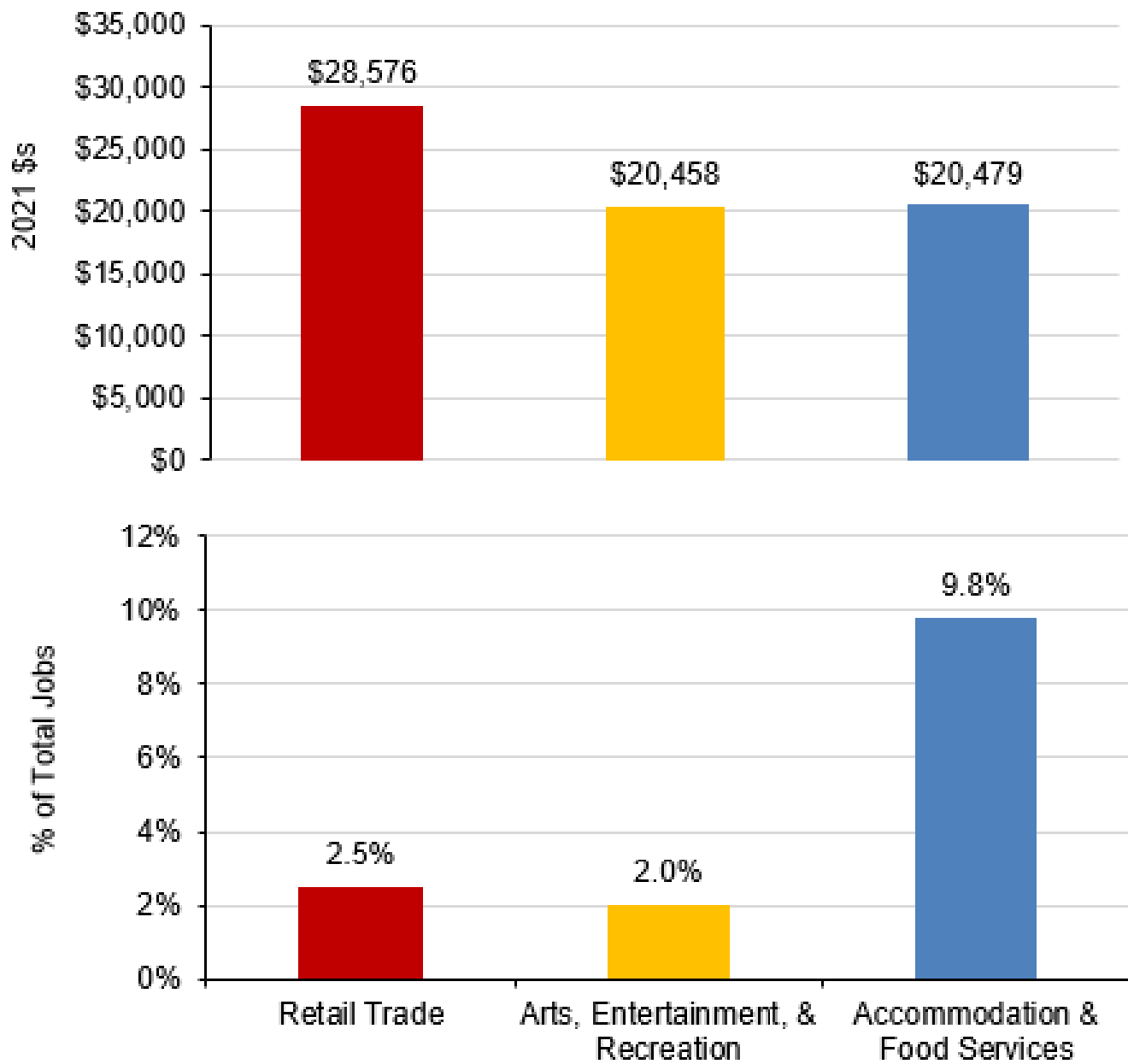


Figure 15. (Top) Avg. Annual Wages in Industries that Include Travel & Tourism in Southeast Montana, 2020; (Bottom) Percent of Total Jobs in industries that Include Travel and Tourism in Southeast Montana, 2020.

