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Jay Kemmerer
WORTH Institute



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College of Business
Center for Business
and Economic Analysis



The Economic Impact of the Wyoming Outdoor Recreation Grant Program

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Cover photo credit: Wyoming Office of Tourism

The Center for Business and Economic Analysis (CBEA) at the University of Wyoming (UW) supports the economic growth and diversification of Wyoming's economy through applied economic and business analytics for communities, industries, and entrepreneurs. The center was established in 2019 as a unit within the College of Business. CBEA is a member of the Association for University Business and Economic Research (AUBER).

TEAM

Dr. Morgan Holland graduated with a PhD in economics from Florida State University in 2022 with research interests in the economics of automation, corporate finance, human capital, and the economics of disability. In addition, Morgan worked as an economic consultant for the FSU Center for Economic Forecasting and Analysis, pursuing applied research projects in a wide variety of fields. Today, Morgan focuses on economic research in the tourism and hospitality sectors in Wyoming. He is especially interested in researching and promoting policies that will help Wyoming take full advantage of its outdoor recreation resources while preserving them for future generations. Morgan also provides support services to stakeholders in the tourism and hospitality sector through economic research and analysis.

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Correspondence: For additional information, contact mhollan9@uwyo.edu.

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1 Executive Summary

This report estimates the economic impact of the Wyoming Outdoor Recreation ARPA Grant Program (WORGP), which provided over \$20 million in grants and received an additional \$3 million in matching funds for a total investment of approximately \$23 million in outdoor recreation infrastructure across Wyoming. These investments have generated measurable economic benefits, both in the short term through construction activity and in the long term through increased visitation and enhanced outdoor recreation access.



Photo credit: Wyoming Office of Tourism

Short term impacts from construction activities are significant. Based on IMPLAN modeling, the WORGP grants are estimated to have supported 198 jobs, \$11.5 million in labor income, \$18.8 million in value added (GDP contribution), and \$34.7 million in total economic output. This represents a return of approximately \$1.50 in labor income and \$1.62 in value added for every dollar invested. Tax revenues resulting from construction include \$990,549 in local, county, and state tax revenues, along with an additional \$3 million in federal taxes, providing an immediate fiscal benefit to public budgets.

Permanent impacts modeled with REMI forecast modest but sustained increases in Wyoming’s economy through 2036. Under the medium scenario, improvements to recreation assets such as the Pilot Hill Boulder Drive Trailhead, Laramie Bike Park, Belvoir Ranch, and Wind River Trailheads are projected to generate 3.96 new jobs annually by 2036, \$262,087 in additional labor income, \$324,913 in value added, and \$535,716 in output. Over time, these gains accumulate to represent a substantial return on investment relative to the initial infrastructure spending. In addition to economic benefits, there are additional social and health benefits of outdoor recreation that were outside the scope of this economic analysis but remain critical to community well-being. The report confirms that the WORGP grants are a strong investment in Wyoming’s outdoor recreation economy, supporting construction, stimulating tourism, and contributing to long-term economic vitality.

This report uses economic modeling of *direct*, *indirect*, and *induced* impacts using IMPLAN and REMI. To illustrate, assume that a project requires several construction jobs. These jobs and their associated compensation and output are considered *direct*

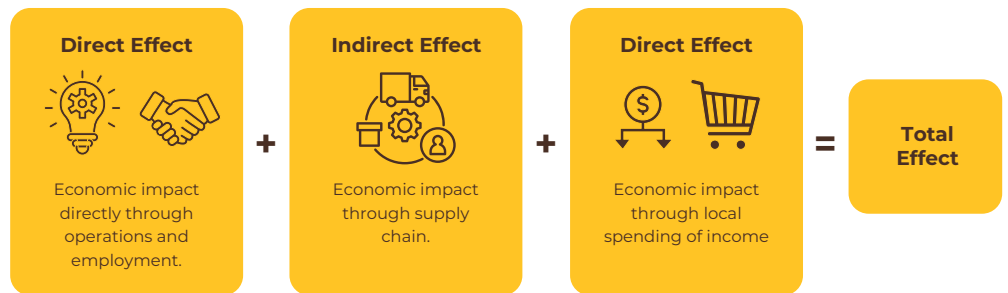


Figure 1.1: Total impacts are the sum of direct, indirect, and induced impacts.

economic impacts. Beyond this direct effect, there will also be an increase in the demand for intermediate goods needed in construction like wood, steel or concrete. If these goods are purchased from suppliers in the local area, they are considered *indirect* impacts. Further, the additional income of workers within the construction industry will lead to added economic activity in terms of buying goods and services, which, in turn, creates new economic activity in a region. In other words, individuals' spending will induce more spending, which we refer to as *induced* impacts. The *total* impact is the sum of direct, indirect, and induced impacts, as illustrated in Figure 1.1 below.

Table 1.1 lists additional economic impact analysis terminology used in this report.

Table 1.1: Economic impact terminology used in this report.

Variable	Definition
Employment	Employment refers to an industry-specific mix of full-time, part-time, and seasonal jobs. Expressed as full-time equivalents (FTE).
Labor Income	Labor income refers to all forms of employment income, including employee compensation (i.e., wages, salaries, and benefits) and proprietor income.
Value Added	Value added is the difference between an industry's total output and the cost of its intermediate inputs; it is a measure of the contribution to GDP. Value added is usually thought of as a better indicator of the value of economic activity than output.
Output	Output is the value of production by industry in a calendar year. It can also be described as annual revenues plus net inventory change. It is often referred to as total economic impact. Output is often thought of as an inferior measure of economic value because the value of inputs are "double-counted" in measuring output.

Table 1.2 shows the estimated direct, indirect, and induced economic impacts of construction on the WORG grant funded projects.

Table 1.2: Temporary impacts from construction

Impact	Employment	Labor Income	Value Added	Output
Direct	139	\$8,506,425	\$12,598,737	\$23,249,357
Indirect	26	\$1,556,296	\$3,096,436	\$6,124,087
Induced	33	\$1,484,332	\$3,059,246	\$5,321,329
Total	198	\$11,547,053	\$18,754,419	\$34,694,773

Table 1.3 shows the estimated direct, indirect, and induced economic impacts on tax receipts of construction on WORG grant funded projects.

Table 1.3: Temporary impacts to tax receipts from construction

Impact	Local	County	State	Federal	Total
Direct	\$30,534	\$13,186	\$236,892	\$2,161,043	\$2,441,654
Indirect	\$60,394	\$23,905	\$296,244	\$430,410	\$810,953
Induced	\$49,380	\$18,985	\$261,028	\$412,902	\$742,296
Total	\$140,309	\$56,076	\$794,164	\$3,004,355	\$3,994,904

Permanent impacts are modeled in REMI for 2025 to 2036 from estimated increases in visitation to Wyoming. Table 1.4 shows annual permanent impacts from increased visitation in 2036.

Table 1.4: Annual impact from increased visitation in 2036.

Economic Indicator	Low Forecast	Medium Forecast	High Forecast
Employment	03.09	03.96	04.83
Labor Income	\$204,599	\$262,087	\$319,575
Value added	\$253,574	\$324,913	\$396,252
Output	\$418,113	\$535,716	\$653,318

Figure 1.2 demonstrates how annual permanent impacts are expected to grow as visitors are attracted to outdoor recreation opportunities. Employment, labor income, value added, and output are plotted from 2026 to 2036.

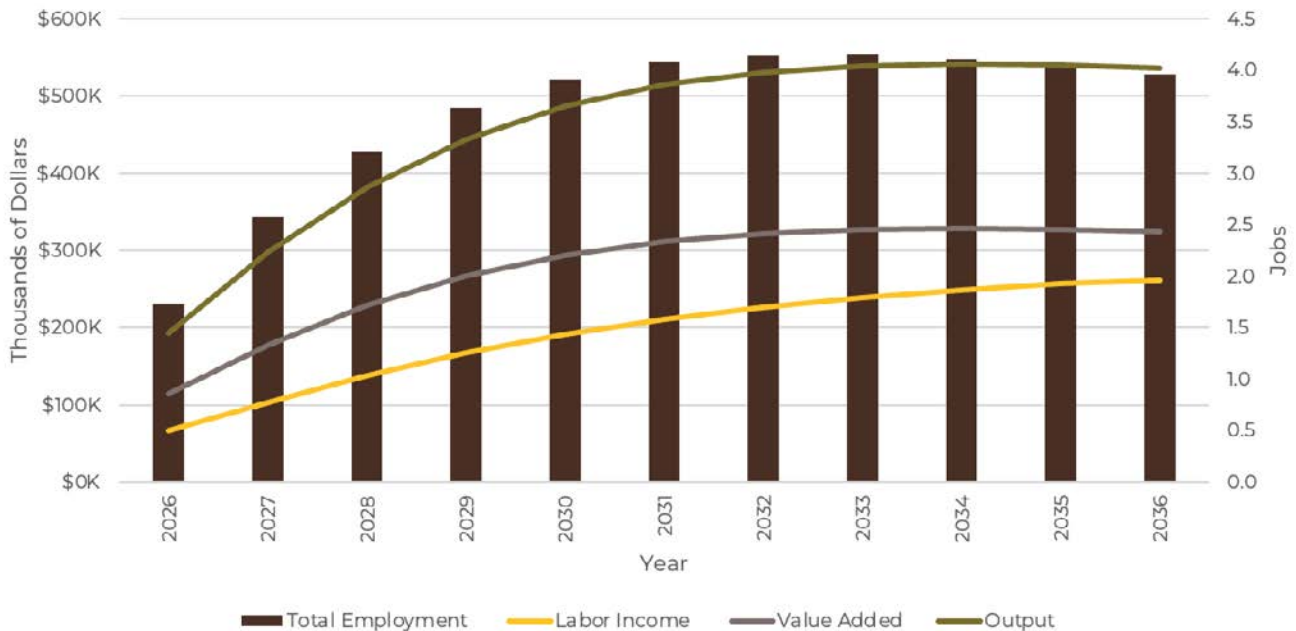


Figure 1.2: Annual impacts from increased visitation from 2026 to 2036

2 Introduction

The American Rescue Plan Act (ARPA) signed into law on November 11, 2021, earmarked \$3 billion to “address the continued impact of COVID-19 (i.e., coronavirus disease 2019) on the economy...” (H.R.1319 - 117th Congress (2021-2022), 2021) Part of these funds disbursed in the State of Wyoming were used to fund the Wyoming Outdoor Recreation ARPA Grant Program (WORGP). In the first round of funding in 2023, WORGP received 117 pre-applications for \$71 million in funding. In the second round of funding in 2024, WORGP received 33 pre-applications for a total of over \$45 million in request. To date, WORGP has awarded more than \$20 million in funding for projects in Albany, Fremont, Laramie, Lincoln, Natrona, and Sweetwater County. Grants were awarded to projects in “Disproportionately Impacted Communities, Qualified Census Tracts, and the Wind River Reservation” economically impacted by COVID-19. Local community organizations and governments raised an additional \$3 million in matching funds for a total of over \$23 million in investment in outdoor infrastructure across the State.

Figure 2.1 maps the total funding (WORGP grant funding and matching funds) in each County. Natrona County was awarded the largest amount of grant funding at \$8,195,000. With an additional \$990,696 in matching funds, Natrona County also has the largest investment in outdoor recreation infrastructure. Lincoln County has the smallest amount of grant funding at \$23,100 with an additional \$2,500 in matching funds for a total investment of \$25,600.

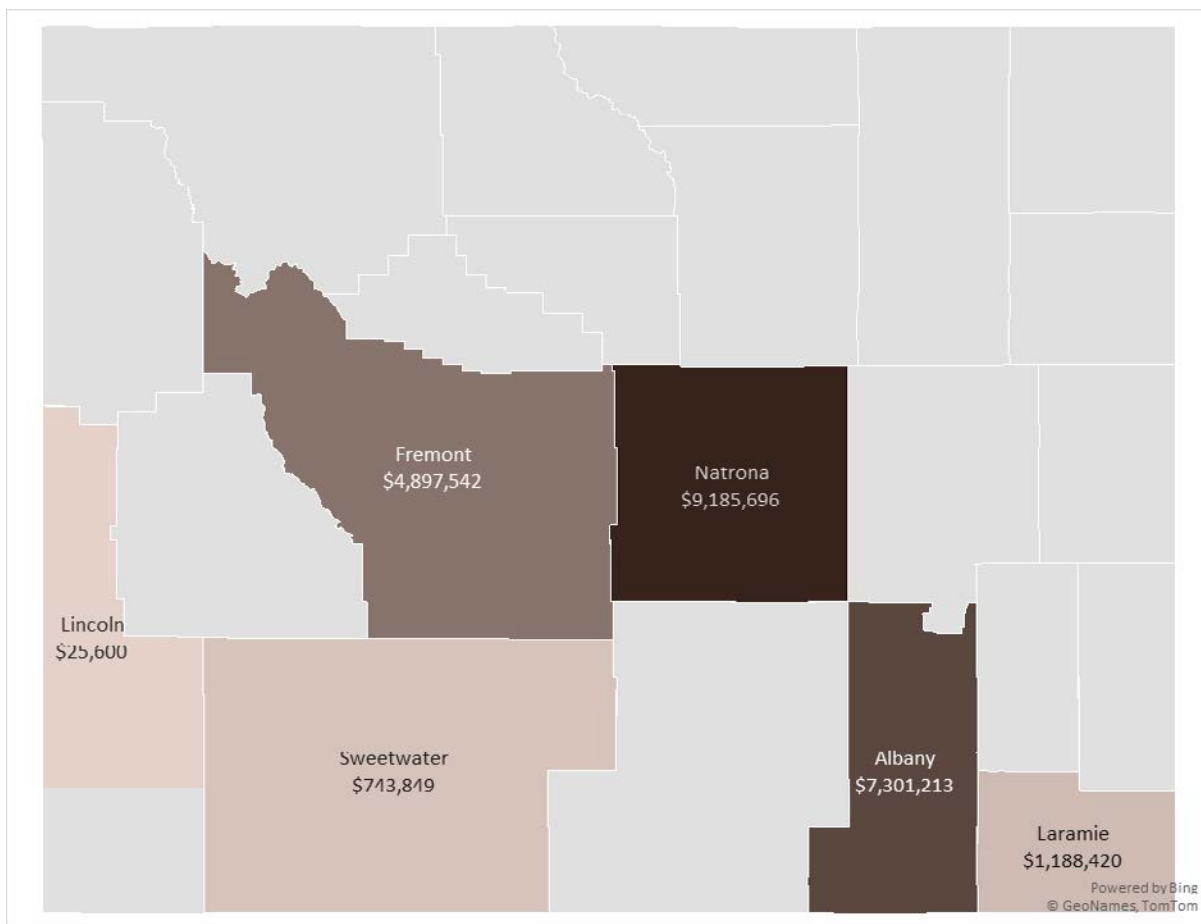


Figure 2.1: Investment in outdoor recreation infrastructure by county

Investments in outdoor recreation infrastructure lead to positive economic impacts in communities. Access to outdoor recreation attracts visitors who spend money in local communities, contributing to the visitor economy (Rosenberger et al., 2017). In addition, better access to outdoor recreation makes communities more desirable, which can attract more skilled workers and increase property value (Harrington et al., 2022; Headwaters Economics, 2019). Both effects lead to more disposable income among residents and increased economic activity. Greater access to outdoor recreation also encourages healthier lifestyles among residents, which can decrease healthcare expenses, improve quality of life, and extend lifespans (Marsden Jacob Associates, 2018). Investments in outdoor recreation infrastructure can also have temporary impacts to the local economy as the construction of facilities increases employment and economic expenditure in the community (Clouse, 2019).



