
THE ECONOMIC IMPACT OF NATIONAL HERITAGE AREAS

A CASE STUDY ANALYSIS OF THE
ERIE CANALWAY NATIONAL HERITAGE CORRIDOR



This report and accompanying research quantifies the economic benefit of select NHAs to their local and state communities — measuring job, revenue generation, and economic impacts through a protocol comprising interviews, IMPLAN analysis, and existing data sources. The protocol provides a benchmark for NHAs to complete future economic impact studies.

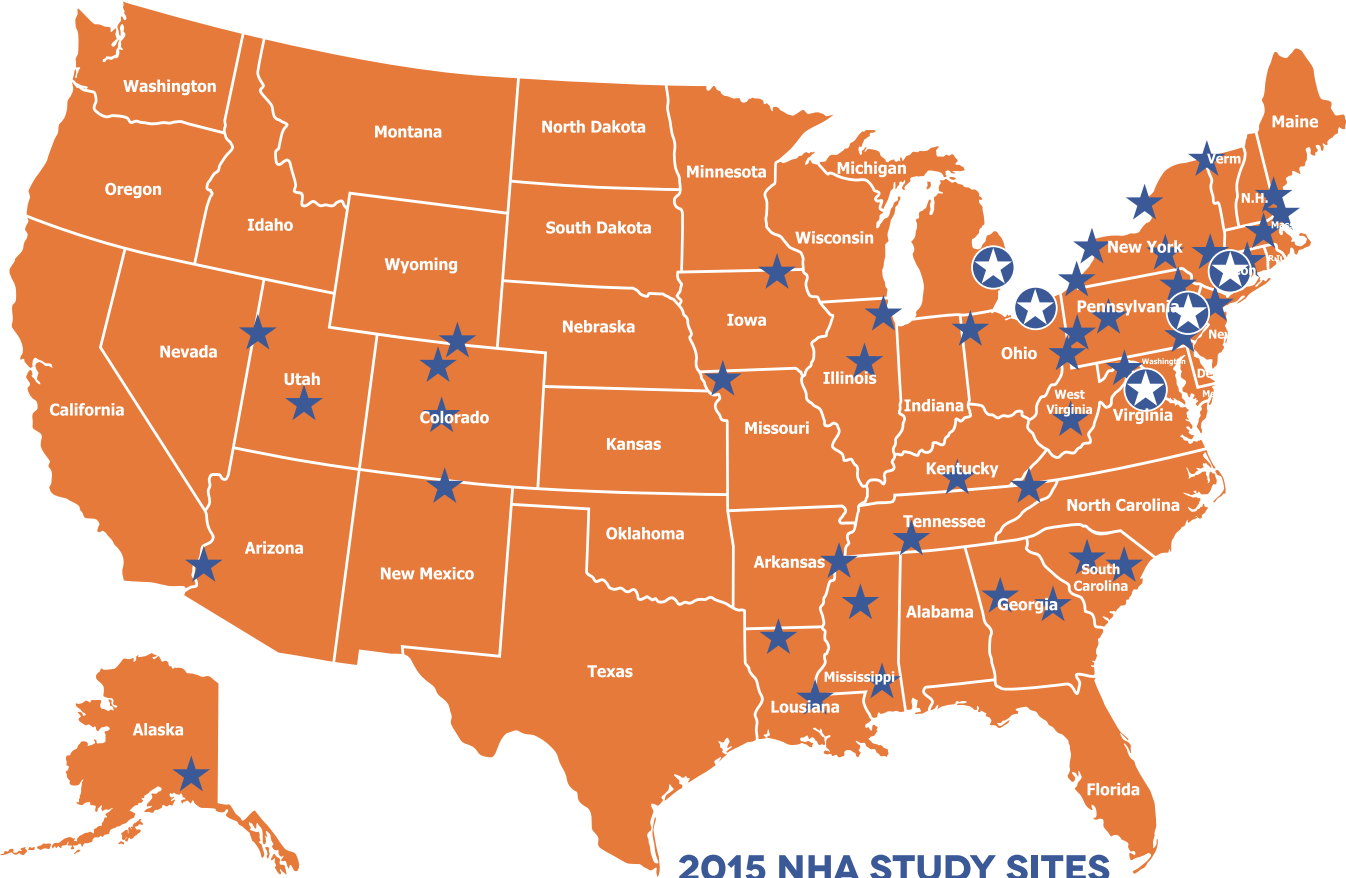
THE ECONOMIC IMPACT OF NATIONAL HERITAGE AREAS:

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MAP OF NATIONAL HERITAGE AREAS



2015 NHA STUDY SITES

- ERIE CANALWAY NATIONAL HERITAGE CORRIDOR
- THE JOURNEY THROUGH HALLOWED GROUND NATIONAL HERITAGE AREA
- SCHUYLKILL RIVER NATIONAL HERITAGE AREA
- UPPER HOUSATONIC VALLEY NATIONAL HERITAGE AREA
- MOTORCITIES NATIONAL HERITAGE AREA
- OHIO & ERIE CANALWAY NATIONAL HERITAGE AREA

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.

In 2012, Tripp Umbach completed a comprehensive economic impact study on six NHA sites in the Northeast Region that also included an extrapolation of the economic benefit of all 49 NHA sites on the national economy. The annual economic impact was estimated to be **\$12.9 billion**. The economic activity supports approximately **148,000 jobs** and generates **\$1.2 billion** annually in Federal taxes from sources such as employee compensation, proprietor income, indirect business tax, households, and corporations.¹ This study seeks to further quantify the economic impacts of individual NHAs based upon a case study approach.^{2,3}

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. The economic impact of the Erie Canalway National Heritage Corridor shows:

- **Erie Canalway National Heritage Corridor (NY)** generates **\$307.7 million** in economic impact, supports **3,240 jobs**, and generates **\$34.9 million** in tax revenue.

NHAs SUPPORT REGIONAL ECONOMIES

NHAs DIRECTLY AND INDIRECTLY GENERATE **\$12.9 BILLION PER YEAR IN THE U.S.**



CREATE AND SUPPORT **148,000 JOBS**



**\$1.2 BILLION
IN TAX REVENUE**



1. In the same 2012 study, Tripp Umbach calculated the impact of the 21 current NHAs in the Northeast Region of the United States. This study revealed that the NHAs in the Northeast Region generate an annual economic impact of \$5.4 billion, support more than 66,880 jobs, and generate \$602.7 million in local and state taxes.

2. Tripp Umbach. "The Economic Impact of National Heritage Areas: A Case Study Analysis of Six National Heritage Area Sites in the Northeast Region of the United States and Projections on the National Impact of All National Heritage Areas." www.nps.gov/history/heritageareas/.

3. Tripp Umbach. "The Economic and Community Impact of National Heritage Area Sites: Essex National Heritage Area, Oil Region National Heritage Area, Yuma Crossing National Heritage Area." www.nps.gov/history/heritageareas/.

PROJECT OVERVIEW

In July 2015, Tripp Umbach was retained by the Heritage Development Partnership to measure the economic, employment, and government revenue impacts of operations and research of six NHAs. The following report highlights the economic impact of the **Erie Canalway National Heritage Corridor**. The goals of the NHA economic impact study included the following:

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

This study builds upon previous work completed to assess the economic benefit of NHAs to their regions, states, and local communities by measuring employment and revenue generation in addition to economic impacts. The research protocol included kickoff calls and progress reports with leadership from each NHA, interviews with key stakeholders within the six NHA regions, and data collection of existing NHA visitor estimates, operating budgets, and grant/capital awards information. The data collection process guided the economic impact analysis using IMPLAN.⁴

Each NHA profiled has distinct qualities and features, as noted in Table 1. The economic impact of an NHA will vary from site to site as each NHA is unique, operating in its local and state economy.

2015 NHA STUDY OVERVIEW

Study Period:

Three-Year Average for 2012, 2013, 2014

NHAs by Region:

Northeast – **Erie Canalway NHC**, The Journey Through Hallowed Ground NHA, Schuylkill River NHA, and Upper Housatonic Valley NHA

Midwest Region – MotorCities NHA and Ohio & Erie Canalway NHA

NHA Geography:

Erie Canalway NHC – NY

JTHG NHA – MD, PA, VA, WV

Schuylkill River NHA – PA

Upper Housatonic – CT and MA

MotorCities – MI

Ohio & Erie Canalway – OH

Methodology:

IMPLAN 2013 Data

4. 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 the MIG, Inc. website: <http://implan.com/V4/Index.php>.