Angler Tourism on the Lower Yellowstone River

Fishing along the Lower Yellowstone River sees more angler day spent from shore than from a boat. According to the Statewide Angling Survey conducted 2019 by Montana's Fish, Wildlife, and Parks (FWP), 38.1% of resident angler days and 40.3% of nonresident angler days in Montana accessed water through a FWP Fishing Access Site (FAS). Currently, the Lower Yellowstone falls 20% or more lower than the Upper Yellowstone and Montana as a whole in proportion of total angler days that are attributed to nonresidents. This statement is only to point out the difference, not to suggest that the region should seek to be the same as elsewhere.

Other sites of access for anglers include private property, bridge right-of-way, or access sites owned by other agencies. On the Lower Yellowstone River, 62% of all respondents accessed and fished the river from the shore, as compared to 28% angling by boat (Figure 16). Given the popularity of public access to angling waters, the opportunity exists for the Lower Yellowstone River to increase nonresident fishing participation by focusing on providing an increased number of FAS available to the public. This potential for change and thus economic impact will be assessed in later sections of this report.

Angling Days				
	Resident	Nonresident	Percent Nonresident	Total
Lower Yellowstone River	34,821	5,280	13%	40,101
Southeast Montana	55,818	13,195	19%	69,013
Upper Yellowstone River	172,768	108,373	39%	281,141
Statewide	1,927,738	1,215,367	39%	3,143,105
Access				
	Shore	Boat	Shore/Boat	Ice
Lower Yellowstone River	62%	28%	9%	1%
Southeast Montana	47%	37%	9%	6%
Upper Yellowstone River	62%	26%	10%	1%
Statewide - Resident	47%	39%	9%	3%
Statewide - Nonresident	46%	36%	12%	6%

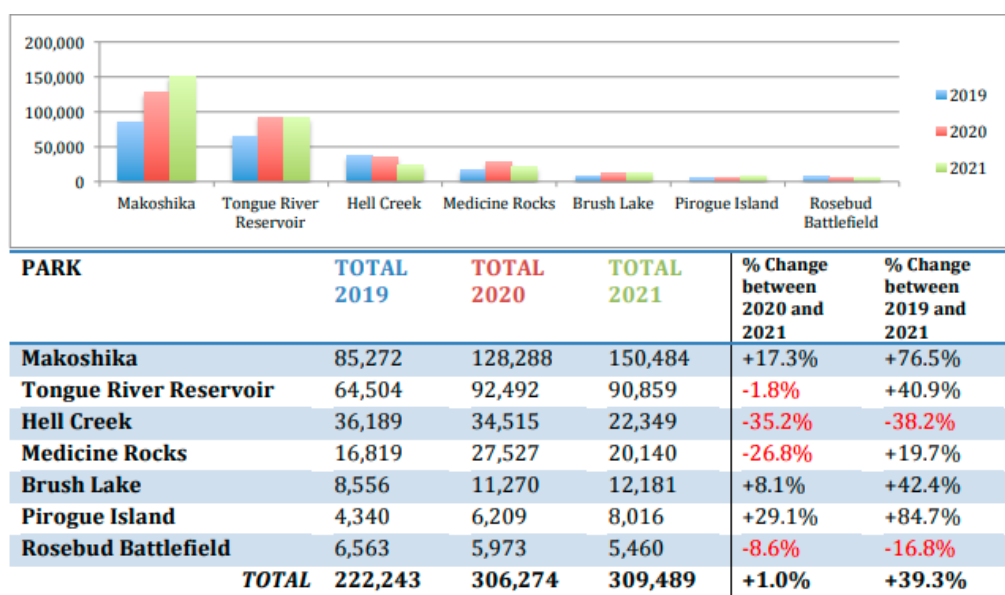
Figure 16. 2019-2020 Statewide Angling survey results for fishing pressure and water access.