Photo credit: Wyoming Office of Tourism

This report focuses on the economic impacts from two sources, temporary impacts from construction and impacts from increased visitation. While the other impacts listed above are important, they would require the collection of long-term measurements of different indicators like real estate prices and community health measures to estimate their magnitude and are therefore left for future work.

The rest of the report proceeds as follows: Section 3 describes the methodology used to calculate impacts from construction and visitation. Section 4 presents the results of economic modeling. Section 5 discusses some of the implications of the results and their limitations. Section 6 concludes.

3 Methodology

This section presents the methodology for estimating the economic impacts of the outdoor recreation infrastructure grants. Because each grant award is being used for a different kind of infrastructure, the methodology differs between grants. However, there are some common elements that are applied to each grant.

3.1 TEMPORARY IMPACTS FROM CONSTRUCTION AND MAINTENANCE

Each grant involves either construction of new outdoor recreation infrastructure, purchasing new outdoor recreation equipment, or maintenance of existing outdoor recreation infrastructure or equipment. These are considered temporary economic impacts as they are expected to be one-time expenses paid for by the grant funding. Construction, maintenance, and equipment purchases are handled the same for all grants. For each grant, impacts from construction, maintenance, and equipment expenses are estimated based on the plans and budgets submitted to WORG for consideration in awarding funding. These expenses are assigned

an IMPLAN industry and entered as direct impacts in IMPLAN.¹ Depending on the project description, projects are entered as either industry output or as a detailed industry impact analysis with a breakdown of intermediate inputs and employee compensation. IMPLAN estimates indirect and induced impacts using input-output modeling. See Appendix A for more details on IMPLAN modeling.

A brief description of each project follows.

3.1.1 Albany County

In Albany County, the LaBonte Park Pathway and Fitness Trail Improvements involve pathway upgrades, installation of exercise equipment, and related engineering work in LaBonte Park. The WORC share of this project is \$1,393,817 and the matching funds from City of Laramie are \$154,869. The total cost is \$1,548,686, and the construction activity is coded under IMPLAN 55.

The Pilot Hill School Yard Trails Maintenance in Albany County is a trail maintenance project on sections of trail in the School Yard area of Pilot Hill Recreation Area. Including labor and supervisory costs. Under IMPLAN Code 55, the WORC grant of \$182,710 is supplemented by \$50,000 from Pilot Hill Inc. Detailed industry analysis estimates \$182,710 in labor compensation and \$14,450 in intermediate inputs.



Spring Creek Trail Phase 2 from the City of Laramie

The Pilot Hill Trailhead project will construct a gravel parking area at the Boulder Drive entrance to the Pilot Hill recreation area. The parking area will have vault toilets, parking for oversize vehicles and horse trailers, and maps and signage for wayfinding. The project is funded by a \$1,000,000 WORC grant along with an additional \$1,004,684 in matching funds. Construction expenses for this project are categorized as \$550,100 in Code 50 and \$1,454,584 in Code 51.

The Laramie Bike Park project will construct a park dedicated to various biking skill elements. In addition to bike features, the park will include restroom facilities, maintenance stations, parking, and seating for spectators. The project is funded by a \$700,000 WORC grant along with \$100,000 in matching funds. Expenses for this project are all entered in Code 50.

The Spring Creek Trail Phase 2 in Albany County involves new bike path construction and trail expansion. The project, under IMPLAN Code 51, is backed by a \$2,479,705 WORC grant and \$235,428 from the City of Laramie, totaling \$2,715,133.

¹ See <https://support.implan.com/hc/en-us/articles/115009674428-IMPLAN-Industry-Schemes> for a description of the IMPLAN industry classification scheme. The Excel spreadsheet here https://support.implan.com/hc/article_attachments/34804094841371 provides more details on construction industries, specifically.

3.1.2 Fremont County

The Eastern Shoshone Playground Project in Fremont County includes site preparation, equipment installation, and construction of new recreational structures. Classified under IMPLAN Code 51, it is funded by a \$1,145,105 WORC grant, with ongoing efforts to secure private matching funds.

The Wind River Lakes Project in Fremont County entails the installation of recreational infrastructure such as boat ramps, vault restroom facilities, pavilion structures and picnic tables at Bull Lake, Dinwoody Lake, Moccasin Lake, and Ray Lake. Construction costs of \$1,168,539, are funded by a WORC grant. The project is seeking additional support from private donors. All expenses are coded under IMPLAN Code 51.

In Fremont County, the Outdoor Sports project involves both reconstruction and general site cleanup such as weed removal, rehabilitation of paint at two baseball fields in Fort Washakie, Ethete, and Arapaho. Designated under IMPLAN Code 55, the project is funded by a \$78,100 WORC grant, with additional contributions sought from private sources.

The Ethete Powwow Arbors project in Fremont County includes maintenance of a recreational center requiring new lumber, materials, and labor. It is categorized under IMPLAN Code 55, with a \$410,000 WORC grant and a \$5,000 match from the Casino Charitable Sponsorship Committee. The project includes \$160,000 in employee compensation and \$255,000 in intermediate inputs.

A similar Powwow Arbors Project in Fremont County focuses on enhancing and maintaining the powwow arbor in Fort Washakie. Under IMPLAN Code 55, the project has received a \$508,483 WORC grant and is actively seeking additional funding.

In Fremont County, the Tribal Buffalo Initiative project involves the construction of an outdoor education center with a concrete base, public restroom, and picnic tables. Falling under IMPLAN Code 51, the project is funded by a WORC grant of \$333,289.

The Wind River Reservation Trailheads project, also in Fremont County, includes the development of three locations in remote parts of the Wind River Range with expanded trailheads, parking, picnic areas, and vault toilet facilities. With a WORC grant of \$791,301, the project is categorized under IMPLAN Code 51, with ongoing fundraising from private donors.

The Shoshoni Trailhead project in Fremont County will develop a trailhead at the Shoshoni end of the 22-mile Wyoming Heritage Trail (locally known as Rails to Trails) that runs from Shoshoni to Riverton. The



Tribal Buffalo Initiative from the Wind River Development Fund



Northern Arapaho Powwow Arbors and Ground TBI areas

project includes building a covered picnic enclosure, a firepit with a pergola, sidewalks, green spaces with trees, and rehabilitation of current parking areas. The project is funded by a \$330,513 WORG grant along with \$48,000 in matching funds. Expenses for this project are categorized under IMPLAN codes 47 (\$13,361.50), 50 (\$259,000), and 51 (\$70,391.50).

The St. Lawrence Trail Improvements project in Fremont County will rehabilitate 90 miles of trail in the Wind River Range that need maintenance, Sonnicant Lake and Alpine Lake trails. The project is funded by a \$72,010 WORG grant and \$7,010 in matching funds. All expenses for this project are categorized under IMPLAN code 55.

3.1.3 Laramie County

The CCM Community Space project in Laramie County includes design, landscaping, fencing, and sunshade installation at a planned community center classified under IMPLAN Code 51. The total project value is \$580,895, funded through a \$290,000 WORG grant and \$290,895 from the City of Cheyenne 6th Penny Tax Grant and AARP.



Belvoir Ranch. Photo credit: City of Cheyenne

Belvoir Ranch is a 20,000-acre property located 8 miles southwest of downtown Cheyenne. The property is on the Colorado border and connects with the Red Mountain Open Space managed by Larimer County, CO. The City of Cheyenne was awarded \$486,736 in WORG dollars and \$121,684 in matching funds to develop multiuse trails and other outdoor recreation infrastructure on the property for the Belvoir Ranch Trailhead project. Construction expenses are categorized under IMPLAN codes 50 and 51.

3.1.4 Natrona County

The Marion Kreiner Swimming Pool and Park Improvements in Natrona County involve new construction and maintenance of outdoor recreational facilities such as pool building renovation, skate park pad construction, and pump track construction, classified under IMPLAN 51. The project received \$1,850,000 from WORG and \$190,000 from the City of Casper, totaling \$2,040,000.

For the North Platte River Pedestrian Bridge, also in Natrona County, the construction of concrete pathways and a pedestrian bridge is supported by a \$3,500,000 WORG grant, with \$430,696 in matching funds from the City of Casper and the Natrona County Recreation Joint Powers Board. This project is mapped to IMPLAN 51 with a total cost of \$3,930,696.



North Platte River Pedestrian Bridge

The North Casper Athletics and Recreation Complex project is for new construction work and renovation. The focuses are on enhancing outdoor recreational facilities, such as demolishing a skate park and building a new Miracle Field in its place, renovating bathrooms and lighting of the park, upgrading fences etc. Since this project involves both new construction and maintenance of existing facilities, some expenses are classified under IMPLAN Code 51, while others are classified under IMPLAN Code 55. With a WORG grant of \$2,845,000 and \$370,000 from the City of Casper, this Natrona County project supports substantial community revitalization.

3.1.5 Sweetwater County

The Century West Park Pool/Sprayground Renovation in Sweetwater County falls under IMPLAN Code 51. The project focuses on the construction and installation of water-based recreational infrastructure, with a proposed WORG grant of \$743,848, and is seeking matching funds from the City of Rock Springs.

Table 3.1 provides a breakdown of the grant amount awarded by WORG and the matching funds for each project.

Table 3.1 Project funding

County	Project	Grant funding	Matching funds	Total Funding
Albany	Pilot Hill Trailhead	\$1,000,000	\$1,004,684	\$2,004,684
Albany	Laramie Bike Park	\$700,000	\$100,000	\$800,000
Albany	Pilot Hill Schoolyard Trail Maintenance	\$182,710	\$50,000	\$232,710
Albany	Spring Creek Trail Phase 2	\$2,479,705	\$235,428	\$2,715,133
Albany	LaBonte Park Pathway and Fitness Trail Improvements	\$1,393,817	\$154,869	\$1,548,686
Fremont	Shoshoni Trailhead	\$330,513	\$48,000	\$378,513
Fremont	St. Lawrence Trail Improvements	\$72,010	\$7,201	\$79,211
Fremont	WRR Trailheads	\$791,301	TBD	\$791,301
Fremont	Powwow Arbour	\$508,483	TBD	\$508,483
Fremont	Outdoor Sports	\$78,100	TBD	\$78,100
Fremont	Wind River Lakes	\$1,168,539	TBD	\$1,168,539
Fremont	Eastern Shoshone Playgrounds	\$1,145,106	TBD	\$1,145,106
Fremont	Tribal Buffalo Initiative	\$333,289	TBD	\$333,289
Fremont	Ethete Powwow Arbors	\$410,000	\$5,000	\$415,000
Laramie	Belvoir Ranch Trailhead	\$486,736	\$121,684	\$608,420
Laramie	CCM Community Space	\$290,000	\$290,000	\$580,000
Lincoln	Youth Fishing Pond Rehabilitation	\$23,100	\$2,500	\$25,600

County	Project	Grant funding	Matching funds	Total Funding
Natrona	North Platte River Pedestrian Bridge	\$3,500,000	\$430,696	\$3,930,696
Natrona	North Casper Athletics and Recreation Complex Improvements	\$2,845,000	\$370,000	\$3,215,000
Natrona	Marion Kreiner Pool and Park Improvements	\$1,850,000	\$190,000	\$2,040,000
Sweetwater	Century West Park Pool/Sprayground Renovation	\$743,849	TBD	\$743,849
Total		\$20,142,258	\$3,010,062	\$23,152,320

Each project has been carefully mapped into the appropriate IMPLAN sector based on the nature and scope of construction activities involved. Expenses that constitute new construction are modelled as direct impacts to either IMPLAN industry 50: Construction of New Commercial Structures including Farm Structures or 51: Construction of New Other Nonresidential Structures, while expenses that constitute maintenance of existing facilities are modelled as direct impacts to IMPLAN industry 55: Maintenance and Repair Construction of Nonresidential Structures. One project that involves the construction of additional electrical transmission infrastructure includes IMPLAN Code 47: Construction of New Power and Communication Structures.

Table 3.2 shows the estimated construction cost of each project in Rounds 1 and 2 of the outdoor recreation grants, categorized by IMPLAN industry.

