

Definitions and Methods¹

The Project's analysis reports on the following six categories:

1. **Gross Economic Output:** The aggregated market value of goods and services produced by businesses and government enterprises in the economy. It is essentially equal to the revenue collected by businesses (including indirect taxes) within the County or impact area.
2. **Gross County Product:** The total of value added created by the production of goods and services in the economy. It represents the sum of labor compensation, capital type income and indirect business taxes. Gross County Product is best described as new money added as a result of the combined activities of this project.
3. **Total Labor Income:** The compensation to employees and self-employed proprietors including both wages and indirect payments such as retirement benefits, health insurance and other similar fringe benefits.
4. **Total Employment:** The number of jobs generated within the impact area including full-time and part-time positions, salaried workers and sole proprietors.
5. **Capital Income:** The sum of income such as business profits, interest and rental income. Capital Income is best described as non-labor benefits.
6. **Indirect Business Tax:** Taxes and fees not based in the businesses' income. It may represent sales taxes (if any) levied by the state and county and also property taxes levied against businesses as well as federal, state and local fees.

¹ The data sets used in this report are provided by Minnesota IMPLAN Group, Inc (MIG, Inc), the developers of the IMPLAN® economic impact modeling system. IMPLAN® is used to create complete, extremely detailed Social Accounting Matrices and multiplier models of local economies. Implan enables users to make in-depth examinations of state, multi-county, county or sub-county and metropolitan regional economies. Implan is used by more than 1,000 public and private institutions. MIG, Inc. has been developing complex localized databases and serving public and private organizations since 1993.

Background and Methodology:

Several assumptions were made in preparing this analysis and calculations were derived using ITRR data from 2014.²

- There were an estimated 582,304 visitors in 2017 and the assumption used in this analysis is that 2.7 visitors represent a visitor group.
- A total of 66% of visitors (384,321) arrive from outside the market area.
- Half of the out-of-area visitors (192,160) spend at least one night in a hotel. Note this analysis did not predict additional nights lodging however extra nights for some visitors were a certainty.

The daily spending per group is 161.19 and is allocated as follows³:

- Food related expenses are \$41.43 per visitor group day.
- Miscellaneous retail expenses are \$43.74 per visitor group day.
- Fuel related expenses are \$51.64 per visitor group day.
- Lodging related expenses are \$19.01 per visitor group day.
- Automotive related expenses are \$5.37 per visitor group day.

The report that follows represents a broader view than the direct expenditures or employment. For example the analysis measures the economic “footprint” as dollars multiply inside and outside of the market area and includes both direct and indirect impacts. This analysis seeks to quantify the economic benefits to the project area. The results of this report are based on datasets that are historically-representative of the economic impacts.

² Institute for Tourism and Recreation Research (ITTR), University of Montana, 2013 Nonresident Visitation Expenditures and Economic Impact Estimates, Kara Grau, M.S. 7/1/2014

³ ITTR visitor expenditure reports for 2013 are used to provide data continuity and comparison across multiple study years.

About Circle Analytics, Inc.

Circle Analytics, Inc. is contracted by NorthWestern Energy to provide studies and analytical support to Montana not for profit organizations. The principals of Circle Analytics, Inc. have prepared hundreds of economic impact reports for state agencies, cities, counties, economic development districts and private corporations. Each report is based on IMPLAN datasets specific to the project's location and unique industry sectors. Robert Gilmore, the study's author, is the recipient of the Ford Foundation's Award for Innovations in American Government and the Council of State Government's Award for Innovation.

Summary of Economic Impacts

The analysis shows that the combined impacts of the Montana Heritage Commission exceed \$74.6 million and include its annual operations, visitor spending for the year 2017 and improvements made by the Commission since 1997. Of these impacts, the majority of \$45.3 million are retained in the local county. The combined activities and related programs benefited a total of 1,226 jobs in the local economy and of these, 993 of the job benefits are ongoing. The Economic Impact Report (shown below) details the impacts. The impact categories are described above in the "Definitions and Methods" section.