Montana State Park Visitation

Visitation to Montana's state parks has grown by 71.1% since 2010, an increase of about 1.4 million visitors.

In Southeast Montana, State Park visitation has grown rapidly in recent years with an additional 87,246 estimated visits, an increase of 39.3% from 2019 to 2021 alone.

Considering the FWP proposal to acquire public land for one section of the Lower Yellowstone River State Park, its impact can be forecast, in part, by using the performance of similar state parks in Montana. 2021 was a banner year for visitation across Montana's state park system, with nearly 3.4 million visitors, just shy of the all-time high for visitation set in 2020. This follows a trend in state park participation – visitation to Montana's state parks has grown by 71.1% since 2010, an increase of about 1.4 million visitors. Specifically in the southeast region of Montana, state park visitation has grown rapidly in recent years with an additional 87,246 estimated visits (+39.3%) from 2019 to 2021 (Figure 17). Makoshika and Tongue River Reservoir bring in the lion's share of visitors to southeastern Montana's state park system.



NOTE: Brush Lake is seasonally closed in the winter months.

Figure 17. 2019-2021 state park visitation across region 6/7 of Montana's state park system

Understanding the balance of resident versus nonresident visitors to Montana's state parks in the southeastern region will provide economic insight for any newly established or proposed state park. In 2021, nonresidents comprised an estimated 31% of visits to all state parks of SE Montana, and 61% of visitors were residents. Of the two most popular state parks, Makoshika saw a lower number of nonresident visitors (26%) while Tongue River saw more than the SE average (42%).¹⁹ Given the size and location of the proposed Lower Yellowstone River State Park, visitation may be within the range of these two established parks.

¹⁹ Resident and Nonresident splits are based on unpublished reports from observations made through ITRR and FWP collaborative projects.

Economic Impact of Public Lands Acquisition

Background Case Study Methods

In 2014, the Joint Legislative Audit and Review Committee (JLARC) of Washington State commissioned an evaluation of the potential economic impacts of public natural resource land.²⁰ The study was conducted by a team of economists from Washington State University (WSU).²¹ This JLARC evaluation is used as a base of reference for conducting the current evaluation of public land acquisitions in Southeast Montana. Below are bulleted lists of key considerations, assumptions, and findings from the JLARC study.

- Impacts are driven in large part by how the land is used. Estimating these impacts are highly dependent on the data available, the assumptions made, and whether land use at a specific site has changed enough to cause a measurable change in the economy. Individual acquisitions may not result in enough land use change to estimate impacts.
- Economic impact analysis is more informative when there is a change in land use that measurably affects economic activity (e.g., more recreation or less agricultural production), not just a change in acreage.
- Economic measures may be only one consideration. The primary purpose of state natural resource lands is often to achieve other goals.
- Economic impact analyses can inform decisions about public lands but may not capture broader impacts. A county-level analysis may not identify the impacts to other counties or the state. As such, additional methods or analyses may be employed to examine a larger range of potential benefits.
- In general, the percentage of public natural resource lands in Washington counties did not negatively affect job, income, or population growth between 1990 and 2010
- A subset of lands managed for conservation, habitat, or passive recreation has a small positive relationship to income and job growth
- Detailed, site-specific information improves the accuracy of the assumptions.

The Case of The Lower Yellowstone

Considering the observations above and the known information about tourism and recreation in Montana generally, and outdoor recreation-based tourism in Southeast Montana specifically, a regional estimation of the potential change in visitation to the area can be conducted using available secondary data sources. As with the JLARC cases this estimation still requires several assumptions about the degree of change. Below, we summarize both the known events, acquisition, and other data, as well as the necessary assumptions made to fill key data gaps.