Table 3.2 IMPLAN industries for each project

Round	Project	County	Implan Code				Total
			47	50	51	55	
First	Boulder Drive Trailhead	Albany		\$550,100	\$1,454,584		\$2,004,684
First	Bike Park	Albany		\$800,000			\$800,000
Second	LaBonte Park Pathway and Fitness Trail Improvements	Albany				\$1,548,686	\$1,548,686
Second	Pilot Hill School Yard Trails Maintenance	Albany				\$182,710	\$182,710
Second	Spring Creek Trail Phase 2	Albany			\$2,715,133		\$2,715,133
First	Rails to Trails Trailhead	Fremont	\$13,362	\$259,000	\$70,392		\$342,753
First	Saint Lawrence Basin	Fremont				\$72,010	\$72,010
Second	Eastern Shoshone Playground Project	Fremont			\$1,145,106		\$1,145,106

Round	Project	County	47		50		51		55		Total
Second	Wind River Lakes Project	Fremont					\$1,168,538				\$1,168,538
Second	Outdoor Sports	Fremont							\$78,100		\$78,100
Second	Ethete Powwow Arbors	Fremont							\$415,000		\$415,000
Second	Powwow Arbors Project	Fremont							\$508,483		\$508,483
Second	Tribal Buffalo Initiative	Fremont					\$333,289				\$333,289
Second	Wind River Trailheads Project	Fremont					\$791,300				\$791,300
First	Belvoir Ranch	Laramie		\$426,414			\$182,006				\$608,420
Second	CCM Community Space	Laramie					\$580,000				\$580,000
First	Fish Pond	Lincoln		\$4,426			\$21,174				\$25,600
Second	Marion Kreiner Swimming Pool and Park Improvements	Natrona					\$1,850,000				\$1,850,000
Second	North Plate River Pedestrian Bridge	Natrona					\$3,930,696				\$3,930,696
Second	North Casper Complex	Natrona					\$2,102,500	\$1,112,500			\$3,215,000
Second	Century West Park Pool/ Sprayground Renovation	Sweetwater					\$743,849				\$743,849
Total			\$13,362	\$2,039,940			\$17,088,566	\$3,917,489			\$23,059,356

Careful examination of Table 3.1 and Table 3.2 reveals that the total amount input for construction expenses is slightly different than the total grant award and matching funds amount. This is because there are small discrepancies in the project budgets and total funding amounts in certain projects. For example, the Pilot Hill Schoolyard Trails maintenance project has \$50,000 of matching funds listed in its award amount, but these funds do not seem to have been applied to any of the project expenses in the budget provided by the applicants. Since it is not possible to say what these matching funds will be spent on, they are not included in the construction expenses.

Separate IMPLAN projects are created for each county for which there are funds spent. Each IMPLAN project is a Multi-Regional Input-Output (MRIO) project. This type of project allows for interactions between separate regions, so direct impacts to Natrona County, for example, will have spillover effects on the rest of Wyoming, simulating purchases by the project developers from other counties in Wyoming. Using an

MRIO project is important in capturing total impacts on Wyoming because otherwise secondary impacts in other counties could be missed. Because Wyoming is an import-heavy state, these impacts are expected to be small, but nevertheless present.

3.2 PERMANENT IMPACTS FROM VISITATION

Permanent impacts may come from several causes. Nearby outdoor recreation infrastructure can raise property values for nearby homes and businesses, leading to greater spending from wealth effects (Harrington et al., 2022). Outdoor recreation infrastructure promotes physical activity, leading to health benefits that may cause less medical expenses for communities (Marsden Jacob Associates, 2018). Finally, outdoor recreation infrastructure can attract more visitors to an area, leading to greater spending by visitors in the local community (Rosenberger et al., 2017). The first two impacts, while important, are difficult to measure and are therefore omitted from this analysis. Visitor spending, however, is measured annually in Wyoming in a report by Dean Runyan Associates commissioned by the Wyoming Office of Tourism (Dean Runyan Associates, 2024 Hereafter the Dean Runyan Report).

To estimate permanent impacts from visitor spending, this report uses the estimated visitor spending per visitor night for each county reported in the Dean Runyan Report. Spending per visitor night is applied to the estimated increase in visitor nights for each project to estimate the increase in total visitor spending. Additionally, operating expenses are derived from each project's description and assigned a 3-digit NAICS code. Total visitor spending is entered into REMI for the years 2026 to 2036 to get an estimate of permanent impacts for the first 10 years of each project's life.

Each project was assessed to determine if they would attract visitors to the area. Most of the projects involve improvements or the completion of deferred maintenance to playgrounds, sports complexes, or other community recreation resources that – although beneficial – are unlikely to attract tourists. However, some projects involve the creation of or improvements to trails that may draw visitors from outside Wyoming: the Pilot Hill Trailhead in Albany County, the Laramie Bike Park in Albany County, the Belvoir Ranch project in Laramie County, the St. Lawrence Trail Improvements in Fremont County, and the Wind River Reservation Trailheads in Fremont County.

Estimating the permanent impacts from visitor spending requires several steps. The overall idea is that improvements in each project should make it more attractive as a recreational location, increasing visitors to the counties in which they are located. Increased visitation should result in higher visitor spending, expanding the visitor economy and impacting other sectors through secondary spending. The following sections explain how each step in this model is estimated for different projects. Many of the methods used in the Pilot Hill Trailhead project are used in subsequent analyses.

3.2.1 Pilot Hill Trailhead

Pilot Hill is a trail system on the Eastern side of Laramie, Wyoming with connecting trails to the Pole Mountain area of Medicine Bow National Forest. The trail system is primarily used by mountain bikers, but trails are designated for multiple nonmotorized uses. Pilot Hill was initiated with the sale of part of the property to the



Group of seniors on Pilot Hill trails. Photo credit: Eppson Center for Seniors

city of Laramie through a public land swap with the Warren Livestock Company in 2020. Other parts of the property are leased from the State of Wyoming. Since its inception, Pilot Hill, Inc, a non-profit charged with the management of the Pilot Hill area, has constructed and maintained over 50 miles of trails.

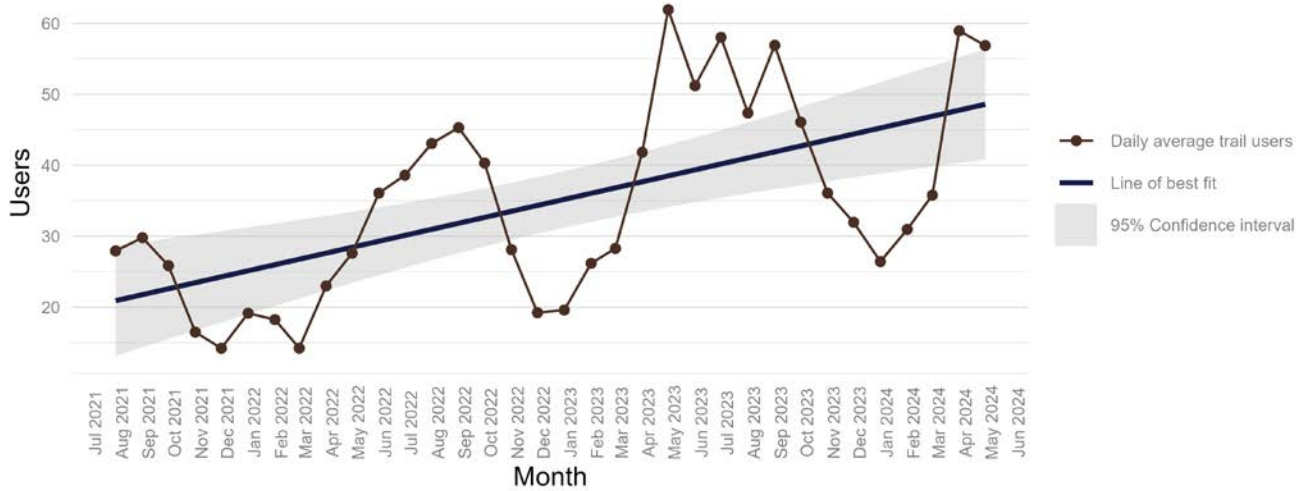


Figure 3.1: Trend in monthly users at the Boulder Drive trailhead of Pilot Hill Recreation Area

Pilot Hill, Inc. was awarded \$1,000,000 of WORG funds to improve parking and amenities at the Boulder Drive Trailhead, which connects to the Pilot Hill trailhead system. The impact of trailhead improvements at Boulder Drive will be driven by improved infrastructure and accessibility to the trail system. Figure 3.1 shows the average daily trail uses from Boulder Drive from August 2021 to May 2024 along with a line of best fit. The chart shows an increasing trend in visits through the Boulder Drive trailhead. Despite having only on-street parking, accessing Pilot Hill through the Boulder Drive trailhead is becoming increasingly popular, with average daily uses nearly doubling from 28 in August 2021 to 56 in May 2024. The peak season of 2023 (May – October) saw average daily trail use of 52 per day. However, due to the lack of parking at Boulder Drive, many trail users are local and choose to ride to the trailhead rather than to drive.² This indicates that Boulder Drive may already be close to its capacity to handle visitors to Laramie. Additional parking at this location would not only make the site more convenient for local riders but also increase its capacity to handle visitors who are more likely to drive to the trailhead to begin a ride.

The current plan for the trailhead improvement includes parking for 69 regular vehicles and space for approximately six oversize vehicles and eight horse trailers. Assuming an average of two people per vehicle, this translates to a capacity to handle 166 visitors concurrently. Analyzing route data from Trailforks.com reveals that on average users spend an hour and a half on the trails. During the busiest months (May – Oct.), average daily visitation to the Trailhead was about 53 visitors per day. Assuming that the distribution of arrivals resembles Figure 3.2, which shows the average number of trail counts per hour, and that visitors stay 90 minutes, the highest number of concurrent visitors would be approximately 9 visitors. This is far below the expected capacity of 166 concurrent visitors. In fact, under these assumptions, visitation would need to approach 800 users per day for the busiest hour to near capacity. From this, it was determined that capacity would not be a significant factor in limiting visitors to Pilot Hill through Boulder Drive.

² Local trail use is based on rides and hikes recorded by users at Trailforks.com. See <https://www.trailforks.com/region/pilot-hill-the-schoolyard/reports/> for reports for the whole Pilot Hill system.

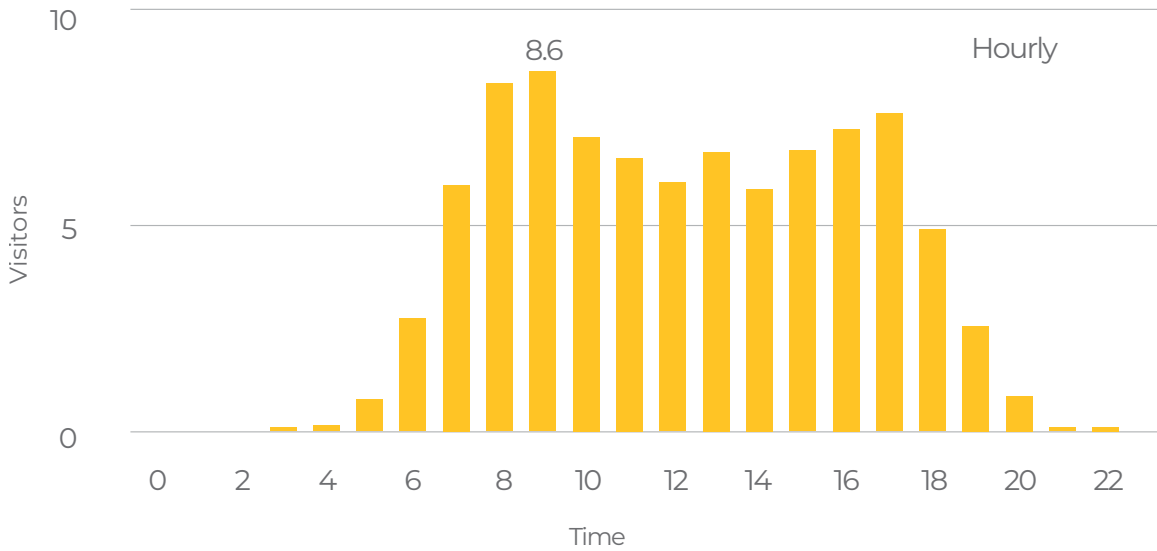


Figure 3.2: Average hourly users at Boulder Drive trailhead at Pilot Hill Recreation Area

Three scenarios are developed to model the impact of trailhead improvements based on estimates of the maximum number of users that will access Pilot Hill through Boulder Drive. In the baseline (medium) scenario, improvements will relieve capacity constraints on the trailhead and allow the number of users to grow at the current rate for the foreseeable future up to a maximum of 30,000 uses per year. 30,000 uses was chosen as the baseline because the trail counter with the highest users per year at Pilot Hill, Schoolyard NW, has an annual usage of about 30,000. In addition to the medium scenario, this report also constructs low and high scenarios where usage is 20% lower and higher than 30,000 annual uses (24,000 and 36,000). To construct the scenarios, we fit growth rates that exponentially decay to the maximum users in each scenario to the current growth rate of 4212. Figure 3.3 shows the expected number of users under each growth scenario through 2036.

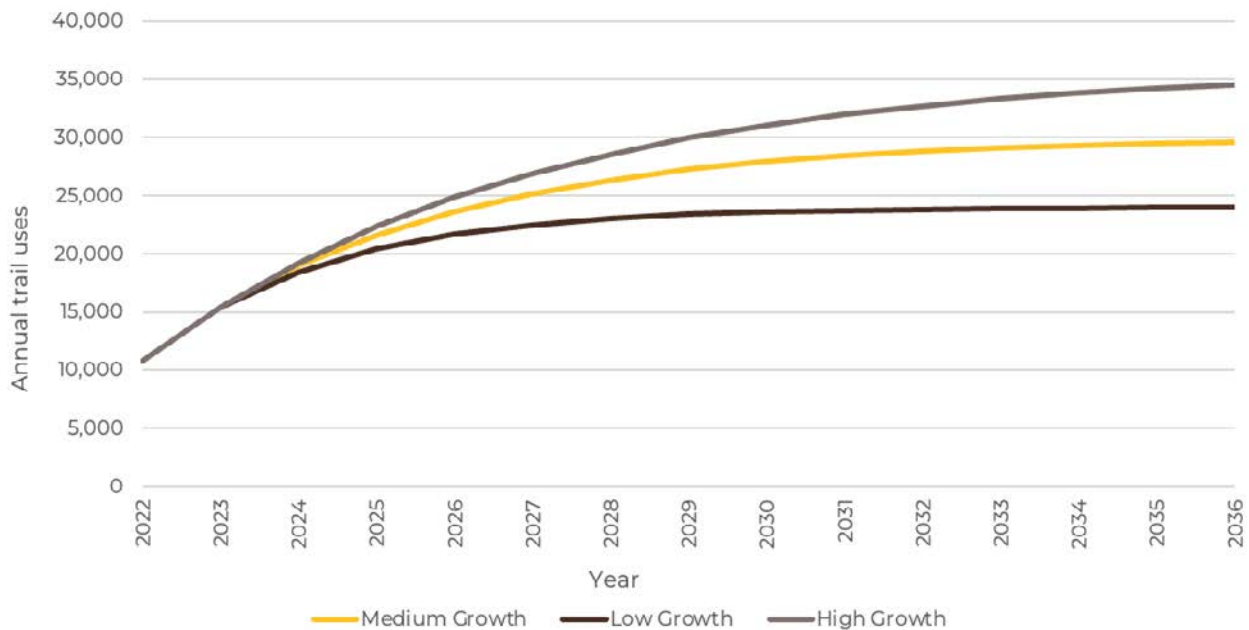


Figure 3.3: Low, medium and high estimated growth in annual trail users at Boulder Drive

Economic impacts from the trailhead improvements are estimated from spending by visitors from outside the area under consideration. The two areas of interest are Albany County and Wyoming. Therefore, this report estimates the increase in users from outside of Wyoming and from outside Albany County. It is not possible to tell from the trail counter data alone how many uses are by visitors to Laramie, so this report relies on a review of the literature on bike trails and general use trails.

