



THE ECONOMIC IMPACT OF NATIONAL HERITAGE AREAS: A CASE STUDY APPROACH

THE LAST GREEN VALLEY
NATIONAL HERITAGE CORRIDOR
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**Tripp
Umbach**

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INTRODUCTION

National Heritage Areas (NHAs) provide economic benefits to communities and regions through their commitment to heritage conservation and economic development. Through public-private partnerships, NHA entities support historic preservation, natural resource conservation, recreation, heritage tourism, and educational projects. Leveraging funds and long-term support for projects, NHA partnerships generate increased economic impact for regions in which they are located.

Since 2012, Tripp Umbach has completed comprehensive economic impact studies for 15 NHA sites across the U.S., including an extrapolation of the economic benefit of all 49 NHA sites on the national economy.

This study seeks to further quantify the economic impacts of individual NHAs. Tripp Umbach conducted economic impact studies for five NHAs in the Northeast and Midwest regions in the Fall/Winter of 2016. This report specifically focuses on the economic impact of the National Coal Heritage Area (WV) on its respective region.

This report specifically focuses on the economic impact of The Last Green Valley National Heritage Corridor (CT and MA) on its respective region.

The results presented in the NHA economic impact study are generated on an annual basis. The economic impact in future years can either be higher or lower based on the visitor or tourist data, number of employees, operational expenditures, and capital expansion. Through the Last Green Valley's (TLGV) work and collaboration with regional historic and preservation-focused partners, the economic impact study shows:

- **The Last Green Valley National Heritage Corridor** (CT and MA) generates **\$303.3 million** in economic impact, supports **3,630 jobs**, and generates **\$25.8 million** in tax revenue.

NHAs SUPPORT REGIONAL ECONOMIES

THE LAST GREEN VALLEY NATIONAL HERITAGE CORRIDOR GENERATES **\$303.3 MILLION** IN ECONOMIC IMPACT



SUPPORTS **3,630** JOBS



GENERATES **\$25.8 MILLION** IN TAX REVENUE.

PROJECT OVERVIEW

In August 2016, Tripp Umbach was retained by the Heritage Development Partnership to measure the economic, employment, and government revenue impacts of operations and research of five NHAs. The goals of the NHA economic impact study include the following:

- To quantify the economic and employment impacts of NHA operations on their individual NHA service areas.
- To demonstrate the broader community impact that NHAs have within their geographic areas of operation.

This report builds upon previous impact studies completed to assess the economic benefits of NHAs to their regions and local communities by measuring employment and revenue generation in addition to economic impacts. This study was both quantitative and qualitative in its nature. Tripp Umbach conducted interviews with key stakeholders within each NHA region, as well as collected existing NHA visitor estimates, operating budgets, grantmaking, capital awards, and volunteer hours. The data collection process guided the economic impact analysis using IMPLAN.¹ This creates a robust approach to the total economic impact of TLGV.

Each NHA profiled has distinct qualities and features. The economic impact of an NHA will vary from site to site as each NHA uniquely operates in its local economy.

The size of an NHA plays a key role in defining its personality. Localized or focused sites are concentrated within a single county. While this leads to partnerships with more defined goals, it can place limitations on available resources. Sites that span wide geographic areas (multiple counties) face the challenge of balancing where and how their resources are allocated. Corridor sites such as TLGV NHC that span multiple states serve as trusted collaborators to numerous partners spanning many varied interests.

The objectives of each NHA are connected by their Federal designation and mission.² Similarities do exist and the impact study attempts to illustrate this by identifying the areas (visitor,

THE LAST GREEN VALLEY NHC – QUICK FACTS

- National Park Service Northeast Region
- Multiple towns and counties in Connecticut and Massachusetts
- 1,100 square miles

¹ This analysis requires the use of IMPLAN3 software and geographic data representative of the NHAs' local and state region. Additional information on IMPLAN can be found at <http://implan.com>.

² Additional information on NHA Federal Designation and mission can be found at: <http://www.nps.gov/history/heritageareas/FAQ/>

operational, grantmaking, and capital funding) where NHAs have the greatest economic value to their local regions and states.

NHA partnerships are encouraged through initiatives that increase educational, recreational, and community/economic development opportunities for both local residents and tourists. Increased visitation by tourists and the increased economic activity are important objectives of heritage areas. Partners collaborate to shape a plan and implement a strategy that focuses on the distinct qualities that make their region special. Partnerships among NHAs and their collaborators play a key role in leveraging federal investment.

The variety of activities of the NHAs makes evaluation of the heritage programs fairly challenging. Utilizing baseline information about visitor characteristics, awareness of heritage areas, visitor use patterns, and evaluations of programs and facilities provides a foundation for data collection. Estimates of visitor spending and local economic impacts help to position the heritage areas within the regional tourism market and local economy.