Supply Change: Acquisitions and Change in River Access and State Park Presence

This economic impact estimation is based on the combined impact of increasing the recreation opportunity supply resulting from the four components of proposed land acquisition (Figure 18 & 19):

²⁰ JLARC Report 15-2, July 2015: <https://leg.wa.gov/jlarc/reports/2015/PublicLandsEcon/f/default.htm#Print>

²¹ WSU team of economists included: Jeremy Sage, Kenneth Casavant, Phil Wandschneider, and Michael Brady

Wildcat Bend Wildlife Management Area	<ul style="list-style-type: none"> • Rosebud County • Approximately 350 acres of riparian wildlife habitat • Walk-in and boat-in access for fishing, hunting, and other recreation
Crackerbox Fishing Access Site	<ul style="list-style-type: none"> • Dawson County • Access to the river at one of the longest stretches without public access • Conservation of around 20 acres for wildlife habitat
Zero MT	<ul style="list-style-type: none"> • Prairie County • Long-term easement on approximately 20 acres of state land • Increased public access FAS
Powder River Depot	<ul style="list-style-type: none"> • Confluence of the Powder and Yellowstone Rivers • Up to 700 acres of federal, state, and private lands at the river corridor to form the first unit of the Lower Yellowstone River State Park • Critical importance for fisheries conservation and other forms of recreation • Cultural and educational significance

Figure 18. Approved and proposed acquisitions of new public lands by Montana FWP.