TABLE 1: NHA CASE STUDY SITE PROFILES

HERITAGE AREA	Size of the Region – Square miles ⁵	National Register Features ⁶	National Historic Landmarks ⁷	Area Population ⁸
Erie Canalway	5,780	18,643	43	3,232,572
The Journey Through Hallowed Ground	5,393	27,007	15	1,413,038
Schuylkill River	1,715	23,943	45	1,854,081
Upper Housatonic	945	2,683	7	123,105
MotorCities	5,032	17,268	14	5,255,454
Ohio & Erie Canalway	600	7,177	4	1,034,899

The size and shape of an NHA also plays a key role in defining its personality. Localized or focused sites are concentrated. While this leads to partnerships with more defined, common goals, it can place limitations on available resources. Sites that span geographic areas (multiple counties) have the unique challenge of balancing where and how their resources are allocated. Finally, corridor sites that span multiple counties or states must serve as trusted collaborators to numerous partners spanning many varied interests. Despite all potential iterations of NHA types, the objectives of each NHA are connected by their Federal designation and mission.⁹ Similarities do exist and the impact study attempts to illustrate this by identifying the three areas (visitor, operational, and grantmaking) where NHAs have the greatest economic value to their local regions and states.

An additional area of consideration that distinguishes NHAs is the partnerships that they engage in. NHA partnerships are encouraged through initiatives that increase educational and recreational opportunities for both local residents and tourists. Increased visitation by tourists and the increased economic activity are important objectives of heritage areas. The partnership approach creates the opportunity for a diverse range of associates to voice a range of visions and perspectives. 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.

TABLE 2: NHA PARTNERSHIPS (2014)

HERITAGE AREA	Formal Partnerships	Informal Partnerships
Erie Canalway	53	115
The Journey Through Hallowed Ground	7	350
Schuylkill River	206	99
Upper Housatonic	4	95
MotorCities	16	6
Ohio & Erie Canalway	8	250

5. ArcGIS via National Heritage Area Statistics.

6. National Register of Historic Places. February 2014. Via National Heritage Area Statistics.

7. National Register of Historic Places. February 2014. Via National Heritage Area Statistics.

8. U.S. Census Bureau Blockgroup Data, 2010.

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

The variety of activities and heavy partner involvement 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 projected impact (FY 2015), including the economic, employment, and state and local government revenue impact of each individual NHA in their respective state. The economic analysis completed for the operational and grantmaking 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.¹⁰ 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 to "get things done." Wages, rent, and professional fees paid by the NHA on an annual basis are included in this segment.

Grantmaking and Capital Expenditures: The economic value of NHA-secured federal and state funding within the region primarily circulates through the economy in the form of knowledge transfer and increased salary amounts for organizations receiving the specific grant funding. Additional grant funding focused on capital and construction development is quantified as well. This segment includes the educational aspect of NHAs and the role that the staff has in serving as catalysts for economic development opportunities in the regions in which they operate.

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 their communities. While these critical concepts that 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 National Heritage Areas have on the regions they are located in, the Tripp Umbach project team conducted a series of kickoff calls and stakeholder interviews during the Fall of 2015 for each of the selected sites. Through phone interviews, Tripp Umbach representatives 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 impact.

During the course of these interviews, several themes emerged across the board for all sites. 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 expenditure data, capital expenditure data, and grantmaking activities. From the primary data in concert with qualitative information stemming from kickoff calls and stakeholder interviews, the economic and community impacts were calculated. The following provides the regional assets of each of the selected sites as described by the stakeholders in addition to the economic impact breakout for each specific NHA.

¹⁰ The analysis of visitor spending includes local spending estimates.

ERIE CANALWAY NHC

A. OVERVIEW OF THE ERIE CANALWAY

The combination of exceptional scenery, history, culture, and natural resources of the Erie Canalway earned the NYS Canal System and communities along its shores designation as a National Heritage Corridor in 2000. The Erie Canalway National Heritage Corridor is among the largest of the National Heritage Areas that have been designated by Congress. It spans upstate New York east to west, for 524 miles, encompassing more than 230 municipalities and approximately 2.7 million residents linked by the Erie, Champlain, Cayuga-Seneca and Oswego Canals and Cayuga and Seneca Lakes – together known as the New York State Canal System. The legislation affirms a national interest in the preservation and interpretation of the Corridor’s important historic, cultural, recreational, educational, scenic and natural resources.

