

Flagstaff Mountain Line Economic Contribution Analysis (FY 2022)

Prepared By:
Feifei Zhang, PhD, Research Associate
Ian Syfert, Assistant Researcher
August 2023

ACKNOWLEDGEMENT

The authors would like to thank the following individuals from the Mountain Line team, whose valuable experience, knowledge, and cooperation were essential in gathering the information necessary to produce this report.

Josh Stone	Management Services Director
Kate Morley	Former Deputy General Manager
Heather Dalmolin	CEO & General Manager
Jacki Lenners	Deputy General Manager

Table of Contents

01 - Executive Summary

02 - Introduction

03 - Economic Contribution

03 - Methodology

03 - Jobs

04 - Output

04 - Labor Income

04 - Tax

04 - Additional Economic Benefits

05 - Operations

05 - Revenues

05 - Expenditures

07 - IMPLAN Analysis

07 - Capital

07 - Revenues

08 - Expenditures (FY2018-FY2022)

10 - IMPLAN Analysis

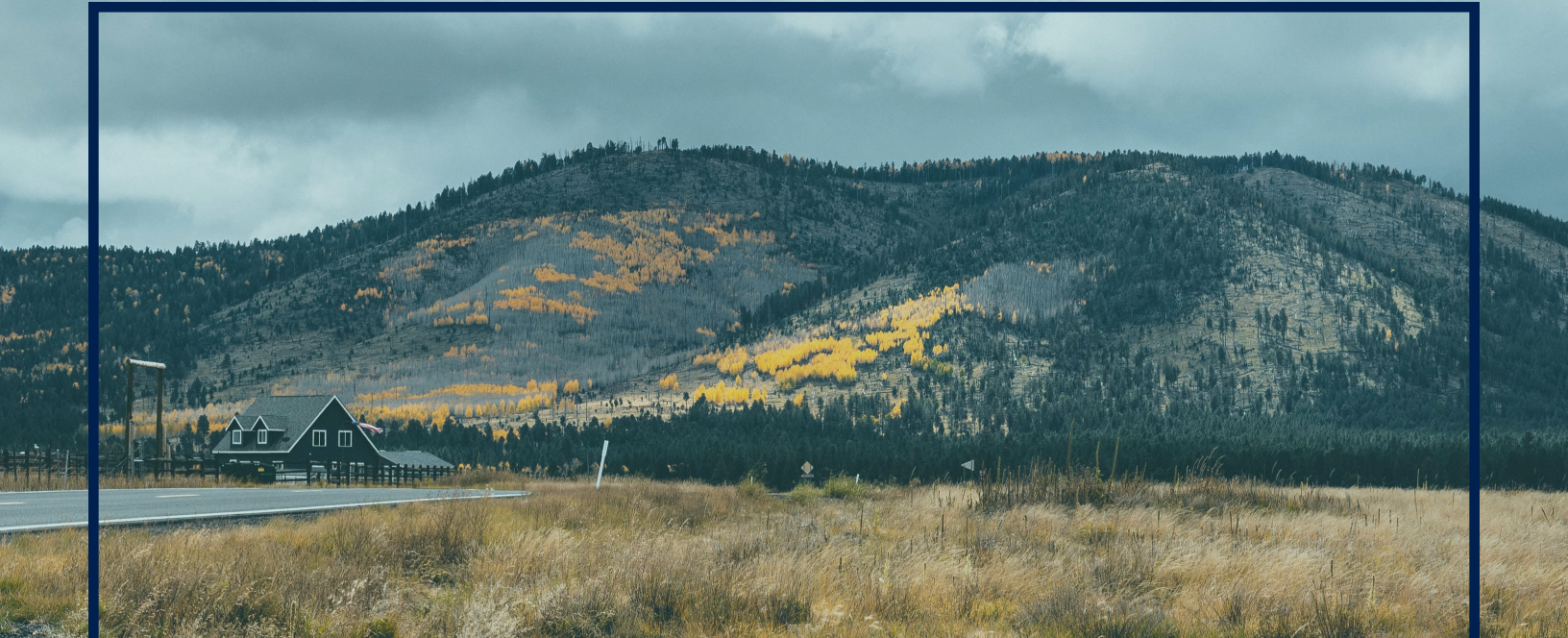
12 - Total Contribution

12 - Key Economic Indicators

12 - Supported Industries

13 - Tax

14 - Money Saved Calculated by Miles Ridden by Riders with Access to a Personal Vehicle



List of Figures

- 04 Figure 1. The Composition of Industry or Enterprise Output
- 08 Figure 2. Projected Capital Expenditure FY2023-FY2027