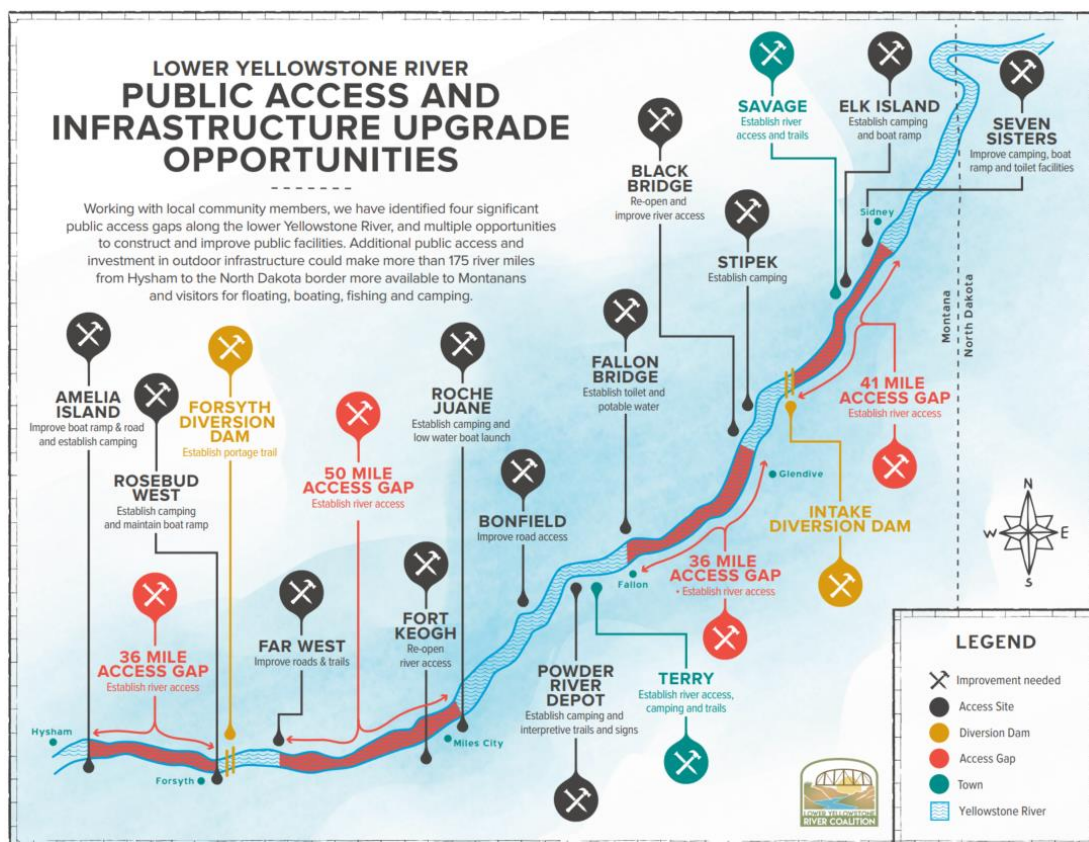


Figure 19. Map of various fishing access sites on the Lower Yellowstone River

Currently 19 FWP and 3 BLM access sites exist along the relevant stretch of the Lower Yellowstone River. The combined acquisitions add four additional river access sites, for an access site increase of 18%. Additionally, the state parks reported previously (Figure 17) in regions six and seven total approximately 16,381 acres total. The four acquisitions would comprise an additional 700 acres of state park land and 390 of other similarly used acreage. The combined additional acreage represents approximately a 7% increase in acreage.

Demand Change: Potential Change in Visitation by nonresidents

In an economic impact study, we are specifically interested in the potential economic spending change that is directly related to the event of interest -- the land acquisition and resulting recreation opportunities. Absent direct survey information asking about the level of interest and willingness to visit Montana once the acquisitions are made and are welcoming visitors and local recreationists, we must estimate the change based on available information about current visitation and expected change. To perform this, we use the following data and assumptions:

- Baseline spending is represented by results of ITRR nonresident traveler expenditures and economic contribution in Southeast Montana Travel Region (2019).²² Any new spending patterns are assumed to be consistent with the typical Southeast Montana Visitor.
- Spending change occurs in relation to the proportion of visitors who travelled through or stayed in Southeast MT and indicated on their Montana nonresident survey (2015-2021) that their primary reason for visiting Montana is one of the following: Fishing; Visiting a State Park; Rivers; Wildlife; Camping; Hunting; Native American History/Culture; Other Montana History/Culture; Open Spaces/Uncrowded Areas.²³

- Of the estimated 4.8 million visitors (average from 2015-2021) who travelled through or stayed the night in Southeast MT, 11.1% indicated on of the following as their primary reason for visiting the state²⁴

▪ Open Spaces/Uncrowded Areas	4.3%
▪ Fishing	2.1%
▪ Hunting	1.5%
▪ Native American & Montana History/Culture	1.2%
▪ Rivers	0.6%
▪ Wildlife	0.6%
▪ Camping	0.5%
▪ State Parks	0.3%
<u>Combined</u>	<u>11.1%</u>

- It is assumed that visitation for those indicating river-based activities as their primary reason are impacted by the increase in FAS accessibility, and those indicating land-based activities are impacted by increased state park and wildlife habitat type acreage.

²² Grau, Kara, "2019 Economic Contribution of Nonresident Travel Spending in Montana Travel Regions and Counties" (2020). Institute for Tourism and Recreation Research Publications. 411.

https://scholarworks.umt.edu/itrr_pubs/411

²³ Only those survey respondents indicating they are in Montana for Vacation, Recreation, or Pleasure are asked about their primary attraction to the state.

²⁴ <http://itrr.umt.edu/interactive-data/default.php>

Resulting Change in Visitation

*Infrastructure, access, and habitat improvements pose the opportunity for direct economic impacts to the region. The completion of these four upgrades may increase visitor spending by **more than \$5 million annually** beyond what may be expected otherwise.*