Working in partnership with federal, state, and local agencies, various non-profits and individuals, the Erie Canalway National Heritage Corridor (ECNHC) works to preserve our extraordinary canal heritage, promote the Corridor as a world-class tourism destination, and foster vibrant communities connected by the waterway. ECNHC achieves its mission in partnership with the National Park Service, New York State agencies, non-profit organizations, local residents, and more than 200 communities across the full expanse of upstate New York.

“Spotlight” Project – Ticket to Ride

Educating future generations on the historic significance of the Canalway is essential to the future preservation of the heritage area. The Erie Canalway NHC established the Ticket to Ride program as an opportunity for students to have a hands-on learning experience to better understand the rich history of their region.

By sponsoring bus and tour fees, the Ticket to Ride program makes it possible for students to participate in educational field trips to sites and museums throughout the heritage area. More than 18,500 school children have taken part in the Ticket to Ride program since 2012. The program has a special focus on serving underserved youth.

In 2006 the Secretary of the Interior approved the Erie Canalway's Preservation & Management Plan. The plan presents a comprehensive and unified approach to the organization's ongoing efforts to protect, interpret, and promote its wealth of resources and offers guidance in formulating policies and taking action to achieve the full potential of the National Heritage Corridor. Achieving the vision and goals set forth in this Preservation & Management Plan requires a creative implementation strategy based on strong partnerships, a clear understanding of opportunities and objectives, and an entrepreneurial approach to resource development. The Preservation & Management Plan identifies six key areas of focus that serve to ensure goals are met. Goals include: (1) preserving canal resources, (2) reaching the highest standards of environmental quality, (3) providing recreational opportunities in harmony with heritage resources, (4) assuring the Corridor's current and future generations of residents and visitors value their canal heritage, (5) striving to encourage economic growth that is balanced and self-sustaining, and (6) promoting the Corridor as a must do travel experience for regional, national, and international visitors.

Through strategic partnerships, Erie Canalway leverages the significant canal assets of the region and fosters vibrant communities for residents and visitors alike. The tourism initiatives that Erie Canalway NHC undertakes are intended to utilize the Corridor's heritage resources to stimulate economic activity. For example, through a formal Partner Program the Erie Canalway has created an integrated system of more than 30 museums and cultural organizations that, through collaboration, strengthens the visitor experience and heightens awareness of the sites. The program creates a clear mechanism for Erie Canalway to direct resources and technical assistance to these sites and encourages partner staff to embrace and champion the goals of the Preservation & Management Plan. Increased visitation that stimulates economic activity is a result.

Expanded, focused, and coordinated tourism development leads to greater visitor awareness of important resources and encourages appropriate programmatic activities that realize economic benefits. The Erie Canalway also works closely with New York's other three national heritage areas to exchange information and create opportunities to grow tourism across the state.

Sponsoring events in the region allows residents and visitors to experience the rich assets of the area and to better understand the history and culture of the Canalway. For example, the ECNHC has supported Parks & Trails New York's efforts to conduct the annual "Cycle the Erie Canal," an eight-day bike tour that spans from Buffalo to Albany, "...allowing riders to enjoy the scenery and come to know the people, places, and events that shaped the Erie Canal and its role in American history."¹¹

In addition, the Erie Canalway works with a number of local organizations, including the Syracuse Convention & Visitors Bureau, which will co-host, with the NYS Canal Corporation, the 2017 World Canals Conference, an event that will bring international visibility and tourism to the Erie Canalway NHC.¹²

In October of 2014, Erie Canalway spearheaded the successful listing of the entire New York State Barge Canal on the National Register of Historic Places inspiring new generations to safeguard and celebrate the engineering marvels that changed the course of American history and helped make New York the Empire State. The multi-year effort, again in close cooperation with the NYS Canal Corporation, resulted in comprehensive documentation that serves as a valuable public record, available to scholars, students, community planners, and canal enthusiasts. Such designation will serve to attract more tourists and more economic impact throughout the Erie Canalway Corridor.

11. "Cycle the Erie Canal 18th Annual Bike Tour" www.ptny.org.