List of Tables

- 05 Table 1. Operating Revenues by Source FY2022
- 06 Table 2. Allotment of Operations Expenditure by IMPLAN Commodity Code
- 07 Table 3. Economic Contribution by Mountain Line Operations Spending
- 07 Table 4. Revenue Sources for Capital Expenditures FY2022
- 08 Table 5. Capital Expenditure FY2018-FY2022
- 09 Table 6. Allotment of Capital Expenditures by IMPLAN Sector (FY2022)
- 09 Table 7. Allotment of Capital Expenditures by IMPLAN Sector (FY2021)
- 09 Table 8. Allotment of Capital Expenditures by IMPLAN Sector (FY2020)
- 10 Table 9. Allotment of Capital Expenditures by IMPLAN Sector (FY2019)
- 10 Table 10. Allotment of Capital Expenditures by IMPLAN Sector (FY2018)
- 11 Table 11. The Contribution of Mountain Line's Capital Expenditure (FY2018-FY2022)
- 11 Table 12. The Contribution of Mountain Line's Capital Expenditure (FY2018-FY2022), Simplified Table
- 12 Table 13. Total Economic Contribution of Mountain Line (FY2022)
- 12 Table 14. Total Economic Contribution of Mountain Line (FY2022 Operational Contribution + Five Year Average Capital Contribution)
- 13 Table 15. Top 15 Supported Industries by Output in FY2022
- 14 Table 16. Total Tax Contributions FY2022
- 15 Table 17. Money Saved Due to Trips Avoided

Executive Summary

This study was requested by Mountain Line and was conducted by the Economic Policy Institute (EPI) housed in the W. A. Franke College of Business at Northern Arizona University. Its purpose is to provide Flagstaff city residents and decision makers with an understanding of the local economic benefits Mountain Line provides.

Public transportation is essential for sustainable cities and economic development. Flagstaff's public transportation provider, Mountain Line, has been nationally recognized for its excellence in providing transportation. Moreover, Mountain Line is a significant economic driver - it provides valuable local jobs, makes considerable operational and capital expenditures which create ripple effects to its upstream industries, which in turn generate more economic output and create jobs. It also leverages local dollars to bring in additional federal dollars and stimulates the generation of considerable tax revenues to both federal and local governments. In addition, there are more benefits that this report doesn't measure, including environmental benefits, and the increase in value of properties along the public transportation lines.

The major findings of this study include:

In Fiscal Year 2022,

- \$16.4 million in local economic output was generated by Mountain Line
 - \$15.5 million is from operational spending
 - \$905 thousand is from capital spending
- 144 local jobs are supported by Mountain Line
 - 137 jobs are supported by operations spending, in which 99.75 jobs are directly provided by Mountain Line
 - 7 jobs are supported by capital spending
- Mountain Line leverages federal funding
 - Every dollar of local operations funding leverages \$0.52 from federal source
 - Every dollar of local capital funding leverages \$2.3 from federal sources
- Mountain Line generated \$2.58 million total tax revenue
 - \$1.72 million federal tax
 - \$479 thousand state tax
 - \$382 thousand county and city tax
- \$484,880 was saved by vehicle owners who use Mountain Line



Introduction

Source: www.knau.org

Mountain Line was established in 2001 and is the transit agency in northern Arizona operating fixed route bus service on nine routes, paratransit service, vanpool, and seasonal Mountain Express service to Arizona Snowbowl. It employs nearly 100 people and serves more than 2.5 million annual riders (pre-COVID).

Mountain Line is directed by a Board of Directors comprised of representatives from the City of Flagstaff, Coconino County, Northern Arizona University, and Coconino Community College. The agency works in collaboration with local, regional,

state, and federal partners to deliver transit solutions that benefit the entire community.

In 2019, Mountain Line won the Partnership of the Year award for addressing congestion on US 180 after winter storms. They collaborated with multiple entities to offer free bus rides from Flagstaff to Arizona Snowbowl and used Flagstaff High School's parking lot as a park-and-ride location. This successful partnership reduced vehicle traffic and improved the travel experience for visitors to snowplay areas.

Economic Contribution

Methodology

This study primarily focuses on delineating the economic contributions that Mountain Line brings to the Flagstaff Metropolitan Area's economy. Most of the findings presented in this report are derived from IMPLAN (IMPact analysis for PLANning), a widely recognized and utilized Economic Impact Analysis platform across the nation. It combines a set of extensive databases, economic factors, multipliers, and demographic statistics with a highly refined, customizable modeling system. The foundation upon which the economic impact analyses are built is the input-output (I-O) model, which examines the inter-industry relationships within an economy in a given period of time.

This study employed the Industry Contribution Analysis (ICA) method to estimate the total value Mountain Line generated and supported in the Flagstaff Metropolitan Area. ICA looks at how a business or Industry is linked to the current economy. In another word, it looks at how an industry would change (increase or decrease) if another industry were suddenly removed from the economy.

The total Economic Contributions are broken down into direct, indirect, and induced effects. The direct effect is by the initial change, in the case of this study, the operational and capital spending by Mountain Line. The direct effect has indirect or multiplier effects that reverberate throughout the local economy. As a result, the combination of these overarching economic effects is often greater than the initial economic input. Each level of effects captures a different portion of the complete economic impact picture.



Source: www.westernslopenow.com.

- **Direct economic effects** are the total output of Mountain Line. These include employee compensation, operational expenses, and capital expenses.
- **Indirect economic effects** are the result from business-to-business purchases in the supply chain.
- **Induced economic effects** are generated when employees of both Mountain Line and businesses providing intermediate inputs spend their income.

The operations and capital expenses data were provided by Mountain Line's financial department. The categories of expenditures were re-organized and assigned to their respective IMPLAN sectors for analysis.