The following total economic benefits are identified and more fully described in the attached economic impact report:

- *\$74.6 million in Gross Economic Output*
- *\$45.3 million in Gross County Product.*
- *\$29.1 million in Total Labor Income*
- *1,226 total jobs (full and part-time).*
- *\$9.7 million in Capital Income.*
- *\$6.3 million in Indirect Business Taxes and Fees.*

How To Read This Analysis

The report has several headings including direct impact, indirect and induced impact and total impact. Definitions for these headings are provided by the Minnesota Implan Group (MIG) and posted in Wikipedia at <http://en.wikipedia.org/wiki/MIG, Inc>. A summary of the website follows:

The Multiplier Model is derived mathematically using the [input-output model](#) and Social Accounting formats. The Social Accounting System provides the framework for the predictive Multiplier Model used in economic impact studies. Purchases for final use drive the model. Industries that produce goods and services for consumer consumption must purchase products, raw materials, and services from other companies to create their product. These vendors must also procure goods and services. This cycle continues until all the money is leaked from the region's economy. There are three types of effects measured with a multiplier: the direct, the indirect, and the induced effects. The direct effect is the known or predicted change in the local economy that is to be studied. The indirect effect is the business to business transactions required to satisfy the direct effect. Finally, the induced effect is derived from local spending on goods and services by people working to satisfy the direct and indirect effects.^[6]

1. **Direct effects** take place only in the industry immediately affected: if DEMCO lays-off 39 employees, the [manufacturing industry](#) loses 39 employees.
2. **Indirect effects** concern inter-industry transactions: because DEMCO is closing, they will no longer have a demand for locally produced materials needed to produce their product. This will affect all of their suppliers, possibly resulting in a further loss of a few more jobs. Supplier employment loss as a result of the Direct effects would be the Indirect effects.
3. **Induced effects** measure the effects of the changes in household income: employees laid-off by DEMCO and suppliers may reduce their expenditures in restaurants and shops since they are no longer employed. These changes affect the related industries.^[1]
4. **Impacts** the total changes to the original economy as the result of a defined event. i.e. Direct effects + Indirect effects + Induced effects = Impacts
5. **Frequency** (not included in the Wikipedia definition) identifies whether the event provides a one-time benefit or if the benefit is annually reoccurring. Events are reported in this analysis as either 'one-time' or 'on-going'.

The analysis can be divided into 3 components as follows:

1. The Gross Economic Output represents the total economic footprint of the project. The impacts of Gross Economic Output impacts can extend from local to regional, statewide, national and international impacts.
2. The Gross County Output represents the benefits that impact the local market.
3. A summary of the Gross County Output. Three of the reports including Labor Income, Capital Income and Indirect Business Taxes are each a sub-part of the Gross County Output.
 - Labor income represents the portion of Gross County Output that benefits labor (note, if there is an employment report it is another way to describe labor income).
 - Capital income represents non-labor benefits (interests, profits, rents etc).
 - Indirect business taxes are the federal, state and local taxes that are generated by the event. Taxes include property taxes levied against businesses but do not include the businesses' income taxes.

Capital Income Calculation

The sum of all property type income (such as business profits, interest income and rental income) generated within the County.

Implan Industry	Frequency	Initial Purchase	Total Impact
Annual Operations Heritage Commission 2016	On Going	\$1,300,000	-\$23,224
Historic improvements from 1997 to present	One Time	\$11,900,000	\$295,728
Visitor – Auto related expenses	On Going	\$1,835,480	\$135,549
Visitor - Food related expenses	On Going	\$14,133,973	\$1,957,327
Visitor – Fuel related expenses	On Going	\$17,611,318	\$4,875,721
Visitor – Hotels and motel related expenses	On Going	\$1,608,381	\$372,650
Visitor – Miscellaneous retail expenses	On Going	\$14,923,927	\$2,110,049
Totals:		\$63,313,079	\$9,723,800

Indirect Business Tax Calculation

Are taxes and fees that are not based in the businesses' income. For the most part they represent sales taxes levied by the State and the county, but also include property taxes levied against businesses as well as fees imposed by federal, state and local governments.

Implan Industry	Frequency	Initial Purchase	Total Impact
Annual Operations Heritage Commission 2016	On Going	\$1,300,000	\$41,667
Historic improvements from 1997 to present	One Time	\$11,900,000	\$290,966
Visitor – Auto related expenses	On Going	\$1,835,480	\$114,083
Visitor - Food related expenses	On Going	\$14,133,973	\$824,290
Visitor – Fuel related expenses	On Going	\$17,611,318	\$2,662,772
Visitor – Hotels and motel related expenses	On Going	\$1,608,381	\$160,773
Visitor – Miscellaneous retail expenses	On Going	\$14,923,927	\$2,301,735
	Totals:	\$63,313,079	\$6,396,286