12. The 2017 World Canals Conference will bring together hundreds of canal enthusiasts, professionals, and scholars from around the world to exchange best practices and information on the history, preservation, and other various elements of canals. The 2017 World Canals Conference will mark the bicentennial of the Erie Canal. <http://inlandwaterwaysinternational.org/world-canals-conference/>.

Events such as “Cycle the Erie Canal” utilize the recreational assets the Erie Canalway NHC has to offer both residents and visitors alike. Over 500 miles of canals, rivers, and lakes are open for recreational use between the months of May and November, allowing boaters, kayakers, and canoers to enjoy the splendor of the Canalway. The Erie Canalway Trail spans between Buffalo and Albany and offers visitors and residents the chance for hiking, jogging, walking, and bicycling along the historic canal. The trail is also available for cross-country skiing in the winter months.

With the recreational offerings, historic sites and museums, and the increase in tourism through the efforts of the ECNHC and its partners, the Erie Canalway has been able to preserve the richness of the region, and in the process, foster growth in the more than 230 communities in the Corridor. The increase in tourism and offerings in the ECNHC also translates into an increase in business and economic development in the communities along the waterway. The ECNHC works with communities to leverage their assets, realize their strengths, and rediscover their roles in the heritage and preservation of the region. Doing so allows communities to achieve self-sustaining growth and add to the quality of life for its residents.

The Erie Canalway has historically served as a symbol of ingenuity and determination and is the oldest continuously operating canal system in the United States. Today, the Canalway continues to exemplify innovation and strength through the efforts of the ECNHC and its partners. The Erie Canalway NHC has been able to preserve the history of the region while also fostering economic growth along the 524-mile corridor.

B. OVERALL ECONOMIC IMPACT

The economic impact of the Erie Canalway NHC is **\$307.7 million annually**. This economic impact consists of three main components: tourism (\$304.8 million), operations (\$2.8 million), and grantmaking activities (\$47,000).¹³ See Figure 1.

FIGURE 1: OVERALL ECONOMIC IMPACT OF ERIE CANALWAY NHC

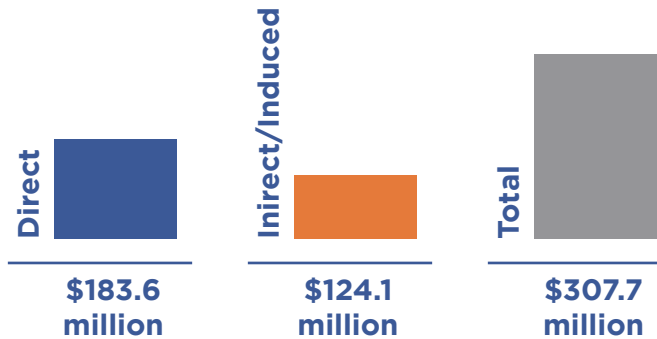


TABLE 3: ERIE CANALWAY NATIONAL HERITAGE CORRIDOR – OVERALL ECONOMIC IMPACT

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Economic Impact	\$183,565,754	\$58,732,436	\$65,414,690	\$307,712,880
<i>Tourism</i>	\$181,824,262	\$58,262,288	\$64,740,556	\$304,827,106
<i>Operations</i>	\$1,741,492	\$470,148	\$627,147	\$2,838,787
<i>Grantmaking</i>	\$0	\$0	\$46,987	\$46,987

The table below shows the top 10 sectors in the NHC region impacted by the Erie Canalway NHC's activities and visitors (See Table 4).

TABLE 4: ERIE CANALWAY NATIONAL HERITAGE CORRIDOR TOP 10 ECONOMIC IMPACT SECTORS

Industry	Economic Output
Hotels and motels, including casino hotels	\$77,061,683
Limited-service restaurants	\$58,192,949
Museums, historical sites, zoos, and parks	\$20,627,368
Retail – Miscellaneous store retailers	\$13,194,693
Real estate	\$12,251,608
Owner-occupied dwellings	\$8,167,524
Transit and ground passenger transportation	\$7,376,171
Wholesale trade	\$5,794,173
Retail – Food and beverage stores	\$5,674,523
Insurance carriers	\$5,427,510

¹³ Data used to calculate impacts was based on three-year averages – 2012, 2013, and 2014.