Jobs

Jobs encompass the employees of Mountain Line and the jobs supported by Mountain Line's capital investment which is paid directly to its contractors (direct), and a fraction of jobs external to Mountain Line that are sustained by its spending on inputs for the operations (indirect), and jobs supported by the spending of the employees of Mountain Lines and the employees of the businesses it supported (induced).

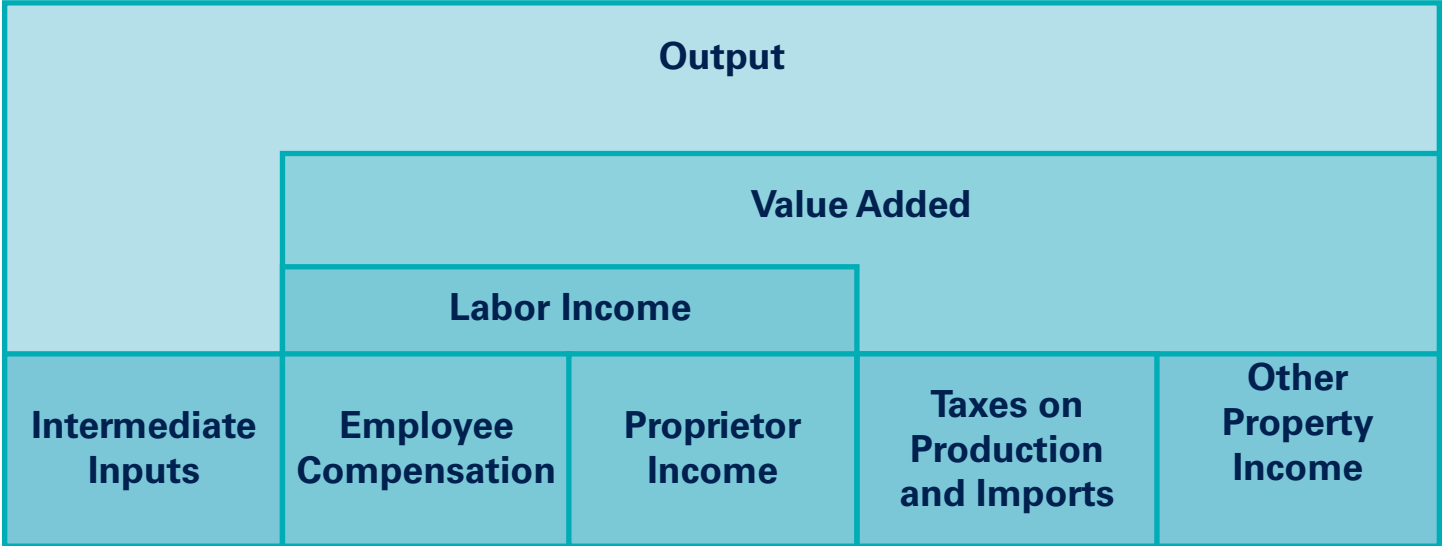


Figure 1. The Composition of Industry or Enterprise Output Source: IMPLAN.com.

Output

IMPLAN defines the total annual production value of each Industry or commodity as output. It includes all components of the production value, i.e., the Intermediate Inputs + Employee Compensation + Taxes on Production and Imports, Less subsidies (Figure 1). The total output of Mountain Line would be the intermediate inputs and its employee compensation, since it's not taxed on its production/operation. Mountain Line supports the extra output generated by its suppliers, which includes the taxes they pay for their production. Thus, the total output Mountain Line brings encompasses expenditures by Mountain Line (its intermediate inputs and employee compensation), and the output of its upstream industries that are catalyzed by the presence of Mountain Line.

Labor Income

Labor income is a metric that encompasses employee compensation and proprietor income. It forms a component of output and includes wages, salaries, benefits, employment taxes paid, and business profits. The total labor income Mountain Line brings takes into account the remuneration provided to Mountain Line employees as well

as all businesses impacted by its expenditures. Although proprietor income doesn't apply to Mountain Line, any profits accrued by the ownership of supplier companies are included.

Tax

Although as a government enterprise, Mountain Line doesn't pay tax, taxation does occur because of Mountain Line's existence: the income tax from its employees and employees of industries it supports, the tax paid by industries where it procures its intermediate inputs, and the sales tax paid when all the employees purchase goods and services.

Additional Economic Benefits

Additional economic advantages attributed to Mountain Line encompass the utilization of local funds to secure federal support, alleviation of traffic congestion, decrease in road maintenance expenses, reduction in private vehicle ownership costs, and diminished parking demand. Moreover, the environmental benefit of curtailed vehicle emissions also forms a significant part of Mountain Line's economic contributions.



Operations

Revenues

The operations budget is financed through a combination of local sources, including fares and transit tax, and federal funding. Federal funds are primarily sourced from the Federal Transportation Administration (FTA) and are distributed through the Arizona Department of Transportation, Bus and Bus-Related Facilities Grant, Capital Investment Grant, and Urbanized Area Formula Grant. A comparison of these funding sources and the financial support they provided during the Fiscal Year 2022 is presented in Table 1. The total revenue for operation was approximately \$9.9 million.

Local funds play a crucial role in leveraging a substantial amount of external funding. For every dollar raised from local taxes and fares for operations, **an additional \$0.52 is leveraged from federal sources.**

Table 1. Operating Revenues by Source FY2022

Source	Revenue
Federal Funding	\$3,191,789
Local Funding	\$5,315,476
Operating Revenues (Fares)	\$1,407,285
Total	\$9,914,550

Data Source: Mountain Line.