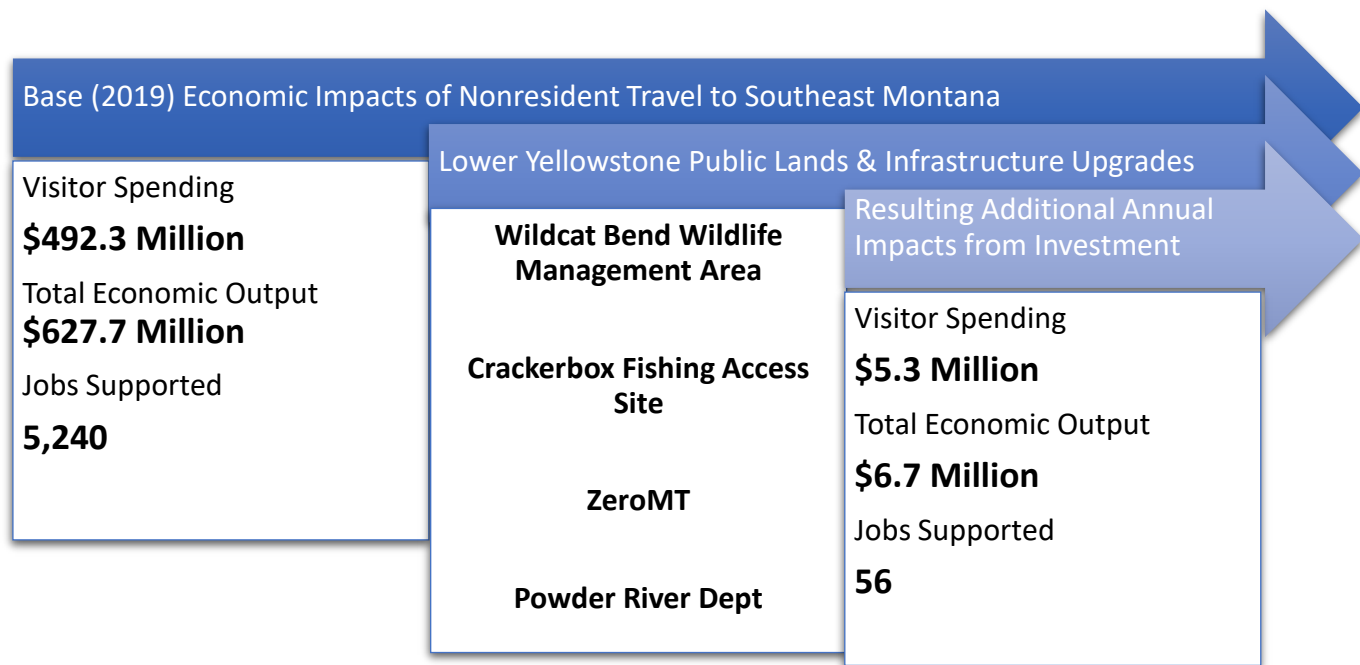


Figure 20. Economic Impact of Lower Yellowstone Infrastructure Projects

It is conservatively expected that given the changes identified above, that visitation to the region would increase by a total of **51,786 visits by nonresidents** every year, resulting in an increase of nearly **\$5.3 million in spending** in the region and **56 additional jobs** supported by this spending (Figure 20).

Not taken into account in this assessment is:

- Additional time (and thus \$) spent in the region by visitors who have other primary reasons for being in the state. It is feasible, and likely, that visitors who are in the state for other reasons (e.g., National Parks, State Parks) may increase their time spent in the southeast region
- Additional impact of Montanans from outside the southeast region who may be enticed to visit with these additional amenities
- Additional retention of residents' spending as they choose to recreate locally instead of traveling elsewhere
- Non-market and community health benefits of the river and habitat protection (Further details on the general concept of non-market benefits are explained below (Figure 21))