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 the Erie Canalway NHC’s regional partners. The three-year average total of visitors and tourists to the Erie Canalway NHC region was approximately 3,247,628 visitors. 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, more than \$304.8 million in economic benefit was supported annually within the region and state.

TABLE 5: ERIE CANALWAY NATIONAL HERITAGE CORRIDOR ANNUAL ECONOMIC IMPACT OF TOURISM AND VISITATION

Visitor Segment	Direct Effect	Indirect Effect	Induced Effect	Induced Effect	Total Effect
Local Day	19%	\$7,606,923	\$2,619,666	\$3,025,231	\$13,251,819
Non-Local Day	41%	\$25,175,583	\$9,017,369	\$10,127,431	\$44,317,383
Overnight	40%	\$149,044,757	\$46,625,253	\$51,587,894	\$247,527,904
Total	100%	\$181,824,262	\$58,262,288	\$64,740,556	\$304,827,106

The economic spending analysis demonstrates 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% of NHC visitation, overnight visitors account for approximately 80% of the economic 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 the Erie Canalway NHC through its operating activities. This impact is represented by the spending of the organizations and the employees it supports. Although not as great as the impact of tourism and visitation on the regional economy, the intellectual benefits and resources of NHC staff serve as independent catalysts for their regional economy.

TABLE 6: ERIE CANALWAY NATIONAL HERITAGE CORRIDOR ANNUAL ECONOMIC IMPACT OF OPERATIONS

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Operations	\$1,741,492	\$470,178	\$627,147	\$2,838,787

E. GRANTMAKING

The Erie Canalway NHC is active in the region with its partners through grantmaking efforts that support projects and programs that are aligned with the educational, cultural, promotional, and economic development 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 Erie Canalway NHC. For the purposes of this study, grants are quantified as increased salary provided by the NHC within their region.

TABLE 7: ERIE CANALWAY NATIONAL HERITAGE CORRIDOR ANNUAL ECONOMIC IMPACT OF GRANTMAKING

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Grantmaking	\$0	\$0	\$46,987	\$46,987

F. OVERALL EMPLOYMENT IMPACT

The Erie Canalway NHC supports a substantial number of jobs in the region. The total employment impact is **3,240 jobs** (2,412 direct jobs and 828 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.

FIGURE 2: OVERALL EMPLOYMENT IMPACT OF ERIE CANALWAY NHC

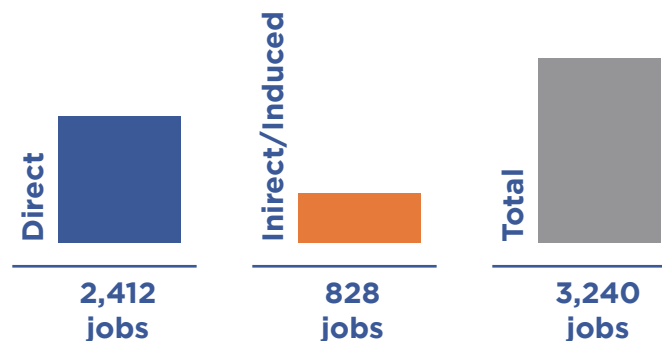


TABLE 8: ERIE CANALWAY NATIONAL HERITAGE CORRIDOR – OVERALL EMPLOYMENT IMPACT

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Employment Impact	2,412 jobs	352 jobs	476 jobs	3,240 jobs
<i>Tourism</i>	2,404 jobs	349 jobs	471 jobs	3,224 jobs
<i>Operations</i>	8 jobs	3 jobs	5 jobs	16 jobs

**Grantmaking did not add to the overall employment impact*

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

**TABLE 9: ERIE CANALWAY NATIONAL HERITAGE CORRIDOR
TOP 10 EMPLOYMENT IMPACT SECTORS**

Industry	Jobs
Limited-service restaurants	960 jobs
Hotels and motel, including casino hotels	659 jobs
Retail - Miscellaneous store retailers	335 jobs
Museums, historical sites, zoos, and parks	249 jobs
Transit and ground passenger transportation	124 jobs
Retail - Food and beverage stores	90 jobs
Real estate	59 jobs
Retail - Gasoline stores	51 jobs
Hospitals	33 jobs
Full-service restaurants	29 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 the Erie Canalway NHC's attraction of visitors, operations, and capital activity, the NHC generates over **\$34.9 million** in tax revenue annually. Direct taxes generate over **\$25.4 million** of government or tax revenue.

