
THE ECONOMIC IMPACT OF NATIONAL HERITAGE AREAS

A CASE STUDY ANALYSIS OF THE
OHIO & ERIE CANALWAY NATIONAL HERITAGE AREA



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.

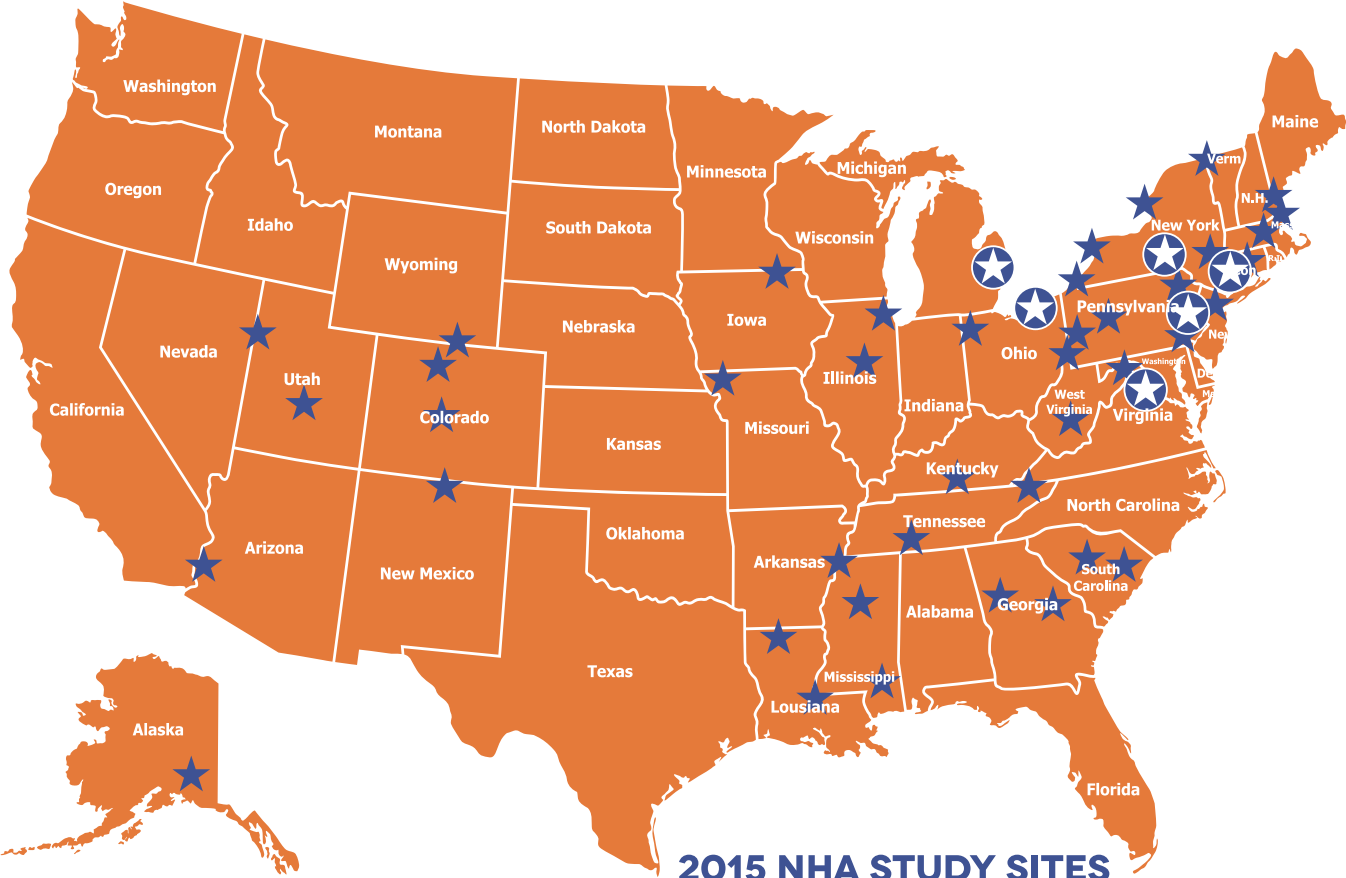
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MAP OF NATIONAL HERITAGE AREAS



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 Ohio & Erie Canalway National Heritage Area shows:

- **Ohio & Erie Canalway National Heritage Area (OH)** generates **\$408.1 million** in economic impact, supports **4,200 jobs**, and generates **\$34.7 million** in tax revenue. The Metroparks of the Ohio & Erie Canalway NHA generate an additional direct impact of **\$24.0 million**.