A primary source is *Examining the Regional Economic Impact of the Pilot Hill Recreation & Wildlife Habitat Management Area and a Valuation of its Latent Attributes*, by Aadland et al., (2021). This report includes a table of previous literature with estimates of non-local use of trails. The reports included in Aadland et al., (2021) were reexamined to verify the accuracy of the reported non-local use and other studies were also examined to update the estimate of nonlocal use for this report. Some studies could not be located and were omitted. Table 3.3 reports each study and its estimate of nonlocal use.

Table 3.3: Trail use literature. Reproduced in part from Aadland et al., (2021)

Area	State	Number of visitors	Nonlocal visits	Overnight visits
Grand County Trails (Doedderlein et al., 2017)	Colorado	2,000,000 non-local visits	44%	49%
Pikes Peak Region (Steer Davies Gleave, 2015)	Colorado	1,653,094	58%	78%
Steamboat Springs Trails (RPI Consulting, LLC, 2019)	Colorado	31,300 - 43,500 non-local visits	44%	97%
Centennial Trail (Peterson, 2019)	Idaho	417,118	10%	-
Organized bicycle tourism events (Piatkowski et al., 2020)	Nebraska	20,000	-	90%
PIKE2BIKE (Fourth Economy, 2014)	Pennsylvania	25,000 - 225,000 non-local visits	-	5%-5.7%
Creeper Trail (Bowker et al., 2007)	Virginia	130,172	45%	27%
Teton County Trail System (Kaliszewski, 2011)	Wyoming	222,533	44%	32%
Catskill Mountain Rail Trail (Camoin Associates Economic Development, 2013)	New York		33% out-of-county, 9% out-of-state	-
Red Mountain Open Space (Vaske et al., 2017)	Colorado	19,700 - 22,300 person-visits	29%	-
Horsetooth Mountain Open Space (Vaske et al., 2017)	Colorado	213,000 - 235,000 person-visits	31%	-

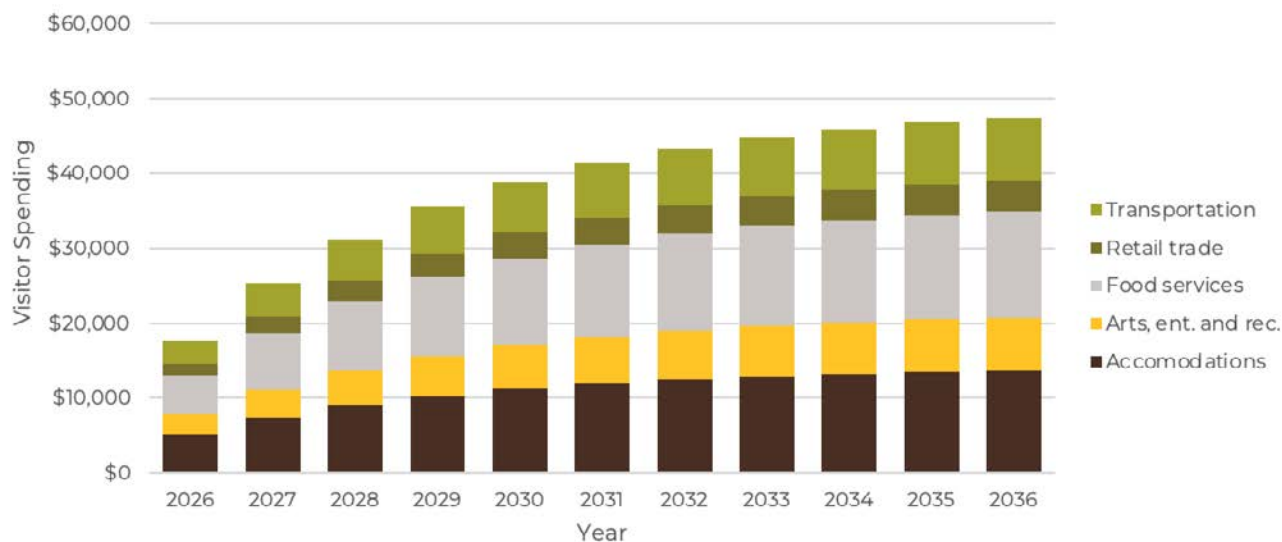
Table 3.3 shows the percentage of local users for trails as reviewed in recent studies. The only study that specifically examined out-of-state users is the Catskill Mountain Rail Trail in New York which found that 9% of users are from out-of-state. Red Mountain and Horsetooth open spaces are the most like Pilot Hill given their low visitation numbers and geographic proximity. Both are managed by Larimer County Parks and Recreation in Colorado. The report produced by Larimer County Parks and Recreation does not provide a percentage of users from out-of-state. However, it does provide a table with the top five primary residences of users and a table showing the percentage of uses from Larimer County.³ Combining the information from the two results in maximums of 20% and 21% of users of Horsetooth Mountain and Red Mountain being from outside the greater Denver area, respectively. A reasonable assumption is that an additional 10% of users at these two locations will be from Colorado. Taking this into consideration, this report assumes that 9% of users will be from outside Wyoming – in line with the estimate from the Catskill Mountain Rail Trail.

Spending by visitors is estimated from two sources. First, this report only considers spending from overnight visitors due to data limitations. This report applies the average percentage of trips to Albany County by overnight visitors estimated by Zartico for 2022-2023 of 40.1%.

Visiting Pilot Hill may not be the primary purpose of visitors to Laramie. However, visiting Pilot Hill generally takes a substantial time commitment as users spend an average of 1.5 hours on trails (Trailforks.com). Therefore, this report assumes that each trail use at Boulder Drive represents an additional 0.5 person-nights of visitation.

Finally, this report applies the visitor spending information from Dean Runyan Associates to the estimated person-nights of visitation to calculate a final tally of estimated visitor spending from 2025-2035.

Figure 3.4 shows the estimated increase in visitor spending for the three growth scenarios.



3 See Tables 17 and 18 from Vaske et al., (2017)

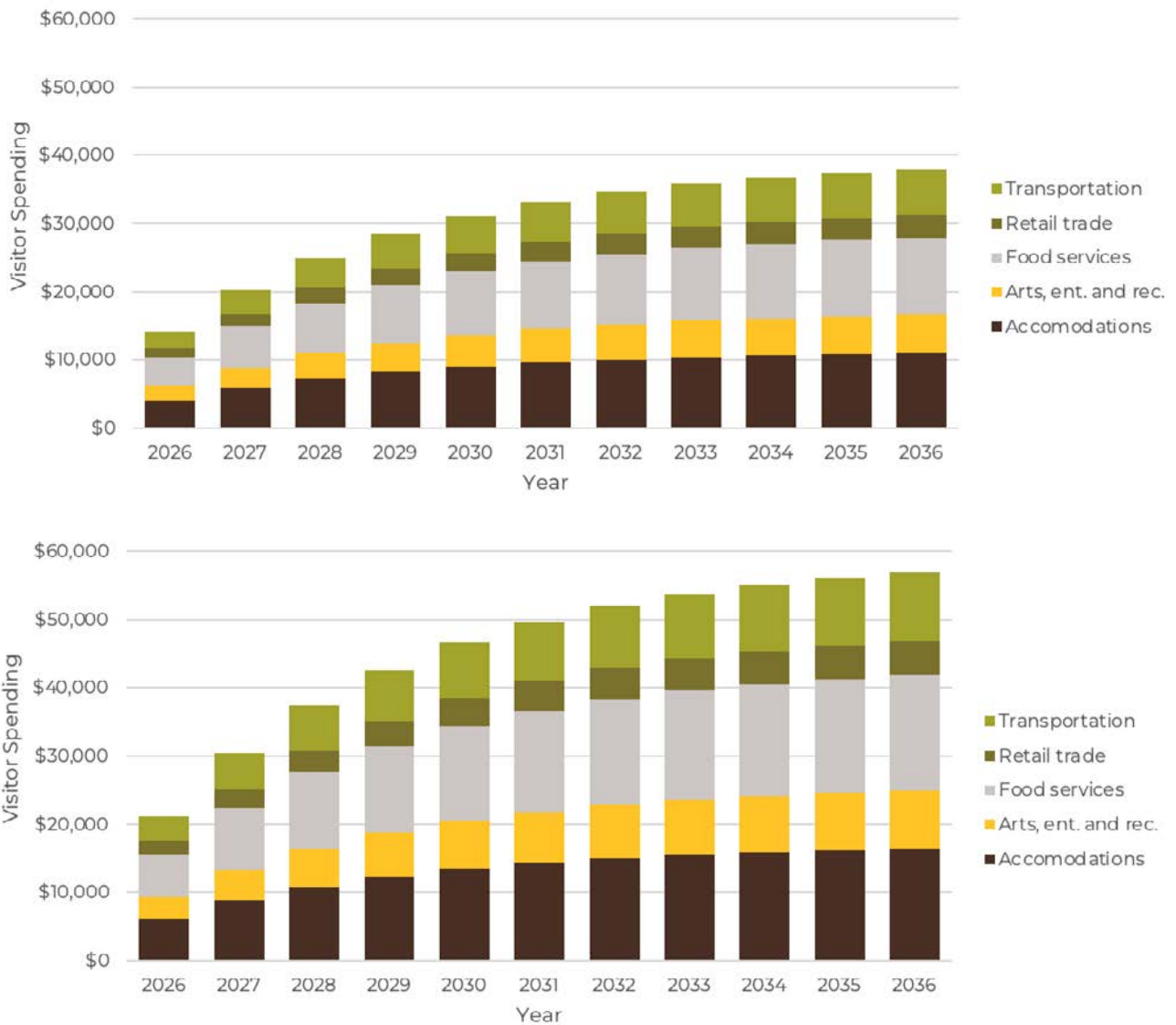


Figure 3.4: Low medium and high estimated growth in visitor spending in Albany County from growth in visitors to Boulder Drive trailhead at Pilot Hill by industry.

3.2.2 Belvoir Ranch Trailhead

The City of Cheyenne plans to develop 22,200 acres of land into an outdoor recreation area focused on hiking and mountain biking, but including other nonmotorized uses. The Belvoir Ranch development includes the Belvoir Ranch and Big Hole properties purchased by the City of Cheyenne in 2008 along with land leased from the State of Wyoming. The City of Cheyenne plans to construct 17.84 miles of trail on the property using \$486,736 of WORG funding and \$121,684 of matching funds.



Photo credit: Wyoming Office of Tourism

Although the property is currently used for hunting and cattle grazing – activities that will likely continue after the trail system is constructed – there are no statistics for current usage by hikers and cyclists to use in estimating future visitation. Therefore, this report relies on applying estimates of visitation to nearby trail systems in the Red Mountain and Soapstone Prairie areas.

The Red Mountain Open Space is a 15,780-acre area maintained by Larimer County, CO. The adjacent 18,728-acre Soapstone Prairie Natural Area is administered by Larimer County Parks and Recreation. Like Belvoir Ranch, these areas are primarily for hiking and cycling and are relatively distant from population centers. However, the nearest population center to these two areas is Fort Collins, CO, which has a much larger population than Cheyenne (170,376 compared to 65,165).



Photo credit: Wyoming Office of Tourism

The CBEA and WORTH received visitation statistics from the administrators of both areas in addition to using a 2017 report on Larimer County open spaces (Vaske et al., 2017). Soapstone Prairie had annual visitation estimates for 2017-2022 while Red Mountain has visitation estimates for 2018. On average, Soapstone Prairie receives 15,245 people per year while Red Mountain received 18,000 visitors in 2018. Each year of visitation to Soapstone Prairie and the single year of visitation to Red Mountain were weighted by the estimated population of Fort Collins in that year and then averaged. Applying the weighted average to Cheyenne’s population results in an estimated annual visitation of 6,035. To produce low and high estimates, the annual visitation estimate is multiplied by 0.8 and 1.2. The result is low, medium, and high visitation estimates of 4,828, 6,035, and 7,242 annual visits. Since the estimated trail usage is relatively low, no growth trajectory is estimated for Belvoir Ranch. Instead, annual visitation is assumed to be relatively constant.

Next, this report estimates visitors to Belvoir Ranch from outside Wyoming. Using the same studies applied to Pilot Hill (Red Mountain and Horsetooth Open Spaces and Catskill Mountain Rail Trail), approximately 9% of visitors are expected to come from outside Wyoming. Like Pilot Hill, a visit to Belvoir Ranch is expected to take a significant amount of time, so this report assumes that each visit represents an additional 0.5 person-nights in Laramie County. Finally, the spending per person-night for Laramie County from the 2023 annual Travel and Tourism Impact Report is applied to the estimated room-nights from visitors outside Wyoming to produce final impacts to spending to be entered into REMI. Table 3.4 shows the estimated room-nights and spending that will be generated by Belvoir Ranch.

Table 3.4: Estimated increase in annual visitation to and spending in Laramie County from Belvoir Ranch

Measure	Low Scenario	Medium Scenario	High scenario
<i>Visitation</i>			
Person-nights	105	131	157
<i>Spending</i>			
Accommodations	\$6,152	\$7,690	\$9,228

Arts, ent. and rec.	\$2,740	\$3,426	\$4,111
Food services	\$5,781	\$7,226	\$8,671
Retail trade	\$3,763	\$4,704	\$5,645
Ground transportation	\$5,412	\$6,765	\$8,118
Air transportation	\$50	\$63	\$75
Total	\$23,899	\$29,874	\$35,848

3.2.3 Laramie Bike Park

The City of Laramie was awarded \$700,000 to construct a bike skills park on city-owned property. Along with matching funds of \$100,000, the total budget for the project is \$800,000.

Only three reports on visitation at bike parks were found, examining Giant’s Ridge & Redhead Mountain bike parks in Biwabik, MN (Parks & Trails Council of Minnesota, 2024), the Knoxville Urban Wilderness in Knoxville, TN (Gregory, 2024), and the Trackline Bike Park in Ogden, UT (*Trail Counter Data, Ogden, UT, 2024*).