Key economic impact findings presented within the summary include the total economic impact (FY 2015/2016), including the economic, employment, and state and local government revenue impact of each individual NHA in their respective region. The economic analysis completed for the operational, grantmaking, and capital activity impact uses actual expenditures and NHA employment to drive estimates of employment, income, tax revenue, and other economic variables.

Visitor and Tourism Expenditures: The economic impact of visitors to NHAs is the **primary source** of economic benefit quantified in this analysis. The direct consequence of visitor expenditures become business receipts, which in turn, are used to pay wages, salaries, and taxes. The initial, direct round of spending ripples through the regional economy supporting additional economic benefits. Given the unique challenges of capturing visitor data by NHAs, the economic model includes local visitor estimates within the analysis.³ The visitor benefit analysis model clearly states an explicit relationship to overall visitor estimates reported by the NHAs and analysis of the visitor segments and their spending patterns. The model also estimates visitor expenditures.

Operational Expenditures: These expenditures are the economic impact of the NHA's organizational spending and staff. This refers to the day-to-day spending of the NHA, such as wages, rent, and professional fees paid by the NHA on an annual basis are included in this segment.

³ The analysis of visitor spending includes local spending estimates.

Grantmaking and Capital Expenditures: NHA-secured federal and state funding in the form of grantmaking to specific sites within the region primarily allows for the creation and development projects and initiatives that further add to the historic, cultural, and recreational offerings of the NHA region. Funding focused on capital and construction development is quantified as well.

NHAs also provide intangible benefits that are not able to be quantified. Knowledge sharing, facilitating collaborative partnerships, and increasing the quality of life are elements that each NHA brings to its community. While these critical concepts are not quantified within the context of this report, they are highlighted through qualitative data that was collected.

In order to gain a better understanding of the qualitative impact NHAs have on the regions they are located in, Tripp Umbach conducted stakeholder interviews for each of the NHA sites. Tripp Umbach interviewed community leaders and representatives of organizations that have knowledge of the mission of each NHA. These stakeholders were asked a series of questions to determine the strengths of the NHA and the most important key messages regarding the NHA's economic and community impact.

During the course of these interviews, several themes emerged across the board. NHAs serve as catalysts in their communities, taking on projects that otherwise may be overlooked or be considered too difficult to tackle. By encouraging collaboration and working with their partners to see projects through, NHAs increase quality of life for individuals living in these communities and provide unique destinations for visitors coming to these areas.

In addition, primary data was collected via a standardized data collection form. Data collected included: visitor data (primary data from actual reported visitor counts), operational expenditures, capital expenditure data, and grantmaking activities. From the primary data in concert with qualitative information stemming from kickoff calls, progress reports, and stakeholder interviews, the economic and community impacts were calculated.

I. THE LAST GREEN VALLEY NHC

A. OVERVIEW OF THE LAST GREEN VALLEY NATIONAL HERITAGE CORRIDOR



Founded as a grassroots organization, The Last Green Valley (TLGV) was designated as a National Heritage Corridor by Congress in 1994. Over the years, TLGV NHC has had proven success in preserving the natural, historic, and cultural legacy of the 35-town National Heritage Corridor that spans eastern Connecticut and south-central Massachusetts. TLGV works to enhance the assets of the region. The corridor is home to abundant natural resources. The efforts of TLGV to promote tourism and the regional assets has spurred economic development in communities throughout the corridor. Focusing on stewardship, cultural and historic promotion, natural resource preservation, and economic and community development, TLGV NHC has been successful in striking a balance between working to uphold its natural and recreational attributes, while at the same time finding ways to enhance quality of life for those who have come to live and work in its towns and communities. TLGV ultimately has been able to realize its mission of creating a lasting vision and legacy for the corridor.

Efforts to preserve and sustain the corridor's natural land and water resources stands at the forefront of TLGV's mission. Covering 1,100 square miles, the corridor is comprised of 77 percent forest and farmland and is home to numerous waterways. TLGV NHC recognizes the importance of maintaining the area's land and water assets, as these serve as key natural resources in a region surrounded by urban New England. TLGV has taken the role of facilitator, educator, and partner in order to preserve the natural integrity of the region. Over the years, TLGV NHC has leveraged

"SPOTLIGHT" PROJECT – SPRING OUTDOORS

In the spring of 2016, The Last Green Valley NHC launched "Spring Outdoors", a month-long event of free, guided walks on land trust and municipal properties. Building off the success of TLGV's first Spring Outdoors event, the NHC will dramatically expand the event in the Spring of 2017.

Spring Outdoors 2017 will run from the Spring Equinox in March through the Summer Solstice in June, and will not only focus on conservation efforts but also will provide participants with the opportunity to take part in a number of recreational activities. TLGV NHC hopes to build and promote Spring Outdoors to be an event that rivals Walktober in the depth and breadth of experiences and participants, further connecting locals and tourists to the rich experiences of the corridor.

grants received from the National Park Service and various organizations to provide more than \$3 million dollars toward the creation of trails, clean waterways, and preservation of land in the corridor. TLGV NHC has also been successful in securing large grants from other agencies. In late 2016, TLGV NHC was awarded \$6.1 million from the US Department of Agriculture for a forest stewardship and conservation project.

