



Great American Outdoors Act Legacy Restoration Fund for National Parks

Economic Impacts of Fiscal Year 2021 Funding

Natural Resource Data Series NPS/NRSS/NRDS—2021/1319



ON THE COVER

Exterior marble restoration at the Thomas Jefferson Memorial (NPS Photo)

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March 2021

U.S. Department of the Interior
National Park Service
Natural Resource Stewardship and Science
Fort Collins, Colorado

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Please cite this publication as:

Cullinane Thomas, C., and L. Koontz. 2021. Great American Outdoors Act Legacy Restoration Fund for national parks: Economic impacts of fiscal year 2021 funding. Natural Resource Report NPS/NRSS/EQD/NRDS—2021/1319. National Park Service, Fort Collins, Colorado.

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Acknowledgments

We extend thanks to the Great American Outdoors Act LRF Execution Team for helping with the development of this report.

Introduction

The Great American Outdoors Act of 2020 (GAOA), P.L. 116-152, established the National Parks and Public Land Legacy Restoration Fund (LRF) to address priority deferred maintenance projects on National Park Service (NPS) and other federal lands. For the NPS, the LRF equates to receiving a maximum of \$1.33 billion per year for fiscal years 2021 through 2025. Funding of this magnitude provides the NPS with the opportunity to reduce the maintenance backlog, protect critical resources, expand recreational opportunities, and focus on long-term sustainable operations for the next century. Use of these funds on NPS projects will also support jobs and business activity in local economies across the Nation. The purpose of this analysis is to present preliminary estimates of the economic impacts associated with the NPS Fiscal Year 2021 (FY21) projects supported by the LRF.

Methods

Projected estimates of the breakdown of NPS LRF are based on the current NPS inventory of scoped FY21 projects. The FY21 list includes transportation projects (roads, bridges, tunnels, and paved parking areas) and non-transportation projects categorized as building & structures, water and utilities, recreational assets, and demolition activities (Table 1).

Table 1. Great American Outdoors Act, NPS LRF expenditures by primary activity category, 2021.

Primary Activity	2021 Funding	Distribution of Funds
Transportation	\$673,283,868	57.9%
Building & Structures	\$231,303,304	19.9%
Water & Utilities	\$191,351,038	16.5%
Recreational Assets	\$55,794,273	4.8%
Demolition	\$11,234,432	1.0%

Economic impact analyses estimate the net effects of changes in economic activity in a regional economy; in this case, economic activity in the US National economy stemming from projected expenditures of NPS LRF on priority deferred maintenance projects. Impacts include three categories of economic activity:

- **Direct** economic activity resulting from planning, design, construction, project management and administration,
- **Indirect** effects of supply chain purchasing of inputs from US suppliers, and
- **Induced** effects of employees of directly and indirectly affected businesses spending their incomes on goods and services produced within the US economy.

The indirect and induced effects of spending are called secondary effects and describe how the injection of NPS LRF into the US economy (direct effects) “ripple” or “multiply” to create additional economic activity (secondary effects). Secondary effects include multiple rounds of spending backwards through supply chains and only include goods and services purchased from US suppliers. This analysis assumes: all direct NPS LRF expenditures are made to US-based businesses; 3.2% of project spending is on federal employment and payroll for program support; and project implementation is through private contracting.

Four economic effects metrics are reported:

- **Job-years** measure the total number of annualized full and part-time jobs accumulated over the duration of NPS LRF related expenditures. Job-years is a measure of the quantity of employment supported by project expenditures and is not a measure of the number of workers. For example, if a construction project employs a worker for 18 months, this worker would be counted as 1.5 job-years (18 months/12 months in a year);
- **Labor income** includes employee and proprietor wages, salaries, and benefits supported by NPS LRF related expenditures;
- **Value added** measures the contribution of project expenditures to Gross Domestic Product (GDP). Value added is equal to the sum of the values added to a product at each step of the production chain and is thus a measure of the value of the production of goods and services less the cost of intermediate expenditures;
- **Economic output** measures the total estimated value of production of goods and services supported in the US economy by NPS LRF related expenditures. Economic output is the sum of all intermediate sales (business to business) and final demand (sales to consumers and exports).

Economic multipliers used in this analysis are derived from the IMPLAN software and data system¹ (IMPLAN Group LLC; IMPLAN Pro version 3.0 software with 2019 national-level data). The underlying IMPLAN data are derived from multiple Federal and state data sources, including the Bureau of Economic Analysis, Bureau of Labor Statistics, and the US Census Bureau. The IMPLAN economic model is static; this analysis therefore assumes that inter-industry relationships and the production functions and supply chains of affected industries will be similar to those of the IMPLAN data year (in this case 2019). The structure of the national economy changed significantly in 2020 due to the coronavirus pandemic. Annual IMPLAN 2020 and 2021 data files were not available at the time of this analysis. Thus, possible shifts in national multipliers between 2019 and 2021 are not captured in this analysis. All dollars in this report are in 2021 dollars (\$2021). IMPLAN deflators were used to adjust dollar values to \$2021.

