

# The Economic Contribution of River-Based Recreation in the Little Yampa Canyon, Colorado

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- River-based recreation on the Yampa River contributes \$70,373.68 in estimated output to Craig, CO.
- A proposed 660-acre public land acquisition would provide an additional \$109,497.02 in output.
- Increasing recreational amenities and quality will provide a positive impact to visitation, increasing expenditures by up to 30.4% per quality improvement.

## Introduction

The Yampa River is a key driver of outdoor recreation and tourism opportunities to the city of Craig, Colorado and the surrounding Moffat County, drawing in river-based recreators and tourists from surrounding areas. In light of the planned closure of the Tri-State Craig Power Station and the coal mining operations that supply it, Craig, CO is seeking opportunities to enhance recreation access to buffer against the reduction in their energy economy. All land currently owned by stakeholders in the energy industry of Craig will go unused after 2030, and as this industry continues to move out of Craig the opportunity cost associated with public land designation and outdoor recreation development decreases.

A land acquisition proposal by the Bureau of Land Management seeks to introduce a 660-acre parcel of public land adjacent to the Yampa River, supplying additional recreation amenities and improving highway access to the current Little Yampa Canyon Special Recreation Management Area. The author collaborated with the Bureau of Land Management, City of Craig Chamber of Commerce, and local public and non-profit stakeholders to show that this acquisition may represent a positive economic impact on the local community with respect to the current and future impacts of outdoor recreation and tourism in the region.

## Economic Contribution Analysis

Estimates of outdoor recreation and tourism expenditures relied on site-specific data gathered by intercept surveys in the Little Yampa Canyon area during 2 periods in summer 2023. Data collected included details on type and length of visitation, local expenditure information, and recreation site preferences pertaining to the BLM acquisition. Intercept surveying produced a sample of 56 surveys, of which 45 were designated as non-resident responses accounting for 141 non-resident participants represented.

We used input – output analysis to estimate the expenditure values of river-based recreation in Moffat County. Using expenditure data provided by participants in summer 2023, common recreation-specific spending data is mapped to IMPLAN’s NAICS codes to provide an input to Moffat County’s economy. The data was expanded to estimate visitation through the use of 2020 visitor check-in sheet data<sup>1</sup> and the survey data collected to produce an estimate of 1,042 non-resident visitors in the 2023 season.

Aggregated totals for each expenditure category were designated as respective industry inputs and analyzed using IMPLAN’s Moffat County 2019 economic framework to determine the direct, indirect, and induced effects of recreation spending in 2023 dollars. Three output scenarios were produced: a baseline estimate derived from current estimated spending, a scenario representing only the additional economic contribution attributable to the BLM parcel and amenities, and a combination of both.

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<sup>1</sup> Data obtained from 2020 Yampa River State Park River Use Sign In Sheet – South Beach. Colorado Parks and Wildlife

Table 1: Input-Output Results Under Current Conditions + Additional Days

Economic impact	Direct effects	Indirect effects	Induced effects	Total effects	Type SAM multiplier
Total output	\$124,197.69	\$33,429.57	\$22,243.45	\$179,870.70	1.45
Total employment	1.38	0.21	0.14	1.74	1.26
Total labor income	\$42,003.05	\$7,262.34	\$5,840.29	\$55,105.68	1.31
Value added	\$69,063.85	\$13,211.31	\$12,324.21	\$94,599.36	1.37

We find that under current recreational conditions, estimated seasonal spending as a result of non-resident visitation to the Little Yampa Canyon will produce \$70,373.68 in total additional economic output. The additional public land and amenities to be included by the Bureau of Land Management is projected to increase the effect of non-resident expenditures on output by \$109,497.02. Once the project is complete and recreational opportunities are available to the public, the impact of river-based recreation in the Little Yampa Canyon will result in \$179,870 in total economic output for Craig, Colorado (Table 1). Output from the aggregated restaurants, other amusement and retail, and gasoline/fuel rank amongst the highest across tourism-supporting industries in Craig.

**Additional Non-Resident Spending via Recreation Management Decisions**

We used the intercept survey to quantify the potential impacts on visitation from additional recreation opportunities in the Little Yampa Canyon by asking respondents to report their estimated changes in visitation under different site quality improvements. Based on self-reported visitation frequency, the typical non-resident recreator spends 10.84 days per year recreating in the Little Yampa Canyon. Using the baseline estimate for output from non-resident expenditures, we were able to estimate the percent change in visitation from site quality improvements independent of the BLM acquisition and estimate the increase in output associated with additional visitation, as shown by Table 2.

Table 2: Additional Non-Resident Spending Generated from Quality Improvements

Recreational Quality Preferences	Average Days/Participant	Additional Expenditure	Additional Total Output
Increased # of public put-ins, take-outs, and fishing access sites	3.30	\$ 23,224	\$ 21,433
Hiking/biking/motorized vehicle trail access	2.79	\$ 19,641	\$ 18,126
Water levels	2.34	\$ 16,456	\$ 15,187
Fishing opportunities/conditions	2.07	\$ 14,588	\$ 13,463
More challenging features/trails	1.85	\$ 13,006	\$ 12,003
Wildlife and surrounding habitat	1.51	\$ 10,617	\$ 9,798
Hunting access	1.45	\$ 10,219	\$ 9,431
Scenery/natural setting	0.96	\$ 6,768	\$ 6,246

The results of this study are almost entirely localized to Craig, Colorado as opposed to Moffat County as a whole, and the impacts make a strong local impact on the limited number of industries affected by an increase in recreation expenditures. These estimates provide insight into activity, spending, and frequency of visitation of outdoor recreation and tourism visitors for use in planning with the improvement of recreational opportunities. Identifying the key industries in Craig that support recreation and tourism shows the local community the impact of investing in recreation infrastructure. Due to the economic contribution model’s linear results, stakeholders can create similar estimates under different levels of potential visitation to the area in the short term. Stakeholders can also use the results of the intercept survey instrument to consider which recreational amenities should be improved upon to garner more visitation and thus more estimated economic contribution from the region’s annual recreators.