TLGV's grants to local businesses and organizations, as well as advocacy efforts by the NHC, have helped provide needed funding and awareness to promote agriculture in the region. This work has ensured that community development and the protection of forest and farmland do not come into conflict. TLGV has taken measures to promote waterways in the region and preserve their importance in the corridor. The creation of National Water Trails allows residents and visitors alike to come to appreciate the role waterways and natural resources play in forming the identity of the region.

The NHC has recognized the importance of creating recreational opportunities to further promote the prominence and proper use of the region's environmental assets. The development of water and walkway trails has provided recreational opportunities. These recreational offerings also serve as drivers of tourism. Every year, local and non-local visitors come to experience the TLGV NHC. One of TLGV's biggest events is "Walktober," a month-long event each fall that provides visitors with over 200 choices of walks, hikes, historic tales, paddles, bike rides, farm visits and more. Visitors who partake in Walktober come to learn more about the rich history and culture of the region, while also enjoying the natural landscape of the corridor.

Events such as Walktober provide more than recreational or educational experiences; they also spur economic development in the region. Growth in the number of tourists and locals who come to TLGV NHC has warranted the development of hotels, stores, restaurants, and other businesses that serve visitors. TLGV promotes local businesses and organizations in its Visitor's Guide. The increase in business in the region and publicity of these businesses through TLGV NHC has allowed for increased economic activity and community development.

Since 1994, TLGV NHC has served as a protector and promoter of the 35-town corridor in Massachusetts and Connecticut that is home to an abundant number of natural resources. As TLGV has worked to preserve the region's water and land assets, it has found ways to transform the land and waterways into recreational experiences. The development of hiking trails, paddle guides, and signature events such as Walktober has allowed TLGV NHC to become a tourist destination. Increased tourism in the corridor has spurred economic and community development with the creation of businesses that provide needed services to visitors. TLGV has been able to balance its endeavors in preservation and development to ensure that quality of life is enhanced, while upholding the integrity of the region. As TLGV continues to pursue grant opportunities, work with local organizations and business, and find ways to provide cultural and

recreational opportunities for its visitors, the NHC moves forward in fulfilling its vision for the region.

B. OVERALL ECONOMIC IMPACT

The economic impact of the TLGV NHC is **\$303.3 million annually**. This economic impact consists of three main components: tourism (\$301 million), operations (\$2.3 million), and grantmaking activities (\$29,333) (See Figure 1 and Table 1).⁴

FIGURE 1. OVERALL ECONOMIC IMPACT

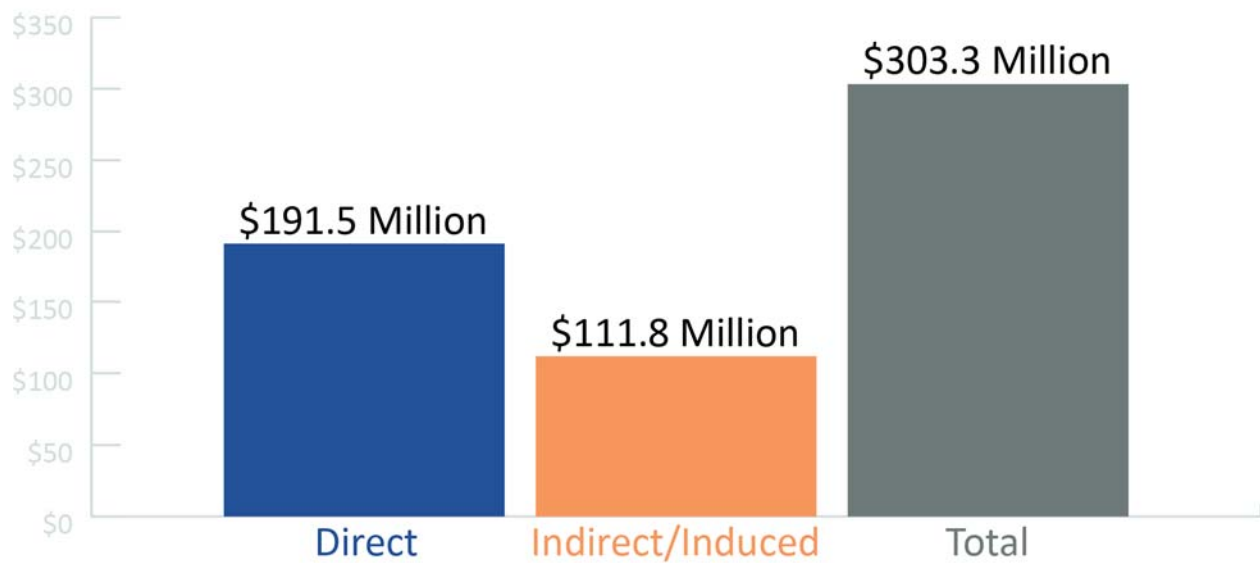


TABLE 1. OVERALL ECONOMIC IMPACT

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Economic Impact	\$191,436,192	\$52,001,741	\$59,832,491	\$303,270,423
<i>Tourism</i>	<i>\$190,194,631</i>	<i>\$51,383,634</i>	<i>\$59,390,609</i>	<i>\$300,968,874</i>
<i>Operations</i>	<i>\$1,224,561</i>	<i>\$614,817</i>	<i>\$432,838</i>	<i>\$2,272,216</i>
<i>Grantmaking</i>	<i>\$17,000</i>	<i>\$3,290</i>	<i>\$9,043</i>	<i>\$29,333</i>