Expenditures

In Fiscal Year 2022, the total expenditure on operations was approximately \$9.88 million. The largest share of this expense, roughly \$6.86 million, was allocated to payroll to Mountain Line's 99.75 Full Time Equivalent (FTE) employees. The rest \$3.02 million was spent on buying intermediate goods and services to maintain its operations.

The financial statement of Mountain Line provides a detailed breakdown of its expenditure. These sectors encompass employee compensation (which includes salaries, wages, payroll taxes, and benefits), and intermediate input purchases to maintain Mountain Line's operations. Table 2 illustrates the allocation of these expenditures across IMPLAN's economic sectors.

Table 2. Allotment of Operations Expenditures by IMPLAN Commodity Code

Employee Compensation	\$6.86 million
3047 - Electric power transmission and distribution	\$37,162
3048 - Natural gas distribution	\$10,654
3049 - Water, sewage, and other systems	\$13,577
3060 - Maintained and repaired nonresidential structures	\$53,395
3152 - Printed materials	\$55,085
3300 - Retail-electronics and appliance stores	\$22,474
3399 - Wholesale services - Petroleum and petroleum products	\$790,487
3402 - Retail services - Motor vehicle and parts dealers	\$435,171
3404 - Retail services - Electronics and appliance stores	\$9,055
3409 - Retail services - Clothing and clothing accessories stores	\$24,912
3410 - Retail services - Sporting goods, hobby, musical instrument and book stores	\$4,468
3411 - Retail services - General merchandise stores	\$28,939
3412 - Retail services - Miscellaneous store retailers	\$11,830
3413 - Retail services - Nonstore retailers	\$35,629
3418 - Transit and ground passenger transportation	\$83,697
3424 - Periodicals	\$1,393
3433 - Wired telecommunications carriers	\$24,707
3434 - Wireless telecommunications carriers (except satellite)	\$15,818
3441 - Monetary authorities and depository credit intermediation	\$16,158
3444 - Other insurance	\$508,966
3451 - General and consumer goods rental except video tapes and discs	\$7,181
3453 - Commercial and industrial machinery and equipment rental and leasing	\$4,021
3455 - Legal services	\$74,462
3456 - Accounting, tax preparation, bookkeeping, and payroll services	\$12,500
3459 - Custom computer programming services	\$29,905
3462 - Management consulting services	\$57,201
3465 - Advertising, public relations, and related services	\$143,646
3466 - Photographic services	\$484
3468 - Marketing research and all other miscellaneous professional, scientific, and technical services	\$64,981
3470 - Office administrative services	\$33,123
3472 - Employment services	\$26,699
3473 - Business support services	\$58,285
3474 - Travel arrangement and reservation services	\$0
3475 - Investigation and security services	\$17,141
3476 - Services to buildings	\$116,007
3477 - Landscape and horticultural services	\$2,044
3482 - Other educational services	\$34,039
3489 - Other ambulatory health care services	\$4,559
3495 - Community food, housing, and other relief services, including rehabilitation services	\$9,857
3507 - Hotels and motels, including casino hotels	\$1,903
3511 - All other food and drinking places	\$5,514
3512 - Automotive repair and maintenance, except car washes	\$88,978
3514 - Electronic and precision equipment repair and maintenance	\$11,704
3523 - Business and professional associations	\$447
3524 - Labor and civic organizations	\$25,239
3526 - Postal service	\$1,455
Total Operations Expenditure	\$9.88 million

Source: EPI processed data based on Mountain Line financial workbook FY2022.

IMPLAN Analysis

Table 3 presents the total economic contribution attributable to Mountain Line's operations. For output, the cumulative figure, \$15.5 million, comprises \$9.9 million in Mountain Line's spending, \$1.7 million in purchases by other businesses, and \$3.9 million in spending stimulated by household income. This implies that \$15.5 million of the economic activity in Flagstaff can be credited to Mountain Line's operations spending.

The total local employment effect of Mountain Line's operations, including multiplier effects, amounts to 137 jobs, which include 99.75 Mountain Line's own employees, and 37.15 jobs in other sectors that are supported by Mountain Line operations.

Table 3. Economic Contribution by Mountain Line Operations Spending

Contribution	Employment	Labor Income	Value Added	Output
Direct	99.75	\$6,864,677	\$6,864,677	\$9,881,201
Indirect	12.05	\$553,731	\$978,499	\$1,738,171
Induced	25.10	\$1,263,208	\$2,282,403	\$3,899,485
Total Operations	136.89	\$8,681,616	\$10,125,579	\$15,518,858

Source: IMPLAN Model, 2021 Data, using inputs provided by EPI, Mountain Line, and IMPLAN Group LLC.

Capital

Revenues

Mountain Line's capital is also from two sources: local sales tax and Federal Transportation Administration (FTA). Table 4 provided a detailed breakdown of federal and local funding sources for capital revenues in Fiscal Year 2022.

Table 4. Revenue Sources for Capital Expenditures FY2022

Source	Revenue
Federal Funding	\$421,384
Local Funding	\$183,257
Total	\$604,641

Source: Mountain Line.