TABLE 10: ERIE CANALWAY NATIONAL HERITAGE CORRIDOR – STATE AND LOCAL TAX IMPACT

Description	Employee Compensation	Tax on Production and Imports	Households	Corporations
Dividends				\$57,250
<i>Socials In Tax – Employee Contribution</i>	\$60,743			
<i>Social Ins Tax – Employer Contribution</i>	\$117,437			
<i>Tax on Production and Imports: Sales Tax</i>		\$12,163,287		
<i>Tax on Production and Imports: Property Tax</i>		\$14,453,362		
<i>Tax on Production and Imports: Motor Vehicle License</i>		\$192,521		
<i>Tax on Production and Imports: Severance Tax</i>				
<i>Tax on Production and Imports: Other Taxes</i>		\$1,626,554		
<i>Tax on Production and Imports: S/L NonTaxes</i>		\$43,437		
<i>Corporate Profits Tax</i>				\$1,717,227
<i>Personal Tax: Income Tax</i>			\$3,804,960	
<i>Personal Tax: NonTaxes</i>			\$501,860	
<i>Personal Tax: Motor Vehicle License</i>			\$86,116	
<i>Personal Tax: Property Taxes</i>			\$61,119	
<i>Personal Tax: Other Tax (Fish/Hunt)</i>			\$19,356	
Total	\$178,181	\$28,479,161	\$4,473,410	\$1,774,476

OVERALL IMPACT: \$34,905,228

H. VOLUNTEER IMPACT

It is estimated that volunteers at sites throughout Erie Canalway NHC generate more than **\$1.6 million annually** as a result of their volunteer services.¹⁴ Volunteers give their time to cleaning the trails and Canalway, helping with events for local community organizations and sites that are part of the NHC, and serving as Erie Canalway Volunteer in Parks (VIP), or volunteers who greet visitors and help provide tours of local parks and sites within the corridor. These benefits are in addition to the **\$307.7 million annual impact** generated by the Erie Canalway NHC.

14. Primary data about number of volunteers and hours volunteered was provided to Tripp Umbach by the Erie Canalway NHC. A conservative assumption of \$22.14 per hour was used to calculate the value of volunteer services. This amount was calculated independently by the Points of Light Foundation.

CONCLUSION

The case studies presented demonstrate that NHAs are valuable economic contributors to the local regions and states where they operate. The partnerships they create and facilitate and the efforts put forth by each organization truly make a difference in their communities. The Erie Canalway NHC serves as a vital part of the local and regional economy contributing millions of dollars annually and sustaining jobs.

- **Erie Canalway National Heritage Corridor** (NY) generates **\$307.7 million** in economic impact, supports **3,240 jobs**, and generates **\$34.9 million** in tax revenue.

APPENDIX A: GLOSSARY OF TERMS

Study Year	Three Year Average of 2012, 2013, and 2014.
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 NHA operates. 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. 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 2013.¹⁵ 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. No inflation adjustments were made to the 2013 NPS spending amounts.

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 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.

15. 2013 National Park Visitor Spending Effects, Economic Contributions to Local Communities, States, and the Nation. July 2014.

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.¹⁶

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.¹⁷

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.

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.

16. 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 the MIG, Inc. website: <http://implan.com/V4/Index.php>.

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

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.¹⁸ The segments identified within qualitative interviews 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 Table 11: Visitor Spending by Segment.

TABLE 11: VISITOR SPENDING BY SEGMENT

Visitor Segment	% of Total Visitation*	Average Daily Spending
Local Day¹⁹	19%	\$40.72
Non-Local Day²⁰	41%	\$64.79
Overnight²¹	40%	\$276.66

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 2013 National Park Service (NPS) economic impact study.²² 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.²³

18. 2013 National Park Visitor Spending Effects, Economic Contributions to Local Communities, States, and the Nation. July 2014.

19. Local day users are defined as those visitors living within the geographic region of the NHA and visiting a heritage attraction, site, or facility for the day. The definition is consistent with those used in the National Park Service Natural Resource Report.

20. Non-local day visitors are defined as those visitors living outside the geographic region of the NHA and visiting a heritage attraction, site, or facility for the day.

21. Overnight visitors are defined as those visitors living outside the geographic region of the NHA and visiting a heritage attraction, site, or facility for multiple days, including an overnight stay.