⁴ All data used to calculate impacts was based on a three-year average – 2013,2014, and 2015.

The following table shows the top 10 sectors in the NHC region impacted by TLGV’s activities and visitors (See Table 2).

TABLE 2. TOP 10 ECONOMIC IMPACT SECTORS

Industry	Economic Output
Hotels and motels	\$77,750,925
Full-service restaurants	\$45,531,693
Limited-service restaurants	\$20,374,374
Other amusement and recreation industries	\$20,181,696
Retail – Miscellaneous store retailers	\$13,748,357
Real estate	\$12,989,971
Owner-occupied dwellings	\$9,139,391
Transit and ground transportation	\$6,866,865
Wholesale trade	\$5,748,091
Retail – Food and beverage stores	\$5,557,287

The components of the economic impact are broken out below.

C. TOURISM IMPACT

The effects of visitation and tourism have the greatest economic benefit for the regions in which NHCs operate. NHCs play a substantial role in supporting and encouraging tourism within their regions. Tourism numbers are calculated by TLGV’s regional partners. The three-year average total of visitors and tourists to the TLGV NHC region is close to 1.9 million visitors.⁵ These visitors spend money in the region, creating a positive ripple effect on the economic structure. Based on the annual average number of visitors to the NHC region and its partner sites, approximately \$301 million in economic benefit was supported annually within the region and state through tourism (See Table 3).

TABLE 3. ANNUAL ECONOMIC IMPACT OF TOURISM AND VISITATION

Visitor Segment	% of Total Visitation	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Local Day	19%	\$8,831,575	\$2,398,419	\$2,823,319	\$14,053,312
Non-Local Day	41%	\$29,844,571	\$8,174,151	\$9,593,302	\$47,612,024
Overnight	40%	\$151,518,485	\$40,811,064	\$46,973,988	\$239,303,538
Total	100%	\$190,194,631	\$51,383,634	\$59,390,609	\$300,968,874

The economic spending analysis demonstrates that within the region, visitors traveling from outside the region and staying overnight represent the largest economic benefit to the economy of the local region and the state. Although overnight visitors only comprise an estimated 40 percent of NHA visitation, overnight visitors account for close to 80 percent of the economic

⁵ Annual tourism projections were utilized from 2013,2014, and 2015.

benefit of the NHC This is primarily driven by the increased amount of fresh dollars from outside the region spent on lodging, accommodations, restaurants, transportation, etc.

D. OPERATIONAL IMPACT

In addition to attracting visitors and promoting tourism in the region, the analysis quantifies the economic benefit of TLGV NHC through its operating activities. This impact is represented by the spending of the organizations and the employees it supports (See Table 4).

TABLE 4. ANNUAL ECONOMIC IMPACT OF OPERATION

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Operations	\$1,224,561	\$614,817	\$432,838	\$2,272,216

E. GRANTMAKING

The TLGV NHC is active in the region with its partners through grantmaking efforts that support projects and programs that are aligned with the educational, cultural, and promotional missions of NHCs. Similar to how tourism and operations support economic activity within the region, grantmaking provides an infusion of funds to assist with the development of the NHA (See Table 5).

TABLE 5. ANNUAL ECONOMIC IMPACT OF GRANTMAKING

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Grantmaking	\$17,000	\$3,290	\$9,043	\$29,333

The grantmaking activities of TLGV NHC attract other organizations and funders in the region to also monetarily support the development of programs and projects that support the overall mission of the NHC. While not accounted for in the overall economic impact of TLGV, the grantmaking of the NHC allowed for leveraged funding for projects and initiatives, contributing an additional \$29,333 in economic impact.

F. OVERALL EMPLOYMENT IMPACT

TLGV NHC supports a substantial number of jobs in the region. The total employment impact is **3,630 jobs** (2,870 direct jobs and 760 indirect/induced jobs). Direct jobs are based on business receipts which in turn are used to pay wages and salaries within industries such as food services, retail, and lodging.

Indirect or induced jobs are supported in the region by local businesses spending part of their receipts on goods and services they require to serve customers, including investment in new equipment and structures. This is the ripple effect of economic activity attributed to NHCs (See Figure 2 and Table 6).