Annually, the local share of funding is considerably lower than the federal portion. Over the period of Fiscal Year 2022, \$183,257 in locally sourced funding for capital expenditures leveraged \$421,384 in incoming federal funding for capital expenditures. Of NAIPTA's capital funding, a substantial 70% is derived from external federal dollars, while only 30% is locally funded. This implies that **every dollar of local capital funding leverages \$2.30 in non-local funding.**

Expenditures (FY2018-FY2022)

In IMPLAN, Capital refers to durable assets and devices that can be thought of as an investment for the purchaser. It includes purchases that are used but not consumed in production like Intermediate Inputs. Mountain Line’s Long-term capital expenses are typically allocated towards vehicle and big vehicle parts purchases and a variety of construction and maintenance projects bus shelters, tools, and technology.

Unlike operations expenditure, capital expenditure can fluctuate significantly each year, contingent on long-term needs and planned projects. Thus, instead of only calculating the capital expenditure’s economic impact in FY2022, we estimated the past five years’ economic impact brought by capital expenditure in each year. From FY2018-2022, Mountain Line’s capital expenditures totaled \$7,852,378.77 (Table 5). Figure 3 shows the projection of capital expenditure for FY2023 to FY2027.

Table 5. Capital Expenditure FY2018-FY2022

	Capital Expenditure
2018	\$4,932,814.89
2019	\$751,216.21
2020	\$626,349.53
2021	\$937,356.84
2022	\$604,641.30
Total	\$7,852,378.77

Source: Mountain Line.

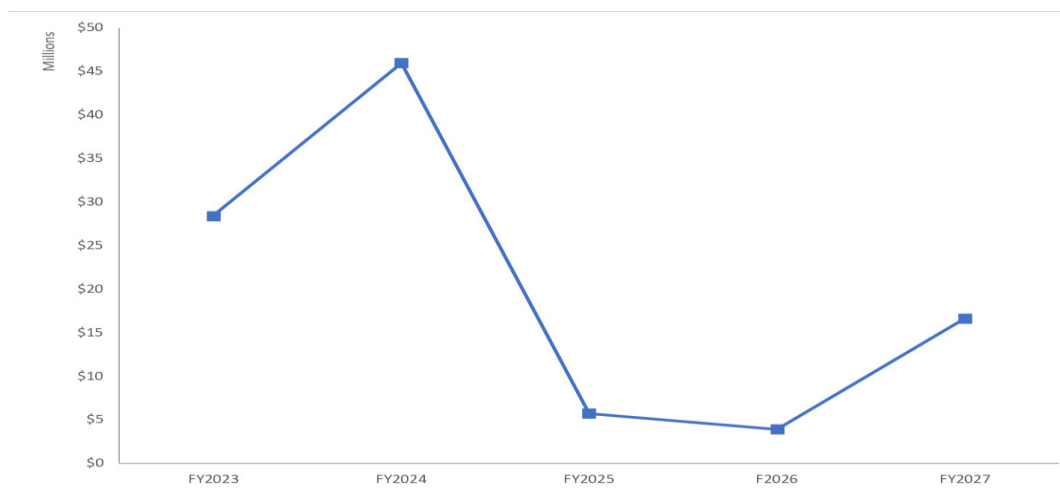


Figure 2. Projected Capital Expenditure FY2023-FY2027 Source: Mountain Line.

Table 6 to Table 10 illustrated how capital expenditures were distributed among IMPLAN's various sectors through the 5-year period from FY2018 to FY2022.

Take FY2022 capital expenditure for example, Mountain Line’s capital expenditures totaled \$604,641 (Table 6). It includes administrative services and software, which are usually larger or one-time projects, such as purchasing and implementing new software

or a compensation study; Vehicle Maintenance, which is a larger engine or transmission overhaul on buses, and they were sent to a shop in town; larger unit purchases for buses, such as a voltage converter/electrical panel, maintenance/upgrade of the existing building, and the maintenance of existing bus stops.

Table 6. Allotment of Capital Expenditures by IMPLAN Sector (FY2022)

IMPLAN Sectors	Spending
352 - Other motor vehicle parts manufacturing	\$15,701
459 - Custom computer programming services	\$68,432
462 - Management consulting services	\$100,080
512 - Automotive repair and maintenance, except car washes	\$253,256
60 - Maintenance and repair construction of nonresidential structures	\$167,172
Grand Total	\$604,641

Source: EPI processed data based on Mountain Line financial workbook F-20 for FY2018-FY2022.

Table 7. Allotment of Capital Expenditures by IMPLAN Sector (FY2021)

IMPLAN Sectors	Spending
352 - Other motor vehicle parts manufacturing	\$260,733.84
462 - Management consulting services	\$66,245.32
470 - Office administrative services	\$108,611.00
512 - Automotive repair and maintenance, except car washes	\$206,021.33
60 - Maintenance and repair construction of nonresidential structures	\$295,745.35
Grand Total	\$937,356.84

Source: EPI processed data based on Mountain Line financial workbook F-20 for FY2018-FY2022.