Only the Knoxville Urban Wilderness and the Trackline Bike Park had visitor counts. However, both locations are significantly different than Laramie, with much larger populations. Table 3.5 calculates the usage per person based on local population for Ogden and Knoxville, showing that there are 0.03 and 0.13 uses per person at each respective location, which are used a low and high estimates of annual uses per person in Laramie. Taking the average results in a medium estimate of 0.08 uses per person. Table 3.5 applies these three estimates to Laramie’s population to derive low, medium, and high estimates of total annual visitation to Laramie’s proposed bike park. In addition, Table 3.5 calculates annual out-of-state usage and estimated person-nights assuming 9% of users are from out-of-state like the Boulder Drive project and that each use results in 0.5 additional person-nights.



Laramie Bike Park Concept Plan

Table 3.5: Estimated increase in visitation to and spending in Laramie County from the Laramie Bike Park

Measure	Low Scenario	Medium Scenario	High scenario
<i>Visitation</i>			
Population	38,257	38,257	38,257
Uses per person	0.029	0.079	0.128
Total annual uses	1,128	3,013	4,899
Out-of-state uses (9%)	101	271	441
Overnight visits (50%)	51	136	220

Spending

Accommodations	\$1,337.23	\$3,573.03	\$5,808.83
Arts, ent. and rec.	\$690.88	\$1,846.00	\$3,001.11
Food services	\$1,380.12	\$3,687.64	\$5,995.15
Retail trade	\$403.45	\$1,077.99	\$1,752.54
Ground transportation	\$815.28	\$2,178.40	\$3,541.52
Air transportation	\$701.35	\$1,873.98	\$3,046.61
Total	\$5,328.32	\$14,237.04	\$23,145.77

Finally, Table 3.5 applies the spending estimates in the Dean Runyan report to the total estimated person-nights to produce low, medium, and high estimates of visitor spending. Since out-of-state visitation to the Laramie Bike Park is expected to be relatively low, no growth rates are used for this project.

3.2.4 Wind River Trail Improvements

Shoshone and Arapaho Fish & Game was awarded funds for two separate trail improvement projects in the Wind River Range in the southwestern part of the Wind River Reservation. The St. Lawrence Trail Improvements will use grant funds to perform maintenance on the Sonnicant Lake and Alpine Lake trails. The WRR Trailheads will use funds to improve trailheads at Mosquito Park, Washakie Park, and the St. Lawrence Basin, adding “wayfinding, educational, and trailhead signage; tribal permit kiosks; parking improvements; vault restrooms ...; picnic areas and pavilion-type structures; trailhead cabin renovations ...; and small buildings (sheds) for Fish and Game employees/ attendants” (Wind River Development Fund, 2023).



Photo credit: Wind River Development Fund

Recreational access to the Wind River Range is underdeveloped on tribal lands. Elsewhere in the Wind River Range there are developed campgrounds, trails, and other amenities that attract outdoor recreation enthusiasts. Adding additional outdoor recreation capacity to the Wind River range within the Reservation should attract visitors to the area who wish to experience one of Wyoming’s most pristine wild areas.

Like the other trail improvements, this report uses several estimates to calculate economic impacts: Trail usage, Usage by out-of-state users, person-nights of visitation, and spending per person-night. To estimate trail usage generated by the two trail improvement grants awarded to Fish & Game, this report uses trail counter data from trails in the Wind River Range. Friends of the Bridger-Teton keeps records from trail counters placed in the Bridger-Teton National Forest portion of the Wind River Range. The CBEA examined the amenities near each trail and determined that Scab Creek and Long Lake trails most closely match the trail improvements in the Reservation, and therefore the trail counts from these two counters are used as estimates. Table 3.6 shows annual raw counts from the devices on Scab Creek and Long Lake trails. Like the trail counts for the Pilot Hill estimation, this study assumes that each trail count represents 0.5 trail uses to account for out-and-back trips. Averaging over Scab Creek and Long Lake trail counts and dividing by 2 results in an estimated 2,073 annual

trail uses.

Table 3.6: Estimated visitors to trails similar to the trail improvements in the Wind River Reservation

Trail	Year	Count
Scab Creek	2019	3,751
	2020	4,574
	2021	3,459
	2022	4,418
	2023	4,247
Long Lake	2023	4,423
Glimpse Lake	2022	1,292
	2023	1,629

Out of state usage is estimated using data from the National Visitor Use Monitoring Program (NVUM) from the National Forest Service (USDA Forest Service, 2018). The NVUM uses periodic surveys, trail counts, and other methods to provide periodic reports on visitation to National Forests. The data from these reports is collected into a tool for researchers and the public. This report uses the percentage of out-of-state visitors to Bridger-Teton National Forest and Shoshone National Forest in the most recent NVUM reports (2018 and 2019, respectively). Due to the remoteness of the trail improvements, this report also uses the percentage of out-of-state users in wilderness areas from BTNF and SNF. Table 3.7 lists the proportion of survey respondents from out-of-state for BTNF and SNF.

Table 3.7: Out-of-state survey respondents in National Forests adjacent to the Wind River Reservation

Area	Percent	Year
Shoshone NF	44.3%	2019
Shoshone NF wilderness	63.2%	2019
Bridger-Teton NF	47.9%	2018
Bridger-Teton NF wilderness	83.8%	2018
Average	59.8%	NA

The four values are averaged to estimate that 59.8% of visitors to the trails improved on the Wind River Reservation will be from out-of-state. Applying this percentage to the estimated annual trail uses results in an estimated 1,039 trail uses by out-of-state visitors per trail. Since there are five trails being improved, this results in an estimated 5,194 annual trail uses. The report also considers estimates 20% lower and 20% higher resulting in three annual trail use estimates of 4,155, 5,194, and 6,233. We assume that trail use will follow a similar growth pattern as the Boulder Drive Pilot Hill project, where growth asymptotes to one of the three usage estimates in approximately 10 years. Figure 3.5 shows the projected growth in visitors from 2026 – 2036.

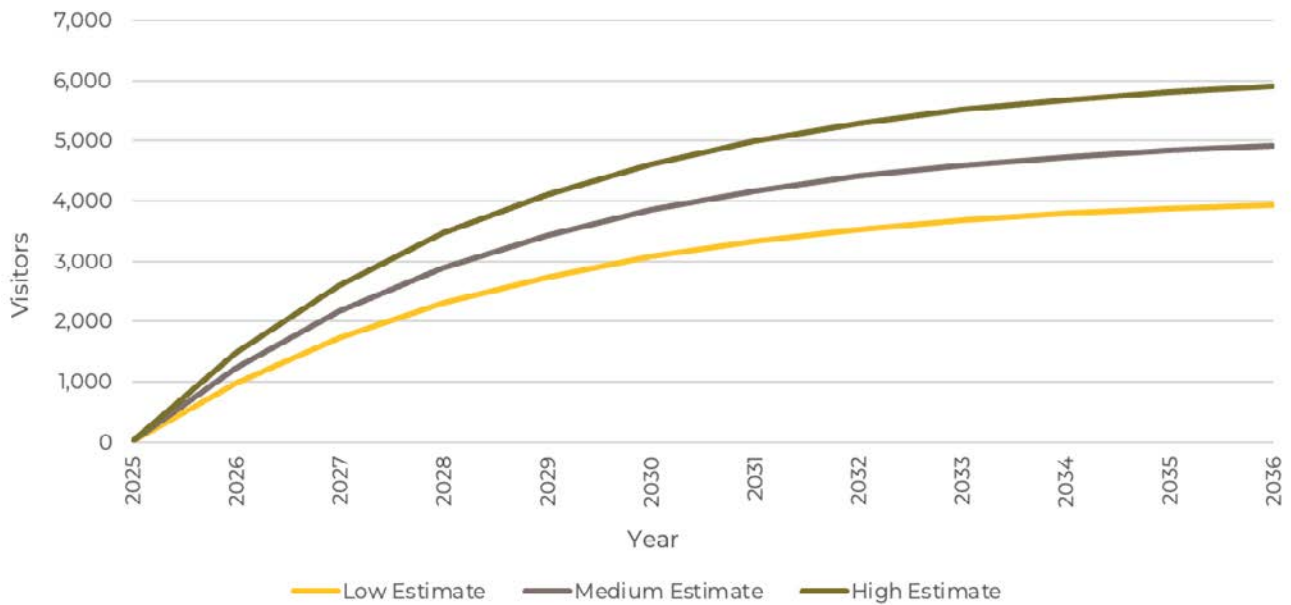
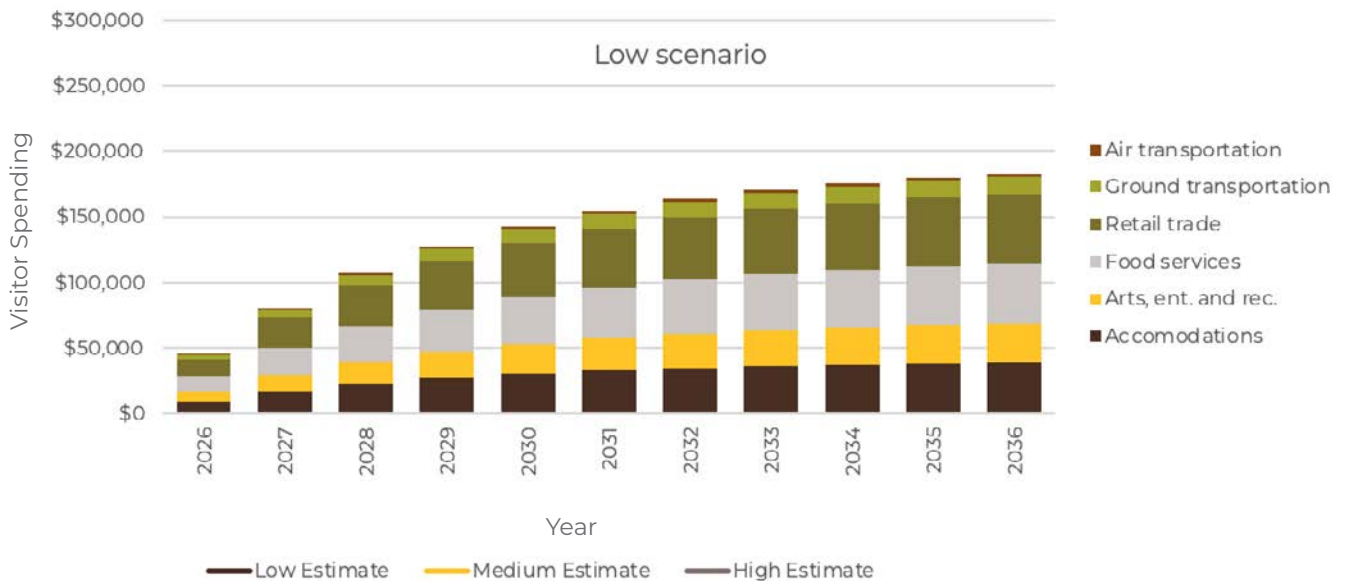


Figure 3.5: Low, medium, and high estimates of growth in visitors to Wyoming from the Wind River trail improvements.

Next, like the Boulder Drive, LBP, and Belvoir Ranch improvements, this report assumes that each trail use translates to an additional 0.5 person-nights of visitation. Applying the spending figures by industry calculated in the Dean Runyan report results in low, medium, and high estimated visitor spending in Fremont County. Growth in visitor spending by industry is shown in Figure 3.6.



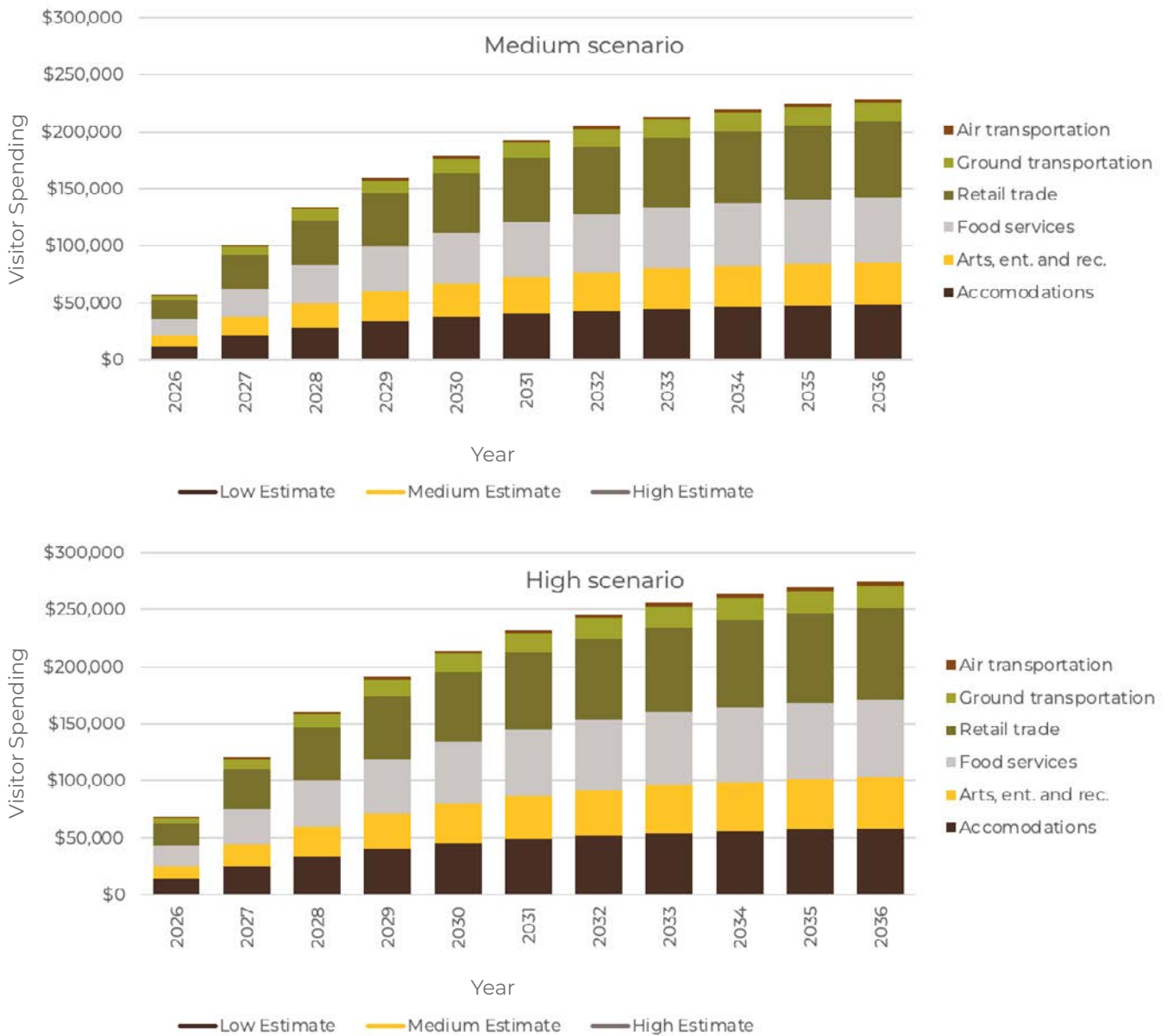


Figure 3.6: Growth in visitor spending by industry from increased visitation driven by the Wind River Reservation trail improvements

3.3 REMI MODELING

The final step in analyzing permanent impacts is to input visitor spending into REMI as exogenous changes in output. Due to differences between industry aggregations for the Dean Runyan report and REMI, three REMI industries - Performing arts, spectator sports, and related industries; Museums, historical sites, and similar institutions; and Amusement, gambling, and recreation industries – were combined to create an arts, entertainment, and recreation industry. The low, medium, and high scenarios for each project were combined into three forecasts of impacts to Wyoming. Impacts are forecast from 2026 to 2036.