FIGURE 2. OVERALL EMPLOYMENT IMPACT

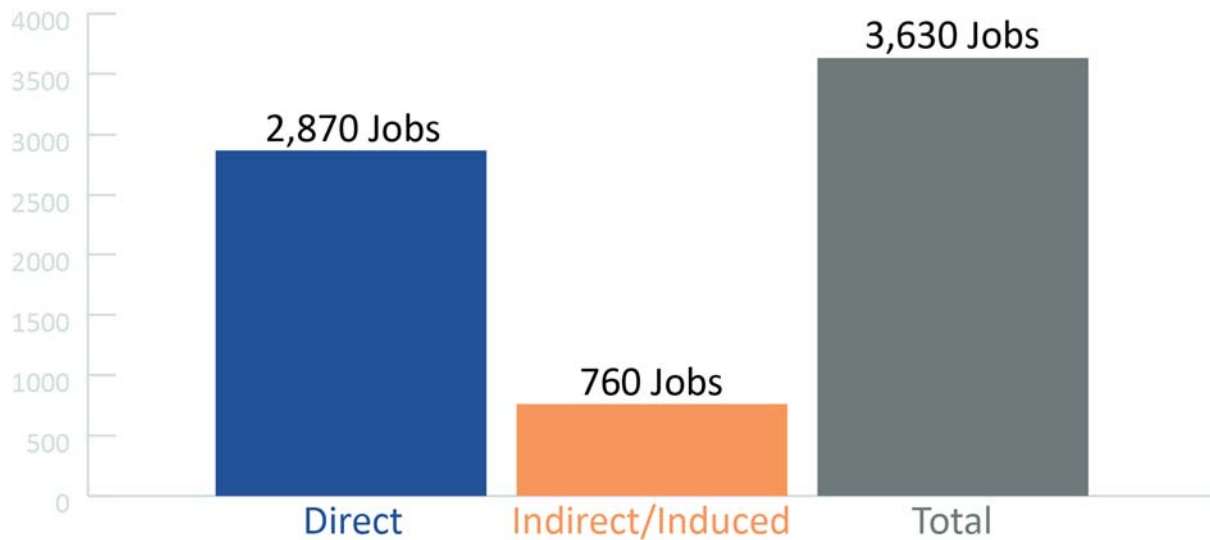


TABLE 6. OVERALL EMPLOYMENT IMPACT

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Economic Impact	2,870 jobs	320 jobs	440 jobs	3,630 jobs
<i>Tourism</i>	<i>2,855 jobs</i>	<i>316 jobs</i>	<i>437 jobs</i>	<i>3,608 jobs</i>
<i>Operations</i>	<i>14 jobs</i>	<i>4 jobs</i>	<i>3 jobs</i>	<i>21 jobs</i>

**Grantmaking did not support the employment impact.*

The “Top Employment Sectors” table illustrates the sectors with the largest number of jobs (includes direct, indirect and induced) supported by TLGV NHC (See Table 7). Industries such as food services, hotels, and retail stores represent the largest number of jobs while the ripple effect illustrates that jobs in real estate and hospitals are also supported by the spending attributable to the TLGV NHC.

TABLE 7. TOP EMPLOYMENT IMPACT SECTORS

Industry	Jobs
Full-service restaurants	891 jobs
Hotels and motels	722 jobs
Retail – Miscellaneous store retailers	424 jobs
Limited-service restaurants	346 jobs
Other amusement and recreation industries	305 jobs
Transit and ground passenger transportation	99 jobs
Retail – Food and beverage stores	93 jobs
Real estate	56 jobs
Retail – Gasoline stores	55 jobs
Hospitals	30 jobs

G. GOVERNMENT REVENUE IMPACT

NHCs also support state and local governments with the generation of government revenue or tax revenue. As a result of TLGV NHC’s attraction of visitors, operations, and grantmaking, the NHC generates over **\$25.8 million** in tax revenue annually (\$19.6 million direct taxes) (See Table 8).

TABLE 8. STATE AND LOCAL IMPACT TAX

Description	Employee Compensation	Tax on Production and Imports	Households	Corporations
Dividends				\$26,575
Social Ins Tax – Employee Contribution	\$72,957			
Social Ins Tax – Employer Contribution	\$141,050			
Tax on Production and Imports: Sales Tax		\$7,928,089		
Tax on Production and Imports: Property Tax		\$12,355,774		
Tax on Production and Imports: Motor Vehicle License		\$147,774		
Tax on Production and Imports: Severance Tax		\$26		
Tax on Production and Imports: Other Taxes		\$822,931		
Tax on Production and Imports: S/L NonTaxes		\$37,406		
Corporate Profits Tax				\$701,542
Personal Tax: Income Tax			\$3,147,617	
Personal Tax: NonTaxes			\$257,467	
Personal Tax: Motor Vehicle License			\$72,756	
Personal Tax: Property Taxes			\$57,093	
Personal Tax: Other Tax (Fish/Hunt)			\$8,419	
Total	\$214,007	\$21,291,999	\$3,543,352	\$728,117
Overall Impact: \$25,777,475				

H. VOLUNTEER IMPACT

It is estimated TLGV volunteers generate more than **\$176,000 annually** as a result of their volunteer services.⁶ Volunteers at TLGV NHC give their time to water and town clean-up initiatives, deliver brochures and guides for Walktober and other events, and help with fundraising initiatives. These benefits are in addition to the **\$303.3 million annual impact** generated by the NHC.