Table 8. Allotment of Capital Expenditures by IMPLAN Sector (FY2020)

IMPLAN Sectors	Spending
352 - Other motor vehicle parts manufacturing	\$37,455.02
404 - Retail - Electronics and appliance stores	\$17,588.33
457 - Architectural, engineering, and relating services	\$163,313.95
462 - Management consulting services	\$420.00
468 - Marketing research and all other miscellaneous professional, scientific, and technical services	\$14,882.00
470 - Office administrative services	\$50,590.00
512 - Automotive repair and maintenance, except car washes	\$103,265.82
60 - Maintenance and repair construction of nonresidential structures	\$233,834.41
Grand Total	\$626,349.53

Source: EPI processed data based on Mountain Line financial workbook F-20 for FY2018-FY2022.

Table 9. Allotment of Capital Expenditures by IMPLAN Sector (FY2019)

IMPLAN Sectors	Spending
457 - Architectural, engineering, and relating services	\$37.50
459 - Custom computer programming services	\$13,511.07
462 - Management consulting services	\$32,818.79
468 - Marketing research and all other miscellaneous professional, scientific, and technical services	\$111,234.66
470 - Office administrative services	\$16,306.81
512 - Automotive repair and maintenance, except car washes	\$202,177.85
514 - Electronic and precision equipment repair and maintenance	\$550.21
56 - Construction of other new nonresidential structures	\$203,355.27
60 - Maintenance and repair construction of nonresidential structures	\$171,224.05
Grand Total	\$751,216.21

Source: EPI processed data based on Mountain Line financial workbook F-20 for FY2018-FY2022.

Table 10. Allotment of Capital Expenditures by IMPLAN Sector (FY2018)

IMPLAN Sectors	Spending
340 - Automobile manufacturing	\$2,976,107.17
447 - Other real estate	\$8,000.00
459 - Custom computer programming services	\$17,501.34
462 - Management consulting services	\$38,964.00
468 - Marketing research and all other miscellaneous professional, scientific, and technical services	\$71,399.42
470 - Office administrative services	\$41,100.00
512 - Automotive repair and maintenance, except car washes	\$85,766.75
514 - Electronic and precision equipment repair and maintenance	\$199,877.83
56 - Construction of other new nonresidential structures	\$629,883.13
60 - Maintenance and repair construction of nonresidential structures	\$22,599.50
Grand Total	\$4,091,199.14*

Source: EPI processed data based on Mountain Line financial workbook F-20 for FY2018-FY2022.

*: In FY2018, there was \$849,615.75 spent on land. The land purchase cost was not included in the total capital expenditure as the input for IMPLAN modeling. This is because land purchases are just asset swaps, and no production is associated with it, thus land acquisition creates no impact in the IMPLAN Model. There was a \$8,000 realtor/intermediate agency fee in this transaction, which has an impact on the real estate industry. The grand total reflected the \$8,000 on realtor fee, but doesn't reflect the land purchase cost. That is why the total spending number in Table 10 is different from the FY2018 capital spending shown in Table 5.

IMPLAN Analysis

The outcomes of the capital expenditure modeling are presented below in detail in Table 11, and in a simplified version in Table 12. The two tables outlined the estimated economic contribution of Mountain Line's capital expenditures from FY2018-2022 to the local economy. In average, the capital expenditure in FY2018-2022 contributed 11.1 FTE jobs, and \$1.4 Million of economic output. In the IMPLAN modeling, the industry interlinkage data, such as the multipliers are each year's specific data when inputting the capital expenditure

for each year, while all the economic impact numbers in dollars are shown in 2023 dollars, to make them comparable.

For FY2019 to FY2022, most of these expenses happened in the same region, such as maintenance of the bus shelter, and capital planning with local consulting firms. However, when there are new buses procured, they are usually from outside of the region and don't continue to circulate through the region's economy, which is considered a leakage. This case happened in FY2018, when nearly \$3 million out of the \$4 million capital spending was spent on purchasing buses that are not manufactured in the region. That is why the total economic contribution in FY2018 from capital expenditure is less than the capital expenditure itself – there is a leakage.

Table 11. The Contribution of Mountain Line's Capital Expenditure (FY2018-FY2022)

	Impact	Employment	Labor Income	Value Added	Output	Tax
2018	Direct	18.2	\$902,730.8	\$1,083,189.6	\$2,027,019.1	\$370,425.2
	Indirect	2.6	\$129,226.2	\$198,284.3	\$399,779.3	\$46,216.0
	Induced	3.6	\$166,859.8	\$310,311.0	\$525,723.8	\$69,529
	Total	24.4	\$1,198,816.8	\$1,591,784.9	\$2,952,522.1	\$486,170.2
2019	Direct	5.3	\$290,747.4	\$370,314.4	\$751,216.2	\$90,223.8
	Indirect	1.1	\$48,473.6	\$79,930.3	\$159,290.7	\$22,534.1
	Induced	1.2	\$55,918.2	\$105,355.8	\$178,229.3	\$24,157.1
	Total	7.6	\$395,139.2	\$555,600.5	\$1,088,736.2	\$136,915.0
2020	Direct	4.9	\$243,208.2	\$262,812.1	\$598,113.4	\$46,555.3
	Indirect	1.1	\$51,809.9	\$78,678.6	\$156,321.3	\$19,003.1
	Induced	0.9	\$47,023.7	\$82,649.5	\$139,662.1	\$16,329.8
	Total	6.9	\$342,041.7	\$424,140.1	\$894,096.8	\$81,888.2
2021	Direct	6.6	\$341,639.7	\$379,500.3	\$805,370.4	\$112,234.8
	Indirect	1.3	\$63,353.7	\$99,622.2	\$200,094.1	\$24,577.6
	Induced	1.4	\$69,468.6	\$125,655.2	\$214,653.6	\$26,613.6
	Total	9.3	\$474,461.9	\$604,777.6	\$1,220,118.0	\$163,425.9
2022	Direct	5.2	\$283,480.8	\$315,730.0	\$604,640.9	\$84,990.3
	Indirect	0.8	\$39,943.7	\$63,451.4	\$127,940.1	\$15,949.3
	Induced	1.1	\$55,716.2	\$100,794.5	\$172,181.7	\$21,347.0
	Total	7.2	\$379,140.7	\$479,975.8	\$904,762.6	\$122,286.6