REMI combines input-output modeling with a sophisticated macroeconomic model calibrated to local regions using local economic data. The result is that some of the limitations of IMPLAN are mitigated. For example, in IMPLAN prices do not respond to changes in industry output but are instead assumed to be fixed. However, in REMI prices are determined by supply and demand modeling, meaning increases in output can cause prices to either rise or fall depending on demand responses. REMI modeling is more appropriate for long-term economic changes because the economy is allowed to adjust to new conditions, leading to more accurate long-term forecasts.

This is not to say that REMI is without limitations. REMI trades off complexity in macroeconomic modeling with simplicity in industry categorization, for example. IMPLAN’s industry classification scheme includes 528 categories while REMI’s includes only 402. In addition, IMPLAN reports direct, indirect, and induced impacts for value added while REMI only reports total value added. REMI’s tax reporting is also limited depending on the model used. This report uses REMI PI+, which foregoes detailed tax reporting but includes county-level forecasts. REMI Tax PI includes greater tax details but is only available at the State level. For an extensive overview of the similarities and differences between IMPLAN and REMI, see *Analyzing the Economic Impact of Transportation Projects using RIMS II, IMPLAN and REMI* (Lynch, 2000).

4 Results

The results of modeling the temporary and permanent impacts are presented in this section.

4.1 TEMPORARY IMPACTS

Temporary impacts from construction are expected to be substantial statewide. Table 4.1 shows the total economic impacts to Wyoming.

Table 4.1: Temporary impacts from construction on WORG projects

Impact	Employment	Labor Income	Value Added	Output
Direct	139	\$8,506,425	\$12,598,737	\$23,249,357
Indirect	26	\$1,556,296	\$3,096,436	\$6,124,087
Induced	33	\$1,484,332	\$3,059,246	\$5,321,329
Total	198	\$11,547,053	\$18,754,419	\$34,694,773

Including direct, indirect, and induced impacts, outdoor recreation grants are expected to support 211 jobs, \$12,175,512 in labor income, \$19,788,230 in value added, and \$36,327,237 in output. Table 4.2 shows the temporary impacts to tax receipts from construction expenses.

Table 4.2: Temporary impacts to tax receipts from construction on WORG projects

Impact	Local	County	State	Federal	Total
Direct	\$30,534	\$13,186	\$236,892	\$2,161,043	\$2,441,654
Indirect	\$60,394	\$23,905	\$296,244	\$430,410	\$810,953

Induced	\$49,380	\$18,985	\$261,028	\$412,902	\$742,296
Total	\$140,309	\$56,076	\$794,164	\$3,004,355	\$3,994,904

Including direct, indirect, and induced impacts, the outdoor recreation grants are expected to generate \$148,368 in local tax receipts, \$59,763 in county tax receipts, \$834,194 in county tax receipts, and \$3,166,879 in federal tax receipts for a total of \$4,209,205 additional tax revenue to all levels of government.

Impacts differ by county depending on how much grant funding is awarded. Table 4.3 shows the impacts by county and Table 4.4 shows tax impacts by county.

Table 4.3: Temporary impacts to each county from construction on WORG projects

County	Impact	Employment	Labor Income	Value Added	Output
Albany	Direct	44	\$2,410,963	\$3,571,800	\$7,251,213
	Indirect	6	\$305,250	\$556,076	\$1,086,616
	Induced	9	\$397,071	\$821,256	\$1,388,327
	Total	59	\$3,113,284	\$4,949,132	\$9,726,155
Fremont	Direct	32	\$1,692,162	\$2,424,355	\$4,854,580
	Indirect	6	\$262,929	\$546,359	\$1,106,000
	Induced	6	\$247,160	\$535,405	\$944,942
	Total	43	\$2,202,251	\$3,506,119	\$6,905,522
Laramie	Direct	7	\$451,149	\$670,124	\$1,188,420
	Indirect	1	\$56,076	\$106,522	\$214,039
	Induced	2	\$68,349	\$148,364	\$280,696
	Total	9	\$575,573	\$925,010	\$1,683,154
Lincoln	Direct	0.1	\$9,134	\$12,413	\$25,600
	Indirect	0.0	\$852	\$1,745	\$3,859
	Induced	0.0	\$728	\$1,995	\$3,757
	Total	0.2	\$10,714	\$16,153	\$33,216
Natrona	Direct	52	\$3,636,936	\$5,443,879	\$9,185,696
	Indirect	9	\$604,295	\$1,177,238	\$2,143,864
	Induced	14	\$677,808	\$1,342,589	\$2,340,093
	Total	75	\$4,919,038	\$7,963,706	\$13,669,653
Sweetwater	Direct	4.0	\$306,082	\$476,165	\$743,849
	Indirect	0.5	\$28,389	\$55,196	\$94,915
	Induced	0.7	\$27,544	\$67,097	\$109,727
	Total	5.1	\$362,016	\$598,458	\$948,491

Table 4.4: Temporary impacts to tax receipts in each county from construction on WORG projects

County	Impact	Local	County	State	Federal	Total
Albany	Direct	\$9,518	\$7,766	\$3,886	\$72,579	\$595,852
	Indirect	\$10,655	\$8,641	\$3,998	\$58,769	\$79,396
	Induced	\$12,730	\$10,324	\$4,781	\$70,611	\$107,613
	Total	\$32,904	\$26,731	\$12,665	\$201,959	\$782,860
Fremont	Direct	\$7,961	\$7,251	\$3,178	\$49,200	\$452,278
	Indirect	\$17,121	\$15,531	\$6,204	\$72,641	\$77,708
	Induced	\$11,515	\$10,447	\$4,185	\$49,576	\$73,848
	Total	\$36,597	\$33,229	\$13,567	\$171,417	\$603,834
Laramie	Direct	\$1,367	\$970	\$57,936	\$507,219	\$578,676
	Indirect	\$1,518	\$7,266	\$85,015	\$88,820	\$201,159
	Induced	\$2,097	\$4,694	\$55,606	\$82,831	\$156,047
	Total	\$4,982	\$15,796	\$198,557	\$678,870	\$935,882
Lincoln	Direct	\$47	\$22	\$213	\$2,076	\$2,357
	Indirect	\$54	\$23	\$166	\$233	\$476
	Induced	\$59	\$25	\$179	\$217	\$480
	Total	\$160	\$70	\$558	\$2,526	\$3,314
Natrona	Direct	\$10,127	\$4,186	\$96,781	\$924,941	\$1,036,034
	Indirect	\$17,418	\$5,683	\$110,887	\$167,174	\$301,162
	Induced	\$17,679	\$5,784	\$113,151	\$186,967	\$323,582
	Total	\$45,224	\$15,653	\$320,819	\$1,279,082	\$1,660,778
Sweetwater	Direct	\$1,515	\$944	\$6,592	\$76,712	\$85,763
	Indirect	\$1,978	\$1,152	\$4,821	\$7,554	\$15,505
	Induced	\$2,124	\$1,237	\$5,142	\$7,850	\$16,354
	Total	\$5,618	\$3,334	\$16,555	\$92,115	\$117,622

Impacts are directly related to grant spending in each county. Natrona County is expected to have the greatest impact from the grant funding, with 74 jobs, \$4,815,353.83 in employee compensation, \$7,797,137.10 in value added and \$13,387,201.84 in output. Lincoln county is expected to have the smallest impact, supporting 0.2 FTE jobs, \$10,714 in labor income, \$16,153 in value added, and \$33,216 in output.

Examining the difference between the total impacts for all of Wyoming in Table 4.1 and Table 4.2 and the sum of impacts from Table 4.3 and Table 4.4 shows the secondary impacts to the rest of Wyoming that occur because of cross-county trade. Table 4.5 shows the impacts to economic indicators and Table 4.6 shows the impact to tax revenues.

Table 4.5: Impacts from intercounty trade due to construction

Impact	Employment	Labor Income	Value Added	Output
Direct	0	\$0	\$0	\$0
Indirect	4	\$298,506	\$653,301	\$1,474,794
Induced	1	\$65,671	\$142,539	\$253,787
Total	5	\$364,177	\$795,840	\$1,728,581

Table 4.6: Impacts to tax receipts from intercounty trade due to construction

Impact	Local	County	State	Federal	Total
Direct	\$0	\$0	\$0	\$0	\$0
Indirect	\$11,651	\$5,850	\$40,428	\$83,746	\$141,675
Induced	\$3,175	\$1,600	\$10,684	\$17,999	\$33,458
Total	\$14,826	\$7,450	\$51,113	\$101,745	\$175,133

4.1.1 Interpretation

Direct tax impacts are likely lower than reported here. Many of the projects are overseen by nonprofits and governmental bodies that may have special tax rules that result in lower direct taxes than are reported here – although the contractors hired to complete projects are likely taxed normally. Because indirect and induced taxes come from expenses by different entities, they are not impacted by this consideration.

Induced impacts are also likely lower than reported here. Most of the projects will be completed by contractors hiring construction laborers. While Wyoming has a pool of construction laborers to hire from, many contractors choose to hire from out-of-state, especially for certain skilled trades with a limited labor pool in Wyoming. Due to the temporary nature of construction, out-of-state workers will likely spend their wages out-of-state, reducing induced impacts. Without hiring information from contractors it is not possible to determine how much induced impacts will be affected by this issue.

A final consideration is the timing of these impacts. Some of the projects will require multiple years to complete. IMPAN normally estimates impacts on an annual basis, so some of the impacts in this report may be spread over two or more years.

Section 5 provides more discussion on these results and the results in Section 4.2.

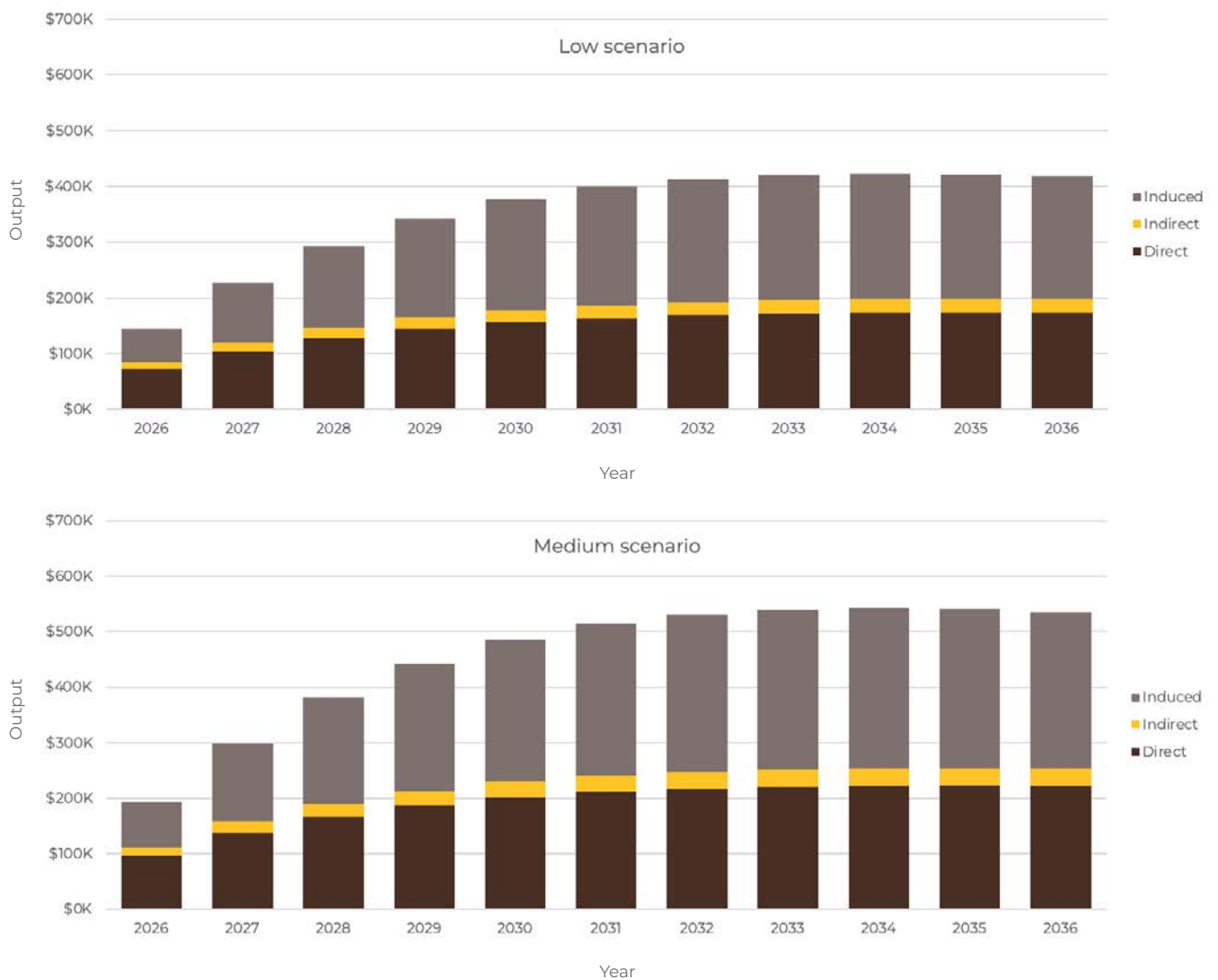
4.2 PERMANENT IMPACTS

This section presents the results of REMI modeling. Using the expenses reported in Figure 3.4, Figure 3.6, Table 3.4, and Table 3.5 as exogenous industry output (sales), REMI calculates how the rest of the economy will react for every county in Wyoming. All the figures in this section report differences in each economic indicator to REMI's standard forecast for Wyoming. Thus, for example, output in Figure 4.1 reports how much greater output is expected to be compared to if the WORG grant projects were not awarded.