CONCLUSION

NHAs are valuable economic contributors to the local regions in which they operate. The partnerships they create and facilitate, and the efforts put forth by each to attract visitors, create economic development, and preserve the culture, history, and assets of their regions truly make a difference in local communities. The Last Green Valley National Heritage Corridor (CT and MA), in partnership with regional historic and preservation-focused organizations, serves as a vital driver in the regional economy, contributing millions of dollars annually and sustaining thousands of jobs.

- **The Last Green Valley National Heritage Corridor (CT and MA) generates \$303.3 million in economic impact, supports 3,630 jobs, and generates \$25.8 million in tax revenue.**

⁶ Primary data about number of volunteers and hours volunteered was provided to Tripp Umbach by The Last Green Valley NHC. A conservative assumption of \$23.56 per hour was used to calculate the value of volunteer services. This amount was calculated independently by the Points of Light Foundation.

APPENDIX A: GLOSSARY OF TERMS

Study Year	Three Year Average of 2013, 2014, and 2015
Total Economic Impact	The total economic impact of an NHA includes the direct, indirect, and induced impact generated in the economy as a result of the institution's presence.
Direct Economic Impact	<p>Direct impact includes items such as operational spending, spending by visitors to the NHA, and grantmaking/capital expenditures.</p> <p>For example, the economic impact of visitors to NHAs is the primary source of economic benefit to the regions in which NHAs operate. The direct consequence of travel expenditures become business receipts which in turn are used to pay wages and salaries and taxes.</p>
Indirect Economic Impact	<p>Indirect impact, also known as the multiplier effect, includes the re-spending of dollars within the local economy by vendors and suppliers.</p> <p>For example, indirect impacts are related to local businesses spending part of their receipts on goods and services they require to serve customers, including investment in new equipment and structures. In turn, their suppliers must purchase certain items from others. This is the multiplier effect of economic activity attributed to visitor spending to NHAs. Each level of impact creates salaries, employment, and tax revenues.</p>
Induced Economic Impact	Induced impact measure the effects of the changes in household income. For example, this impact includes the household spending of the wage and salary income generated by the visitors to the NHA. Induced effects refer to money recirculated through the economy as a result of household spending patterns generating further economic activity.
Direct Employment	Total number of jobs created in the economy as a result of operations, tourist spending and grantmaking activities.
Indirect Employment	Indirect employment is the additional jobs created as a result of the institution's economic impact. Local companies that provide goods and services to an institution increase their number of employees as purchasing increases, thus creating an employment multiplier.
Multiplier Effect	The multiplier effect is the additional economic impact created as a result of the NHA's direct economic impact. Local companies that provide goods and services to an institution increase their purchasing by creating a multiplier. Multipliers in this study are derived through IMPLAN.
Government Revenue Impact	Government revenue that is collected by governmental units in addition to those paid directly by an institution, including taxes paid directly by employees of the institution, visitors to the institution and vendors who sell products to the institution.

APPENDIX B: RESEARCH METHODOLOGY

The study and analysis within utilizes recommendations from previous research to establish a procedure and baseline analysis of how NHAs impact the economy. The research protocol established utilizes existing NHA data collection processes to streamline efforts required by an NHA to complete the analysis.

The estimates made in this analysis are intentionally conservative as to not inflate the results. In fact, the estimates are conservative in that many types of visitor spending are not counted due to limitations of data collection and trip purpose. In most cases, visitor counts and trip purpose are not quantified with existing data sources. All sites utilized visitor counts prepared for the National Park Service, with a majority relying on partners and visitor counts from the primary attractions and visitor centers in their area.

A three-year average of visitor counts to the NHA regions was utilized to provide a data-driven estimate of the annual number of visitors and accounts for spikes in visitor activity that can occur due to special circumstances. The final visitor impact estimates are substantial and demonstrate the importance of heritage tourism to a local economy. We must be aware that within economic analysis, the results are dependent on the data sources utilized to conduct the analysis.⁷ Day visitors were more likely to make the trip specifically to visit the heritage area attraction than visitors on overnight trips. The report identifies these limitations and the effect they have on the analysis. Collecting visitor data is a challenge to the existing resources of NHAs. Approximations of visit data for different facilities may not be completely consistent and vary considerably. As with all economic impact assessments, data utilized and estimates should be viewed as estimates based on the best information presently available.

Tripp Umbach based visitor and general tourist spending patterns on National Park Visitor Spending estimates established in 2015.⁸ The use of a secondary source provides the analysis with a research-based assumption that can be readily duplicated in future years for additional impact studies.