22. 2013 National Park Visitor Spending Effects, Economic Contributions to Local Communities, States, and the Nation. July 2014.

23. 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 12: SPENDING ESTIMATES BY VISITOR TYPE

	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%	31.9%	11.2%	14.9%	21.5%	1.4%	19.2%
Non-local day-trip spending allocation	0.0%	0.0%	28.4%	13.5%	10.0%	27.0%	2.4%	18.8%
Overnight spending allocation	43.0%	0.1%	22.6%	7.5%	5.5%	8.2%	3.3%	9.8%

Each spending category has an associated IMPLAN code for which it is related to within the IMPLAN software. The spending category and IMPLAN codes are detailed in table 13: Spending Estimates by Sector Type.

TABLE 13: 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
493	Museums, historical sites, zoos, and parks	Amusements
499	Hotels and motels, including casino hotels	Motel, hotel, B&B
500	Other lodging accommodations	Camping fees
502	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, including local and non-local visitors. Spending by local residents on visits to heritage areas does not represent new money to the region.²⁴

24. 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.

Step Three - Operational Impacts

The operational impacts of NHAs are estimated from the 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 514, Grantmaking, Giving, and Social Advocacy Organization.

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 in the region. Business refers to a number of activities for each NHA, but for purposes of this analysis, operational impacts are derived from the number of paid employees working for the NHA.

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 5001 employee compensation. The assumption being that grant support ultimately supports the salaries of the organization(s) receiving grant funding. The economic value of NHA-developed federal and state funding within the region primarily circulates through the economy in the form of knowledge transfer and increased salary amounts for organizations receiving the grant funding.

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. For example, if an NHA facilitates the award of a \$25,000 federally sponsored grant to develop a section of biking trail, this economic benefit to the region is captured within the analysis by capturing the estimated increase in salaries and wages to facilitate award of the grant within the NHA and within the receiving organization. Further, if a portion of the award was attributable to specific capital improvements or construction, this was attributed accordingly within the input-output model to account for related construction expenditures and jobs. Grants awarded were included in the model based on year effective when the year that the grant was awarded was not the same.

APPENDIX C: RESEARCH PROTOCOL

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 six sites chosen for this analysis of NHAs will hopefully be the trailblazers for additional sites.

Within each case study, the analysis attempts to focus on a specific event, or “Spotlight Project,” that best illustrates the economic value NHAs provide to the region. 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 six 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.

Based on measures of use patterns from visitor surveys, we made some adjustments for potential double-counting and under-reporting of visitors. The research team determined that the best method to eliminate double- or under-counting was to utilize a three-year average of visitor counts to the NHA regions. This provides a data-driven estimate of the annual number of visitors, and accounts for annual spikes in visitor activity. 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.²⁵ 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.²⁶ Finally, the report provides recommendations based on the current protocol as a means to seek to improve future analysis and development.²⁷

25. In most cases, we lack a clear definition of which visitors to the destination region should be considered “heritage area visitors” and there are questions about the accuracy and consistency of visit 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.

26. In previous NHA economic impact studies completed in 2004 and 2005, Stynes et al. determined that NHAs could utilize a ratio that approximates that 25,000 visitors spend \$2.5 million in the local region. The direct impacts of this spending are \$780,000 in wages and salaries, \$1.2 million in value added, and 51 jobs. Tripp Umbach utilized these projections as a gauge to determine the relative similarities between the TU IMPLAN models and the MGM spending model.

27. 2013 National Park Visitor Spending Effects, Economic Contributions to Local Communities, States, and the Nation. July 2014.

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TRIPP UMBACH

Nichole Parker, Principal
Nicole Englert, Project Director
2359 Railroad Street, #3701
Pittsburgh, PA 15222
(412) 281-2313

www.trippumbach.com

NATIONAL PARK SERVICE, NORTHEAST REGIONAL OFFICE

Peter Samuel, NHA Coordinator
200 Chestnut Street
Philadelphia, PA 19106
(215) 597-1848

www.nps.gov/history/heritageareas

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ERIE CANALWAY NATIONAL HERITAGE CORRIDOR

Andy Kitzmann, Assistant Director
P.O. Box 219
Waterford, NY 12188
(518) 237-7000

www.eriecanalway.org