Source: IMPLAN model, 2021 Data, using inputs provided by EPI, Mountain Line, and IMPLAN Group LLC.

Table 12. The Contribution of Mountain Line's Capital Expenditure (FY2018-FY2022), Simplified Table

	Employment	Labor Income	Value Added	Output	Tax
2018	24.4	\$1,198,816.8	\$1,591,784.9	\$2,952,522.1	\$486,170.2
2019	7.6	\$395,139.2	\$555,600.5	\$1,088,736.2	\$136,915.0
2020	6.9	\$342,041.7	\$424,140.1	\$894,096.8	\$81,888.2
2021	9.3	\$474,461.9	\$604,777.6	\$1,220,118.0	\$163,425.9
2022	7.2	\$379,140.7	\$479,975.8	\$904,762.6	\$122,286.6
Total	55.4	\$2,789,600.5	\$3,656,278.9	\$7,060,235.8	\$990,685.9
Average	11.1	\$557,920.1	\$731,255.8	\$1,412,047.2	\$198,137.2

Source: IMPLAN model, 2021 Data, using inputs provided by EPI, Mountain Line, and IMPLAN Group LLC.

Total Contribution

Key Economic Indicators

Table 13 presents key economic indicators that highlight the substantial economic contribution of the Mountain Line transit system in FY2022. These indicators reflect the direct, indirect, and induced effects of Mountain Line on various aspects of the local economy in FY2022. The table demonstrates the employment supported, labor income generated, value added to the economy, and the overall output resulting from Mountain Line. By analyzing these figures, we gain a comprehensive understanding of the significant economic benefits that the Mountain Line brings to the Flagstaff Metropolitan Area.

Table 13. Total Economic Contribution of Mountain Line (FY2022)

Impact	Employment	Labor Income	Value Added	Output
Direct	105	\$7,148,158	\$7,180,407	\$10,485,842
Indirect	13	\$594,427	\$1,043,038	\$1,868,181
Induced	26	\$1,319,050	\$2,383,425	\$4,072,055
Total	144	\$9,061,635	\$10,606,869	\$16,426,078

Source: IMPLAN model, 2021 Data, using inputs provided by EPI, Mountain Line, and IMPLAN Group LLC.

If we aggregate the operational economic contribution in FY2022, and the average capital expenditure's economic contribution of FY2018 – FY2022, we came up with the following results (Table 14).

Table 14. Total Economic Contribution of Mountain Line (FY2022 Operational Contribution + Five Year Average Capital Contribution)

Contribution	Employment	Labor Income	Value Added	Output
Operational FY2022	136.89	\$8,681,616	\$10,125,579	\$15,518,858
Average Capital FY2018-2022	11.1	\$557,920.1	\$731,255.8	\$1,412,047.2
Total	147.99	\$9,239,536.1	\$10,856,834.8	\$16,930,905.2

Source: IMPLAN model, 2021 Data, using inputs provided by EPI, Mountain Line, and IMPLAN Group LLC.

Supported Industries

Mountain Line generates significant income for supporting industries, as indicated by the data provided by IMPLAN. Some of these would not be surprising, such as automotive maintenance, and wholesale - Petroleum and petroleum products, which are direct suppliers to Mountain Line; however, a closer look at the table also reveals a notable trend where the real estate, healthcare, and retail industries emerge as the major beneficiaries of Mountain Line's existence.

Based on the model analysis using IMPLAN, the economic contribution of Mountain Line extends to various sectors. It directly supports employment within the agency itself, as well as in its supplier industries. This leads to increased labor income, value added, and overall output within the local economy. The sectors that Mountain Line contribute to the most, other than the local government passenger transit itself, in terms of output, are owner-occupied dwellings, retail – motor vehicle and parts dealers, and hospitals. These effects result from the spending of Mountain Line on its operations and capital, as well as the spending of wages earned by employees directly and indirectly supported by Mountain

Line. In terms of growth percentage, or the percentage of the industry that Mountain Line supported, wholesale – petroleum and petroleum products sector gained the most benefits – 1.32% of the total industry’s revenue results from Mountain Line’s purchase. Mountain Line purchased their fuel through a bulk contract with a local wholesaler. Although the fuel is from out of the region, procuring locally helps to keep those local business service jobs.