The bulk of economic activity supported by NHAs is accounted by the spending of visitors to NHAs. The type of visitor can be segmented into specific segments consistent with those identified in previous impact studies conducted for the NPS. The segments identified as NHA visitors were local day-trip, non-local day-trip, and overnight hotel/motel guests. This analysis

⁷ In most cases, we lack a clear definition of which visitors to the destination should be considered “heritage area visitors” and there are questions about the accuracy and consistency of visitation statistics reported by some facilities. In a previous study, Stynes et. al. research identified that on average, 57% of visitors to an NHA reported that one or more of the attractions in the heritage area was the primary purpose of their trip.

⁸ Thomas, Catherine C. and Lynne Koontz. 2015 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation. April 2016.

utilizes the spending patterns of these three distinct NHA visitor segments. Visitor spending estimates rely on reported visitors to each NHA, followed by breaking down visits into segments with distinct spending patterns and applying spending averages based on existing spending trends.

ECONOMIC ANALYSIS PROCESS

Tripp Umbach's methodology for calculating NHA economic benefits may be utilized for other NHA sites. The intention to develop a protocol requiring minimal resources from NHAs was balanced with the development of a protocol that could be replicated with a basic understanding of economic impact input-output analysis, the data collection process, IMPLAN software, and the purchase of IMPLAN data specific to the geographic footprint of the NHA site. The data collection process primarily consists of data points aggregated by NHAs for their Annual Performance Measure Survey, completed annually for the National Park Service. Additional information regarding the use and purchase of IMPLAN3 software is available through MIG, Inc.⁹

It is helpful to think of an input-output model such as IMPLAN as an economic exercise, based on the collection of known data source variables then inputted into the model to simulate how a change in a sector of the economy affects the overall conditions of the economy. An input-output model can simulate the ripple effects of a given sector on the entire economy. The data collection process provides the direct spending effects of a particular sector attributable to the NHA. The model simulates the indirect effects and the induced effects. Summing the direct, indirect, and induced effects provides a reasonable estimate for the impact that a certain sector has on the entire economy.

For example, the economic impact of visitors to NHAs is the primary source of economic benefit to the regions which NHA operates. The **direct** consequence of travel expenditures become business receipts which in turn are used to pay wages and salaries and taxes.¹⁰

Indirect or secondary benefits are attributed to local businesses spending part of their receipts on goods and services they require to serve customers, including investment in new equipment and structures. In turn, their suppliers must purchase certain items from others. This is the ripple effect of economic activity attributed to visitor spending to NHAs. Each level of impact creates salaries, employment, and tax revenues.

⁹ The analysis requires the use of IMPLAN3 software and geographic data representative of the NHAs local and state region. Additional information on IMPLAN can be found at <http://implan.com>.

¹⁰ The analysis does not quantify the direct costs such as visitors utilizing a recreation area that requires expenditures to repair or maintain.

The other type of secondary benefit is *induced*. This benefit accounts for the consumption spending of the wage and salary income directly generated by the visitors to the NHA. Induced effects refer to money recirculated through the spending patterns of households causing further local economic activity.

For each case study site, the “Top Employment Sectors” table illustrates the sectors with the largest number of jobs (includes direct, indirect, and induced jobs) supported by the NHA. Industries such as food services, hotels, and retail stores represent the largest number of jobs attributable to NHAs, while the ripple effect illustrates that jobs in real estate, healthcare, and other indirect industry sectors also support jobs indirectly attributable to the NHA.

The step-by-step process illustrates the economic impact modeling process.

Step One – Data Collection

The economic impact analysis is quantified from available data sources. NHA sites are asked to complete the data collection form developed by Tripp Umbach. All data points are described within the data collection form. These include visitation numbers, operating expenditures, the number of NHA employees, funding from NHAs specific to capital and construction activities, funding from NHAs for educational and support grants, plus any additional public or private matching dollars associated with the NHA grant. The annual amounts for the three most recent years are inputted and an average of those three years is calculated within the data collection form.

Step Two – Visitation inputs

Visitor expenditures are best viewed as the initial monetary activity that stimulates the production process and initiates realistic measurement of economic benefit or impact. Estimating visitors is perhaps the greatest challenge that NHAs face when developing annual counts. They depend primarily on the working relationships and partnerships that they share among partners, sites, and attractions within their areas to calculate visitor estimates.

Visitor economic impact typically requires three basic inputs: (1) the number and types of visitors, (2) visitor spending patterns, and (3) local economic ratios and multipliers. Multipliers for this analysis were obtained from IMPLAN databases, geographically focused for regions around heritage areas and the state economies.

Annual visitation averages are applied to three specific visitor segments approximated from national NPS visitor information data.¹¹ The segments identified within qualitative interviews

¹¹ Thomas, Catherine C. and Lynne Koontz. 2015 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation. April 2016.

with NHA site directors and stakeholders as the most likely visitors to NHAs are local day, non-local day, and overnight visitors. The percentage of the overall visitors and their respective segments are represented in the following table (See Table 9).