Figure 4.1 shows the resulting increase in economic output for Wyoming for each scenario. Output is forecasted to increase in Wyoming for all three scenarios. By 2036, economic output will be between \$418,000 and \$653,000 higher when including direct, indirect, and induced impacts. Output is forecasted to reach a peak in 2034 at between \$422,000 and \$661,000 and decline slightly by 2036. Slight declines in economic indicators are normal for REMI forecasts because REMI considers the economic responses of other regions, consumers, prices, and other factors. In this case, the slight decline is likely due to small changes in prices as other regions adjust supply to capitalize on spending in Wyoming.



Photo credit: Wyoming Office of Tourism



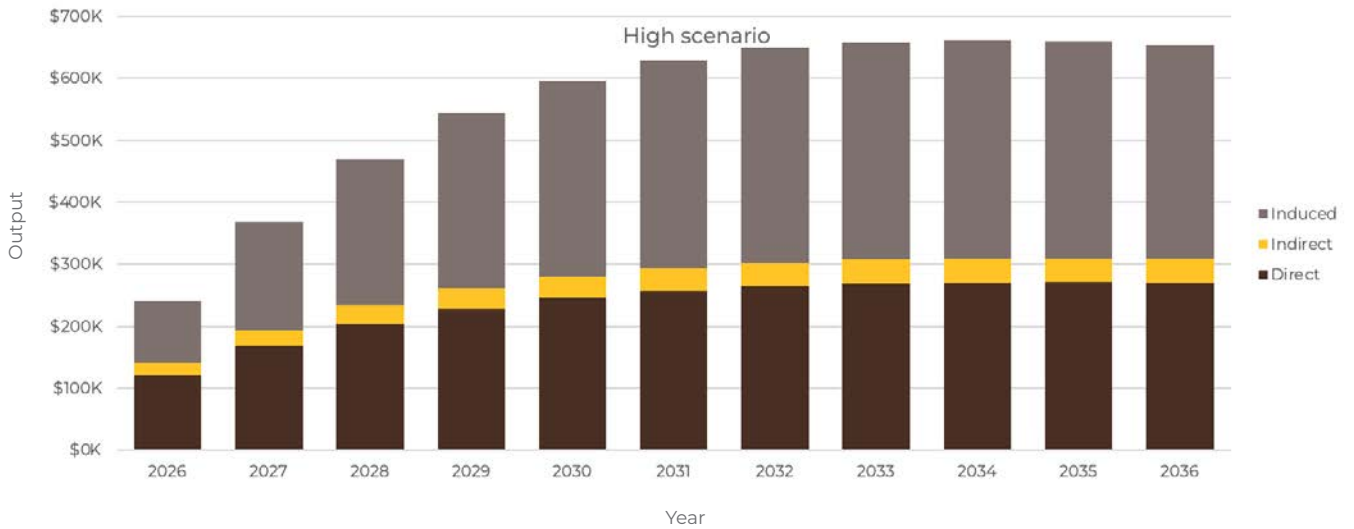
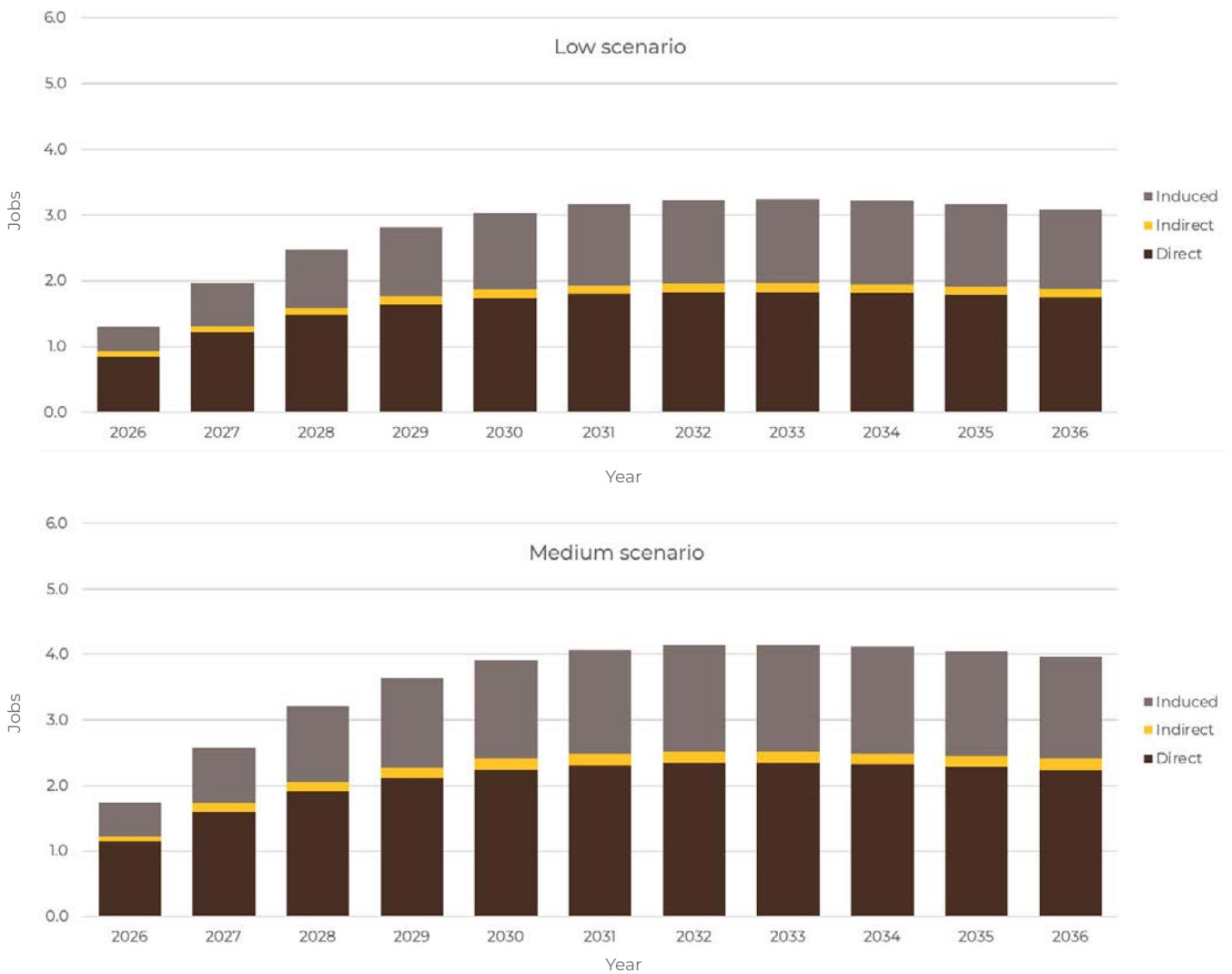


Figure 4.1: Permanent impact to economic output from visitor spending

Figure 4.2 shows the impact to employment in Wyoming. Permanent employment is projected to reach a peak in 2033 with between 3.2 and 5.1 jobs before declining slightly to between 3.1 and 4.8 jobs.



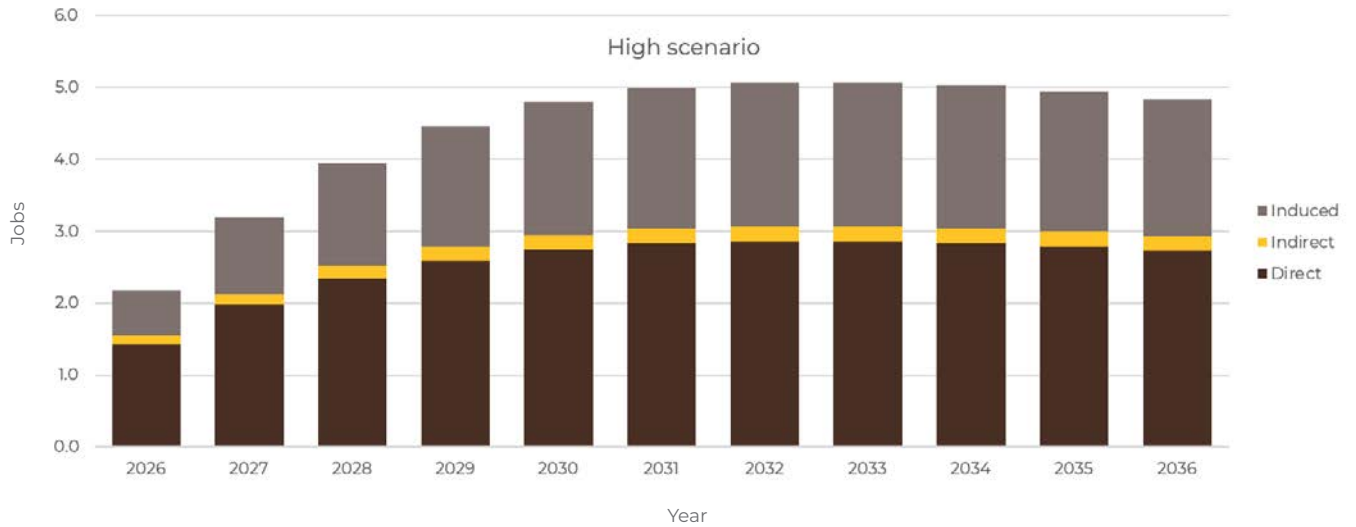
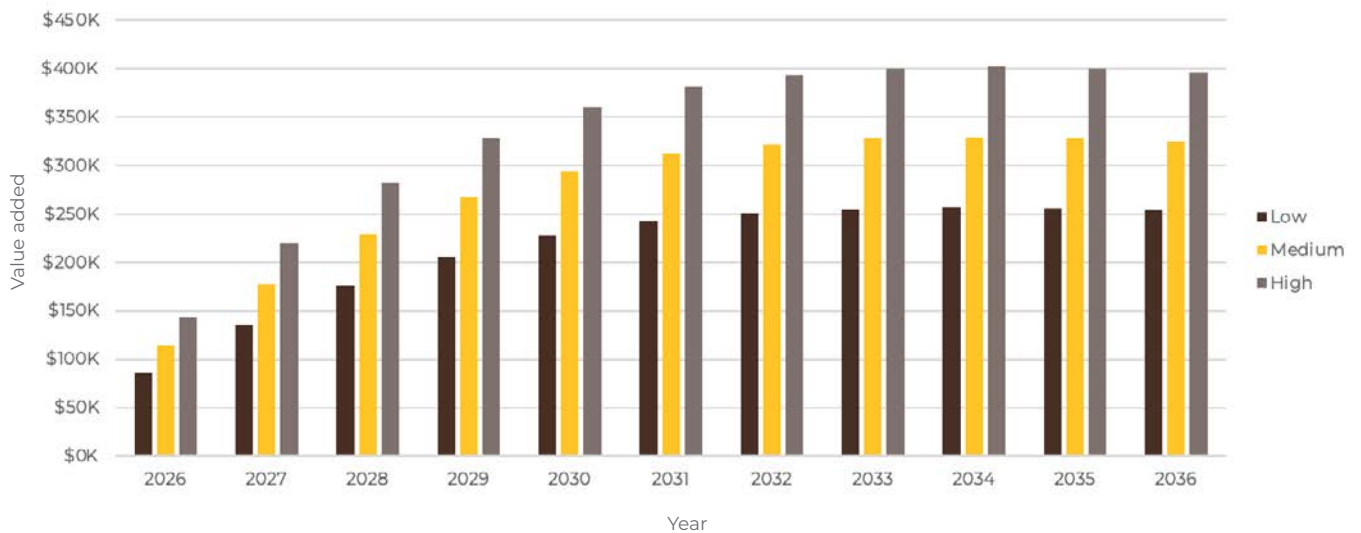


Figure 4.2: Permanent impact on employment from increased visitation

Figure 4.3 shows the permanent impact on value added. The impact to value added is projected to peak at between \$256,600 and \$401,565 in 2034 before declining slightly to between \$253,574 and \$396,252 in 2036.

Figure 4.3: Permanent impact on value added from increased visitation

Figure 4.4 shows the impact on personal income. Unlike many of the other economic indicators, personal income is not expected to decline, but to rise steadily through the forecasting period. By 2036, additional personal income is expected to be between \$204,599 and \$319,575 annually.



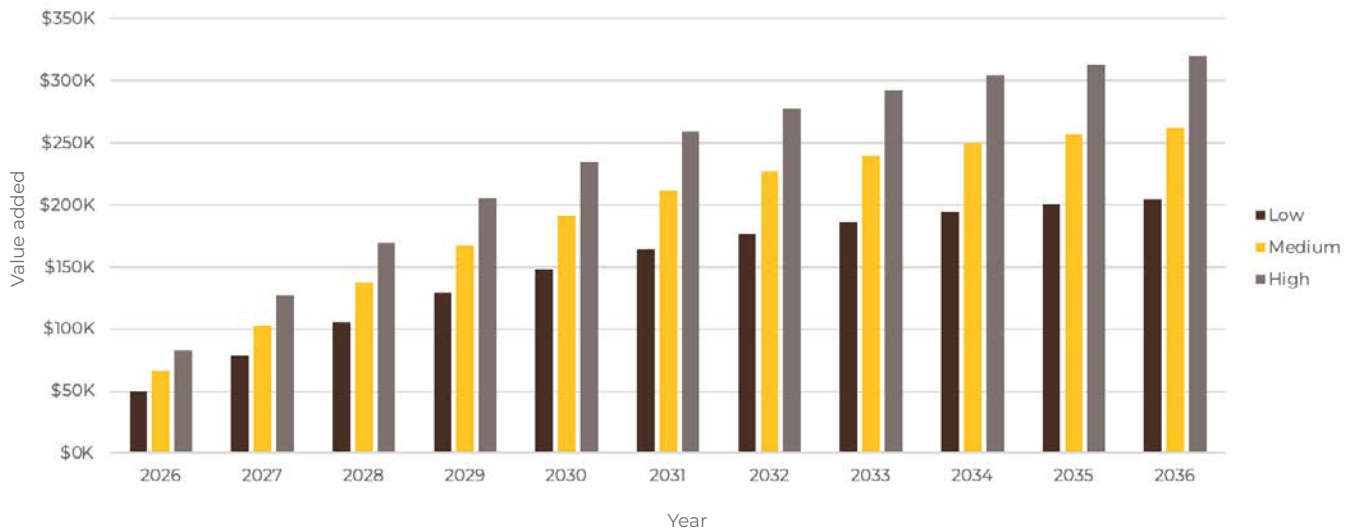


Figure 4.4: Permanent impact on labor income from increased visitation

Figure 4.5 shows the impact on state and local taxes. The low forecast is expected to grow steadily throughout the forecast period, with additional tax revenue peaking at \$96,274 per year in 2036. The middle and high forecasts are expected to peak in year 2035 at \$125,533 and \$154,825, respectively. The middle and high forecasts decline slightly to \$125,484 and \$154,695 respectively in 2036.