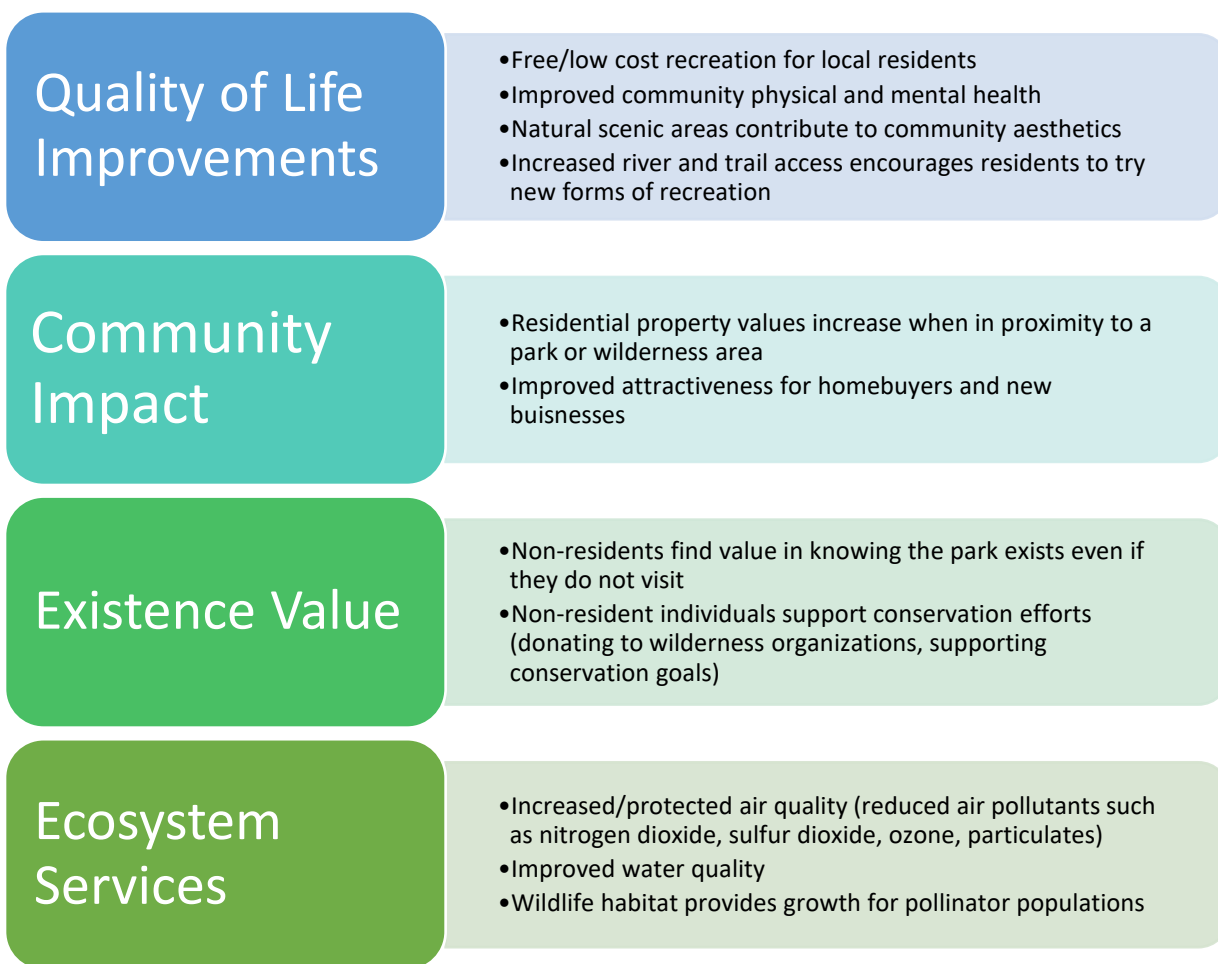


Figure 21. Non-market benefits to increasing/improving open space and park areas

Additional Non-Market Benefits of River Investment

Just as visitors are attracted to Montana for the open spaces and parks, nature settings, history, culture, and recreation, so to do residents recreate in, enjoy, and take pride in these natural amenities in their own backyard. Natural resource tourism and recreation promote business development and residential growth by contributing significantly to residents' quality of life, which is a paramount draw to living and working in Montana.²⁵ In a previous ITRR survey, Montana business owners and managers were asked to score different aspects contributing to quality of life in their immediate area. Results suggest that the largest contributor (highest mean score) in both urban and rural areas of Montana, on average, is the local presence of outdoor recreation, parks, and open spaces (Figure 22). Creating new parks and open spaces may then be considered as a contributing factor to encouraging businesses and their employees to move to Southeast Montana. Additionally, a growing body of literature also suggests that residential property values are increased when in proximity to open spaces and natural areas.