TABLE 9. VISITOR SPENDING BY SEGMENT

Visitor Segment	% of Total Visitation	Average Daily Spending
Local Day	19%	\$41.52
Non-Local Day	41%	\$65.70
Overnight	40%	\$238.22

Each of the visitor segments spends varying amounts of money while visiting the NHA region. The spending estimates of these groups are then applied to spending averages from the 2015 National Park Service (NPS) spending study.¹² The ratio of visitors and spending averages are then calculated to provide total spending estimates for each segment and for each specific type of spending associated with visitation and tourism (See Table 10).¹³

TABLE 10. SPENDING ESTIMATES BY VISITOR TYPE

Visitor Segment	Motel, hotel, B&B	Camping fees	Restaurants & Bars	Amusements	Groceries	Gas & Oil	Local transportation	Retail Purchases
Local day-trip spending allocation	0.0%	0.0%	31.6%	11.3%	15.0%	21.4%	1.6%	19.1%
Non-local day-trip spending allocation	0.0%	0.0%	28.2%	13.5%	10.1%	26.8%	2.6%	18.7%
Overnight spending allocation	42.7%	0.9%	24.2%	6.2%	4.4%	9.5%	2.7%	9.4%

Each spending category has an associated IMPLAN code for which it is related to within the IMPLAN software (See Table 11).

¹² Ibid.

¹³ The analysis acknowledges the possibility of average spending variance through the utilization of average spending derived from consumer choices, estimates, and average visitor counts.

TABLE 11. SPENDING ESTIMATES BY SECTOR TYPE

IMPLAN Sector	Sector Name	Spending Type
400	Retail – Food and beverage stores	Groceries
402	Retail – Gasoline stores	Gas & Oil
406	Retail – Miscellaneous store retailers	Retail Purchases
412	Transit and ground passenger transportation	Local transportation
496	Other amusement and recreation industries	Amusements
499	Hotels and motels, including casino hotels	Motel, hotel, B&B
500	Other accommodations	Camping fees
501/502	Full-service restaurants/ Limited-service restaurants	Restaurants & bars

Once the spending amounts are calculated for each visitor segment and spending type, the next step is entering the spending amounts into the IMPLAN software. Each visitor segment, local day, non-local, and overnight visitors are created as a unique event within the IMPLAN model.

Economic impact measures attempt to estimate the likely losses in economic activity to the region in the absence of the heritage site. Should the heritage area and its partners not be available, it is assumed that local residents would spend the money on other local activities, while visitors from outside the region would not have made a trip to the region. Based on visitors sampled at heritage areas, approximately two-thirds of the associated economic impacts would be lost to the regions in the absence of the heritage attractions. The largest impacts result from overnight visitors staying in local lodging establishments. Local resident spending is included in the economic benefits measures, as this captures all economic activity associated with heritage area visits. Spending by local residents on visits to heritage areas does not represent new money to the region.¹⁴

Step Three – Operational Impacts

The operational impacts of NHAs are estimated from the operational expenditures of the NHA and total number of direct jobs employed by the NHA. Total jobs include full-time and part-time employees. Operational expenditures may also be calculated by entering the actual expenditures of the organization over the annual time period. Again, a three-year average is utilized to eliminate drastic variations (cuts or increases) to annual spending amounts. The employment or spending is entered into the IMPLAN model within Sector 493 – Museums, historical sites, zoos, and parks.

¹⁴ The economic effect of NHAs is an overall contribution to their regional economies. Though local visitor spending is not considered within a marginal analysis due to the fact local residents have choices on where they spend their money within the region, in a contribution sense, residents of the local area do make choices to spend money in the local NHA region due to the NHAs mission fulfillment of preservation and education. In a contribution sense, this economic effect does benefit the regional economy.

The economic analysis completed for the operational impact analysis uses actual expenditures and NHA employment to drive estimates of employment, income, and tax revenue. Operational impacts refer to the day-to-day management, coordination, and activities executed by the NHA and its staff. It refers to the impact of “doing business” as a non-profit organization that promotes history, culture, and recreation in the region.

Step Four – Grant Funding and Support

NHA-funded grants to regional partners and associated revenue “matches” from regional organizations are tracked by each NHA site annually. Grant funding is calculated in the economic impact model as Sector 514 – Grantmaking, giving, and social advocacy. NHA-secured federal and state funding in the form of grantmaking to specific sites within the region primarily allows for the creation and development projects and initiatives that further add to the historic, cultural, and recreational offerings of the NHA region.

Step Five – Capital Specific Funding

Capital-specific funding is calculated separately. Funding for a specific construction or capital improvement project is assigned as a unique event within the IMPLAN software, categorized under IMPLAN code 58 - Construction of non-residential structures. Additional grant funding focused on capital and construction development also includes the educational mission of NHAs and the role that the staff has in serving as catalysts for economic development opportunities in the regions which they operate.

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