¹ Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

To estimate economic impacts, projected expenditures for each primary activity category were bridged to IMPLAN construction sectors, architectural and engineering services, environmental and other technical consulting services, and management consulting services (Table 2). Average economic impacts per million dollars in NPS LRF FY21 spending are shown by project type (Table 3) and primary activity category (Table 4).

Table 2. IMPLAN sector bridge by primary activity.

Activity Category	IMPLAN 546 Sector Number and Description	Transportation	Buildings & Structures	Water & Utilities	Recreational Assets	Demolition
Construction	56 - Construction of other new nonresidential structures	–	–	27.2%	–	–
	60 - Maintenance and repair construction of nonresidential structures	–	68.3%	53.1%	80.3%	–
	61 -Maintenance and repair construction of residential structures	–	12.0%	–	–	–
	62 -Maintenance and repair construction of highways, streets, bridges, and tunnels	80.3%	–	–	–	–
	479 -Waste management and remediation services	–	–	–	–	80.3%
Program Support	462 - Management consulting services	3.2%	3.2%	3.2%	3.2%	3.2%
	544- Employment and payroll of federal govt. non-military	3.2%	3.2%	3.2%	3.2%	3.2%
Planning/Design	457 - Architectural, engineering, and related services	11.3%	11.3%	11.3%	11.3%	11.3%
Compliance	463- Environmental and other technical consulting services	2.0%	2.0%	2.0%	2.0%	2.0%

Table 3 Economic impacts per \$1,000,000 in NPS LRF FY21 expenditures, by project type, \$2021.

Project Type	Effect	Job-years	Labor Income	Output	Value Added
Transportation	Direct	4.6	\$356,400	\$1,000,000	\$497,600
	Secondary	8.4	\$528,400	\$1,749,300	\$927,000
	Total	13.1	\$884,800	\$2,749,300	\$1,424,600
Non-Transportation	Direct	4.9	\$368,700	\$1,000,000	\$496,500
	Secondary	8.5	\$532,200	\$1,751,000	\$924,400
	Total	13.4	\$900,900	\$2,751,000	\$1,420,900

Table 4 Economic impacts per \$1,000,000 in NPS LRF FY21 expenditures, by primary activity, \$2021.

Primary Activity	Effect	Job-years	Labor Income	Output	Value Added
Transportation	Direct	4.6	\$356,400	\$1,000,000	\$497,600
	Secondary	8.4	\$528,400	\$1,749,300	\$927,000
	Total	13.1	\$884,800	\$2,749,300	\$1,424,600
Building & Structures	Direct	4.7	\$357,400	\$1,000,000	\$492,600
	Secondary	8.5	\$527,800	\$1,742,400	\$919,400
	Total	13.2	\$885,200	\$2,742,400	\$1,411,900
Water & Utilities	Direct	5.1	\$385,500	\$1,000,000	\$497,400
	Secondary	8.6	\$541,400	\$1,777,600	\$938,300
	Total	13.7	\$926,900	\$2,777,600	\$1,435,700
Recreational Assets	Direct	4.7	\$356,400	\$1,000,000	\$492,500
	Secondary	8.4	\$526,900	\$1,742,700	\$918,200
	Total	13.1	\$883,300	\$2,742,700	\$1,410,700
Demolition	Direct	4.5	\$377,200	\$1,000,000	\$582,200
	Secondary	7.8	\$489,900	\$1,514,600	\$824,100
	Total	12.3	\$867,100	\$2,514,600	\$1,406,300

Results

The NPS LRF FY21 project expenditures (Table 1) were combined with average economic impacts per primary activity category (Table 4) to estimate FY21 NPS LRF impacts. In FY21, NPS LRF expenditures are estimated to *directly* support 5,520 job-years, \$421 million in labor income, \$1.2 billion in economic output, and contribute \$578 million to the US GDP. Including ripple effects, NPS LRF expenditures are estimated to support a *total* of 15,350 job-years, \$1 billion in labor income, \$3.2 billion in economic output, and contribute \$1.7 billion to the US GDP (Table 5).

Table 5 Economic impacts of NPS LRF FY21 expenditures, by project type, \$2021.

Project Type	Effect	Job-years	Labor Income	Output	Value Added
Transportation	Direct	3,130	\$239,940,000	\$673,280,000	\$335,040,000
	Secondary	5,670	\$355,760,000	\$1,177,810,000	\$624,120,000
	Total	8,800	\$595,700,000	\$1,851,090,000	\$959,160,000
Non-Transportation	Direct	2,390	\$180,560,000	\$489,680,000	\$243,120,000
	Secondary	4,160	\$260,600,000	\$857,420,000	\$452,690,000
	Total	6,550	\$441,150,000	\$1,347,100,000	\$695,810,000
All Projects	Direct	5,520	\$420,490,000	\$1,162,970,000	\$578,160,000
	Secondary	9,830	\$616,360,000	\$2,035,220,000	\$1,076,800,000
	Total	15,350	\$1,036,850,000	\$3,198,190,000	\$1,654,970,000

Literature Cited

IMPLAN Group LLC, IMPLAN System (data and software), 16905 Northcross Drive Suite 120, Huntersville, NC 28078 www.implan.com.

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NPS 999/175187, March 2021

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