Table 15. Top 15 Supported Industries by Output in FY2022

	IMPLAN Code	Industry Description	Industry Total Output	Contribution Output	Estimated Growth Percentage
	532	Local government passenger transit		\$9,881,201	-
1	449	Owner-occupied dwellings	\$723,214,393	\$662,185	.09%
2	402	Retail - Motor vehicle and parts dealers	\$53,086,630	\$460,378	.87%
3	490	Hospitals	\$781,783,552	\$414,583	.05%
4	512	Automotive repair and maintenance, except car washes	\$89,380,217	\$404,050	.45%
5	399	Wholesale - Petroleum and petroleum products	\$18,609,067	\$245,952	1.32%
6	447	Other real estate	\$570,218,692	\$222,620	.04%
7	60	Maintenance and repair construction of nonresidential structures	\$65,578,248	\$214,186	.33%
8	510	Limited-service restaurants	\$342,695,970	\$203,436	.06%
9	483	Office of physicians	\$180,146,840	\$167,331	.09%
10	534	Other local government enterprises	\$499,368,564	\$157,489	.03%
11	509	Full-service restaurants	\$347,519,409	\$147,824	.04%
12	462	Management consulting services	\$22,540,612	\$121,109	.54%
13	411	Retail - General merchandise stores	\$126,993,331	\$119,574	.09%
14	476	Services to buildings	\$61,241,789	\$118,503	.19%
15	465	Advertising, public relations, and related services	\$88,028,404	\$114,156	.13%

Source: IMPLAN model, 2021 Data, using inputs provided by EPI, Mountain Line, and IMPLAN Group LLC.

Tax

As mentioned previously, although Mountain Line doesn’t pay tax for its operation, it stimulates tax streams because of its spending in operations and capital investment. Its employees pay taxes such as income taxes, property taxes, social security tax; its suppliers pay sales tax, exercise tax, corporate profits tax, etc. The taxes occurring due to Mountain Line can be levied at different levels, such as federal, state, county, sub county general, and sub county special districts. For example, the City of Flagstaff can levy a variety of taxes such as property taxes, sales taxes, income taxes, or other local taxes. The sub county special districts, such as fire districts, are separate governmental entities created to provide specific services or infrastructure within a defined geographic area. The special districts

can levy taxes from Mountain Line’s suppliers and the employees supported by Mountain Line, to support their operations and activities. A breakdown of the taxes contributed by Mountain Line is presented in Table 16.

Table 16. Total Tax Contributions FY2022

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
Direct	\$7,253	\$9,876	\$5,472	\$125,612	\$1,479,924	\$1,628,138
Indirect	\$85,145	\$79,970	\$58,132	\$208,035	\$15,485	\$446,767
Induced	\$51,657	\$48,929	\$35,339	\$145,488	\$223,574	\$504,988
Total	\$144,056	\$138,776	\$98,943	\$479,136	\$1,718,984	\$2,579,893

Source: IMPLAN model, 2021 Data, using inputs provided by EPI, Mountain Line, and IMPLAN Group LLC.

Money Saved Calculated by Miles Ridden by Riders with Access to a Personal Vehicle

As previously noted, an ancillary benefit of transit service is the cost savings resulting from reduced wear and tear on private vehicles. This cost can be conservatively estimated by utilizing data from Mountain Line’s own passenger survey from 2022 and applying it to rider numbers in Fiscal Year 2022.

The survey revealed that 35% of riders owned operational vehicles, yet opted to use Mountain Line for transportation. When applied to FY22 ridership numbers (excluding the heavy student usage on Mountain Link), this suggests that 454,518 passenger trips were made by individuals who chose to use the bus over a personal vehicle.

Mountain Line’s 2022 profile indicated that the average distance traveled on the Mountain Line was 3.8 miles for each trip. Applying this to the figure of avoided private trips results in an estimate of about 1.7 million miles that were not traveled in personal vehicles due to Mountain Line ridership.

To quantify the reduced personal vehicle travel, a figure of \$0.28 per mile in operational costs was derived from the American Automobile Association (AAA)’s Your Driving Costs study in 2022. The resulting savings estimate is approximately \$485,000. These calculations are presented in Table 10.

In addition to the variable costs of fuel and vehicle maintenance, the \$0.28 average cost per mile excludes fixed costs such as insurance, depreciation, licensing, and financing. Although costs such as insurance and licensing are not affected by reduced travel, depreciation is. Considering depreciation is also impacted by natural aging, we exclude it to keep the estimate of the avoided cost not overstated. Thus, while this \$485,000 savings is significant, it does not fully capture all of the economic benefits of using Mountain Line over personal vehicles.

Additional economic benefits include reduced traffic congestion (leading to time savings), road wear, maintenance costs, accidents, and environmental impacts. If these costs were calculated, the savings estimate would increase substantially. This study has not endeavored to assign a value to these economic benefits, which means the overall economic contribution estimated by this report is conservative.

Table 17. Money Saved Due to Trips Avoided

Adjusted annual passenger trips	1,298,624
Portion of riders with access to a vehicle	35%
Number of rides by passengers with vehicle access	454,518
Average length of trip (in miles)	3.81
Private vehicle miles avoided	1,731,714
Average cost per mile avoided	\$0.28
Total Cost Avoided	\$484,880

Source: EPI processed data based on the inputs provided by Mountain Line and American Automobile Association.