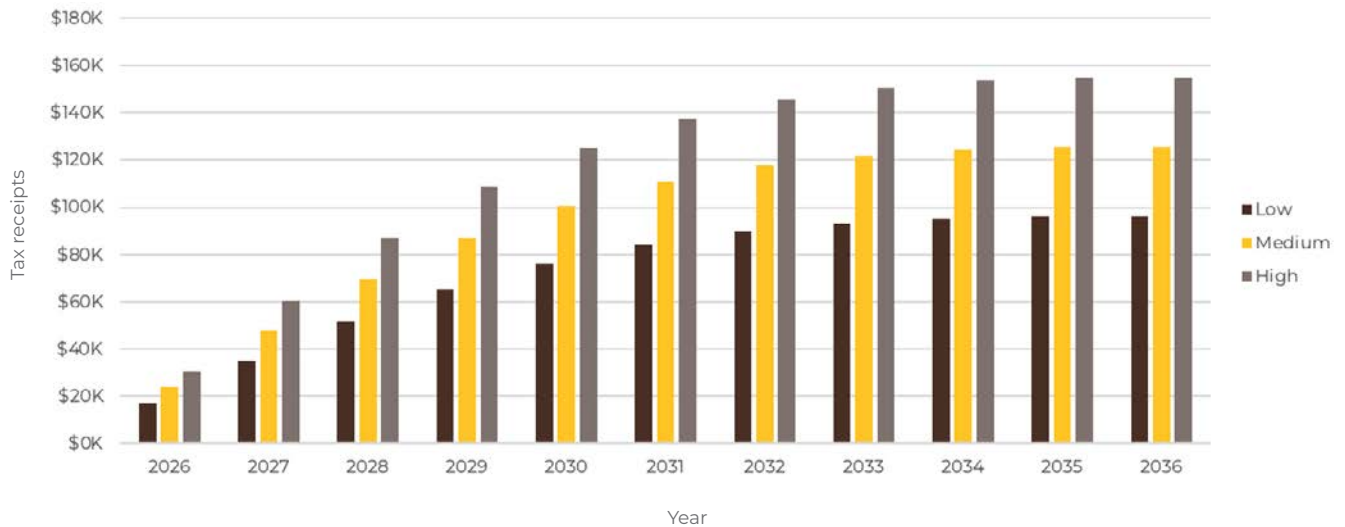


Figure 4.5: Permanent impact on state and local tax receipts from increased visitation

Note that unlike IMPLAN, REMI does not report significant changes in federal taxes and therefore they are not included. Additionally, unlike IMPLAN, REMI PI+ does not report state and local taxes separately.

5 Discussion

The temporary impacts of this project are relatively high compared to the permanent impacts; however, their temporary nature means that capitalizing on them will be difficult for stakeholders. For example, policymakers should be aware that increases in sales & use tax are temporary and should not be relied on as a permanent increase in state and county budgets.

Permanent impacts, though small, should be interpreted in light of the size of Wyoming's economy. For example, the medium forecast predicts an increase of 3.961 jobs in 2036, 0.000892% more than REMI's standard forecast. A similar percentage increase in employment in Colorado would be nearly 28 jobs based on Bureau of Labor Statistics employment data from 2025.

One important consideration when examining permanent impacts is that REMI considers changes in population driven by economic changes. For example, REMI forecasts an increase of 3.1 to 4.8 jobs by 2036, but these jobs are entirely filled by new residents to Wyoming. Wyoming's low unemployment rate – 3.5% as of December 2024 (*Wyoming Economy at a Glance*, 2025) – means that nearly every resident in Wyoming who wants a job can find one. Thus, employers must often recruit people from outside the State to fill vacancies. REMI predicts that increases in employment opportunities will largely have little impact on Wyoming's current residents but instead will lead to population growth. This effect is the reason REMI reports no change in Federal taxes. REMI predicts that the workers who will fill the new jobs will likely be leaving employment in another state to work in Wyoming, shifting Federal tax dollars from one state to another.

5.1 LIMITATIONS

The economic impacts estimated in this report are based on economic modeling and are therefore subject to the limitations of IMPLAN and REMI. See Appendix A for a discussion of input-output modeling. In addition, see *Analyzing the Economic Impact of Transportation Projects using RIMS II, IMPLAN and REMI* (Lynch, 2000) for an extensive discussion of the methodologies of IMPLAN and REMI.

Another limitation of this report is that it exclusively examines the *benefits* of the outdoor recreation grant projects. A full accounting of the outdoor recreation grant projects should take into consideration costs, as well. Since the funding for these projects largely comes from outside of Wyoming through ARPA funding, the costs to the State Government are minimal, likely including only the cost in personnel to process grant applications and to monitor the grants. In addition to direct costs, there are also *opportunity costs* that should be considered. From the perspective of the State of Wyoming, since the funds are earmarked for spending on outdoor recreation infrastructure, the opportunity costs involved largely consist in choosing which projects to fund and for how much. In addition, this report includes funding by matching donors. From the perspective of matching donors, opportunity costs include alternate uses of funds like funding different development projects or investing in financial assets. Such analysis is beyond the scope of this report but should be considered by stakeholders when discussing and applying the results of this report.

Finally, the economic impacts discussed in this report are based on estimation using inter-industry linkages



and are primarily driven by construction expenses and visitor spending. However, there are other benefits to outdoor recreation infrastructure that are not captured here. For example, many studies have shown that access to outdoor recreation facilities leads to a healthier population. Healthier populations not only enjoy greater quality of life, but also have lower overall healthcare expenses, leading to greater disposable incomes. Proximity to quality outdoor recreation also increases the desirability of living in an area, attracting a more productive workforce and increasing property values. These other economic impacts are difficult to measure but should not be discounted.



Photo credit: Med Bow Lodge

6 Conclusion

The WORG grants examined in this report will result in significant temporary impacts from construction, including 211 jobs, \$12,175,512 in labor income, \$19,788,230 in value added, and \$36,327,237 in output. Construction expenses will also contribute to \$139,317 in local taxes, \$55,720 in county taxes, \$787,366 in state taxes, and \$2,976,872 in federal taxes. In addition to temporary economic impacts, the WORG grants will result in increased economic activity from visitor spending as travelers take advantage of better access to outdoor recreation opportunities. By 2036, increased visitation to Wyoming is expected to increase employment by 4-5 jobs, output by \$418,113 - \$653,318, value added by \$253,574 - \$396,252, and personal income by \$204,599 - \$319,575.

Appendix A: CBEA Economic Impact and Economic Contribution Methodology

WHAT IS ECONOMIC IMPACT AND ECONOMIC CONTRIBUTION ANALYSIS?

Economic impact analyses are a widely accepted research approach used to better comprehend the effect of a new event or industry changes on local and state economies. Economic contribution analyses examine the total economic activity resulting from an existing industry or business. These analyses typically use input-output methodologies to re-create inter-industry linkages and calculate the impact on a regional economy. We typically use the Impact Analysis for PLANning (IMPLAN) software package to conduct our analysis. This cloud-based software package allows us to estimate resulting economic activity in terms of employment, labor income, value added (i.e., increase in Wyoming's GDP), total output, and generated tax revenues. IMPLAN allows us to calculate economic impacts at the state, county, Metropolitan Statistical Area (MSA), and ZIP code levels. Although IMPLAN is our primary software package for calculating economic impacts, we also have licenses to other programs such as REMI, SiteStats, Moody's Analytics, and Lightcast.

Modeling the economic impacts requires the examination of three distinct types of effects. To illustrate, assume the project requires several construction jobs. These jobs, and their associated compensation and output, are what we refer to as the direct effect. Beyond this initial effect, there will also be an increase in the demand for intermediate goods needed in construction, e.g., steel. This is called the indirect effect. Further, the additional income of workers within the construction industry will lead to added economic activity in terms of buying goods and services, which, in turn, creates new economic activity in a region. In other words, individuals' spending will induce more spending, which we refer to as the induced effect. The total impact is the sum of direct, indirect, and induced effects, as illustrated in the figure below. In sum, an exogenous *direct* increase in economic activity, in a given geographic area, creates a ripple effect in the economy of that area. The totality of the ripple effect is what we refer to as the *total* impact. The two tables below display lists of additional economic impact analysis terminology and assumptions.

TOTAL ECONOMIC IMPACT IS THE SUM OF DIRECT, INDIRECT, AND INDUCED EFFECTS

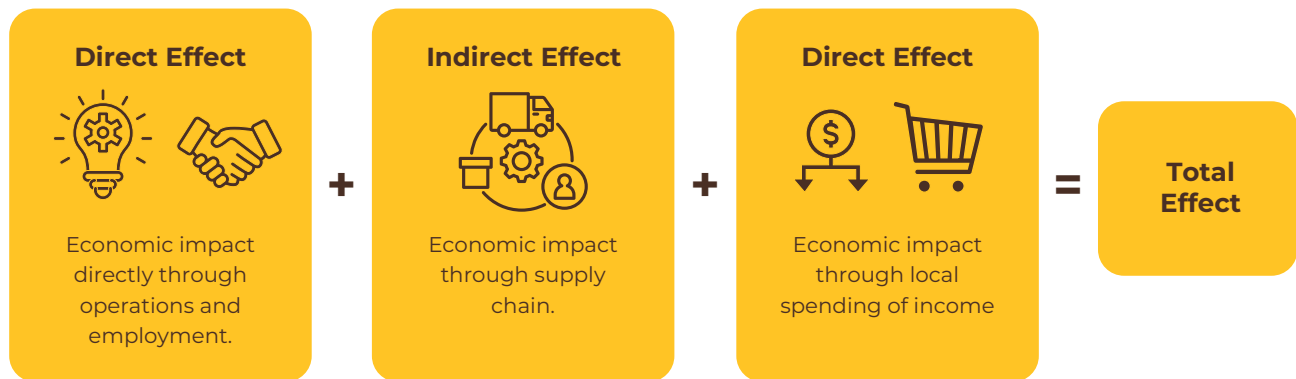


Figure A.1: Total economic impacts are the sum of direct, indirect, and induced impacts

How does Economic Impact Analysis relate to Cost-Benefit Analysis?

Economic impact analyses consider a new event or change in an industry. Economic contribution analyses consider the impact of an existing industry. It is common for both types of analyses to only report the economic benefits and not the costs. This makes sense for existing industries where investments may be partially or fully irreversible. However, it is less justifiable when considering a new event or a change in an existing industry. To determine the optimal use of limited resources, it is necessary to consider both the benefits AND costs of an investment. Economic costs include the foregone benefits of alternative investments. An investment creates an opportunity cost, where the money can no longer be used for other beneficial uses. When feasible the results of a project cost-benefit analysis should be compared to relevant alternatives, even if the ROI is positive. The CBEA strives to calculate the full costs of any new investment whenever possible and do a full cost-benefit or return-on-investment (ROI) analysis.

What Benefits and Costs are Included in an Economic Impact (or Contribution) Analysis?

Not all benefits and costs of an investment or existing industry are quantifiable. For example, consider the construction of a new community hospital. Our standard cost-benefit analysis would report costs such as capital expenditures (CAPEX) and operating expenditures (OPEX), in addition to the economic benefits such as new jobs, value added, tax revenues, and total output. However, the construction of the hospital may also lead to additional costs such as traffic congestion, noise and air pollution, and housing shortages. The construction of the hospital is also likely to have additional benefits that are not easy to quantify such as improving the quality of life of patients and encouraging further economic development in the region. The CBEA recognizes that these non-quantifiable costs and benefits exist and, to the extent possible, will list them in our final report.

ECONOMIC IMPACT ANALYSIS TERMINOLOGY

Table_Apx A.1: Economic Impact Analysis Terminology

Variable	Definition
Employment	Employment refers to an industry-specific mix of full-time, part-time, and seasonal jobs. Expressed as full-time equivalents (FTE).
Labor Income	Labor income refers to all forms of employment income, including employee compensation (i.e., wages, salaries, and benefits) and proprietor income.
Value Added	Value added is the difference between an industry's total output and the cost of its intermediate inputs; it is a measure of the contribution to GDP.
Output	Output is the value of production by industry in a calendar year. It can also be described as annual total expenditures or cost of production for an industry. It is often referred to as total economic impact.
Multipliers	Multipliers describe how, for a given change in a particular industry, a resulting change will occur in the overall economy. For instance, employment multipliers describe the total jobs generated as a result of one job in the target industry.

ECONOMIC IMPACT ANALYSIS ASSUMPTIONS

Table_Apx A.2: Economic Impact Analysis Assumptions

Assumption	Description
Constant Returns to Scale	The quantity of inputs needed per unit of output does not change.
No Supply Constraints	Input-output methodology assumes that there are no restrictions to inputs, raw materials, or labor needed to produce an unlimited quantity of output.
Fixed Input Structure	Changes in the economy may impact the industry's level of output, but do not impact the mix of commodities and services the industry requires to produce that output.
Fixed Technology	The same technology is used to produce each of the industry's products.
Constant Byproduct Coefficients	This is required by the fixed technology assumption. An industry will produce the same mix of goods or services regardless of the level of production.
Static Model (does not model changes over time)	The model does not include price changes and general equilibrium effects are not accounted for.

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