²⁵ Sage, Jeremy L., "Using Tourism to Recruit New Business: Tourism's Role in Economic Development" (2020). *Institute for Tourism and Recreation Research Publications*. 409. https://scholarworks.umt.edu/itrr_pubs/409

The importance of the quality of Montana's natural amenities – mountains, forests, rivers, and lakes - arises at multiple phases of economic development. It is a major component of attracting visitors to the state, thus supporting direct tourism businesses jobs, which span multiple industries. Further, it entices Montanans to stay in the state to own or operate a business. Lastly, it entices visitors and others to return with their businesses and associated jobs. In discussions with several managers, they indicated a desire to maintain high quality of life through close recreation opportunities not only for themselves, but their employees. They believed they have better opportunity to recruit and keep high quality and productive employees through such quality of life.

- Using Tourism to Recruit New Business

	All Respondents		Urban Areas		Rural Areas	
	Raw Mean Score	Standardized Mean Score	Raw Mean Score	Standardized Mean Score	Raw Mean Score	Standardized Mean Score
Cultural Opportunities	7.06	-0.70 ^c	7.44	-0.67	6.07	-0.77
Health/Medical Services	12.49	-0.19 ^b	12.53	-0.20	12.4	-0.17
Public Education	13.91	-0.13 ^b	13.55	-0.15	14.82	-0.08
Personal Safety/Crime Rate	15.38	-0.02 ^b	15.82	0.00	14.25	-0.06
Cost of Living	24.98	0.55 ^a	24.80	0.54	25.45	0.56
Outdoor Recreation/Parks/Open Spaces	26.18	0.50 ^a	25.86	0.49	27.01	0.52

Note: Values with matching superscripts ^{a,b,c} are statistically similar to one another.

Figure 22. Survey results of Montana resident's scoring of QOL aspects by Total, Urban, and Rural Areas

Concluding Remarks

Much of Montana's economy has been and continues to be dependent upon environmental quality and the amenities that environment provides. While the value of this amenity has evolved in definition from early days of extractive-based industries to much of today's value being exhibited via non-extractive means, the importance of the natural environment remains integral to the Montana ethos. In today's Montana economy the natural environment plays both a role in attracting new businesses and improving resident quality of life. Healthy outdoors, including open spaces and rivers are a major draw of tourism to the state and a considerable generator of opportunity and economic impacts from those additional dollars being brought into Montana.

While Much of Montana's tourism is related to the two major national parks, a significant number of visitors also seek out other areas of Montana's wide-open spaces, including state parks, national forests, areas of cultural significance, birding trails and places to enjoy Montana's dark night skies; this is especially true for Southeast Montana. These are the types of people that may be influenced by investments such as those described in this paper on the Lower Yellowstone River.

Additionally, investments such as these provide an opportunity to capture additional time of travelers through the region and entice them to stay in the region longer, spend more money, and support local businesses as they enjoy the unique recreation opportunities both current and proposed.

Opportunities to responsibly and sustainably continue tourism and recreation development in Southeast Montana has gained recognition and significant ground in recent years. Montana's Office of Tourism and Business Development (now Brand MT) recently established an *Eastern Montana Tourism Partner Initiative* in which they identified "Eastern Montana's unique landscapes, historical and cultural sites, and opportunities for outdoor recreation are an undiscovered treasure full of untapped possibilities for economic growth." Through this initiative, multiple projects totaling over \$670,000 were grant funded in an effort to improve infrastructure and raise awareness.²⁶ A list of these projects can be found in the link contained in the footnote below.

The cross-section of these projects and enhanced marketing effort concentrated in the region serve to expand the range of potential benefits to be gained from each individually, but also serve to enhance the entire area tourism amenity value and the potential gains to be made via the infrastructure and habitat investments discussed throughout this paper.

²⁶ Brand MT: <https://brand.mt.gov/Programs/Office-Of-Tourism/Eastern-Montana-Tourism-Partner-Initiative>