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 **Ohio & Erie Canalway NHA**. 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	National Register Features ⁵	National Historic Landmarks ⁶	Area Population ⁷
Erie Canalway	18,643	43	3,232,572
The Journey Through Hallowed Ground	27,007	15	1,413,038
Schuylkill River	23,943	45	1,854,081
Upper Housatonic	2,683	7	123,105
MotorCities	17,268	14	5,255,454
Ohio & Erie Canalway	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.⁸ 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. National Register of Historic Places. February 2014. Via National Heritage Area Statistics.

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

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

8. 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.⁹ 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.

9. The analysis of visitor spending includes local spending estimates.

OHIO & ERIE CANALWAY NHA

A. OVERVIEW OF OHIO & ERIE CANALWAY

The Ohio & Erie Canalway National Heritage Area was designated by Congress in 1996 to help preserve and celebrate the rails, trails, landscapes, towns and sites that grew up along the first 110 miles of the canal that helped Ohio and the nation grow.

At the beginning of the 19th century, Ohio was geographically isolated from the mainstream of the nation's economic vitality. The state was rich in natural resources, but landlocked and inaccessible to the established eastern markets. The Ohio & Erie Canal — the brainchild of George Washington — changed that fact. Built in the 1820s and 1830s, the canal was carved from the wilderness to provide an invaluable link in the nation's transportation system, completing the country's first inland shipping route between the East Coast and Gulf of Mexico. It transformed Ohio from a struggling frontier into the third richest & most populous states in the Union, and positioned New York City as a world port and America's financial capital.

By creating the connection between New York and New Orleans, the Ohio & Erie Canal helped people and products flow across America — fueling westward expansion, a national market economy and burgeoning regional industrial might. It nurtured the state's economy — taking Ohio from near bankruptcy to the third most economically prosperous State in the Union in just 20 years.

Over its history, the canal path defined the settlement of numerous towns, villages and cities along its course. It attracted businesses to its flanks, providing a viable transportation route for emerging industries. They included coal, farm implements, clay products, roller bearings, matches, steel and rubber.

“Spotlight” Project – The Towpath Trail

The Towpath Trail is an iconic Ohio & Erie Canalway travel asset. Working collaboratively, the NHA has put 85+ miles of Towpath Trail in place to date, drawing 2.5-million Towpath travelers each year. Highlights include:

- *Scranton Flats/Cleveland - Canalway Partners RiverSweep volunteers clear blighted areas for future trails. In 2014, a \$9M park & Towpath section opened on a 2011 RiverSweep site, instantly activating health & wellness and tourism usage along the Cuyahoga River.*
- *iTowpath/Akron - The Ohio & Erie Canalway Coalition is collaborating with the City of Akron and Knight Foundation, through a \$750,000 grant award, to enhance and activate the Towpath Trail through improved signage, archways and connections to area attractions and neighborhoods, with the goal of making the city more bike and pedestrian friendly and stimulating community and economic development.*
- *Towpath Bridge Building/Zoar - Local residents and businesses helped the Ohio & Erie Canalway Coalition with the construction of boardwalks over protected wetlands along the Towpath.*

One of the early pioneers of the rubber and tire industry, Dr. Benjamin Goodrich, relocated to Akron, Ohio, to establish The B.F. Goodrich Rubber Company. Other entrepreneurs followed, including Harvey Firestone, Frank A. Seiberling and William F. O'Neil to establish tire and rubber manufacturing factories.

As the Canal Era gave way to railroads, America's Gilded Age followed, fueled by a new entrepreneurial spirit. In Cleveland, it found roots in and around the Canal Basin — where the Ohio & Erie Canal connected with eastbound shipping via the Cuyahoga River and Lake Erie.

John Rockefeller, Henry Flagler and their compatriots settled here, Henry Sherwin and his business partner Edward Williams followed, plying their American ingenuity to once again change the world. In fact, the wealth earned by industrialists in the Ohio & Erie Canalway nurtured a cultural and social philanthropy that led to many of the Canalway's treasured museums, parks and historic spaces. Among those legacies: Cleveland Metroparks, Akron Civic Theatre, Stark County Park District, United Way, Zoar Village, Fort Laurens, Cleveland Foundation, Stan Hywet, Playhouse Square, Summit County Metro Parks, Cleveland Art Museum, Cleveland's Mall Plan, Canton Palace Theater, and the Cleveland Orchestra.

Today, the Ohio & Erie Canalway National Heritage Area not only preserves and celebrates the canal's origin story but also tracks its impact forward along four key pillars — Culture, History, Recreation, and Nature.

Annually, millions of NHA visitors and residents explore American culture and canal-era history and find recreation amidst natural wonders along three celebrated routes — the Ohio & Erie Canal Towpath Trail (85+ miles), the Cuyahoga Valley Scenic Railroad (26 miles through CVNP into Akron and Canton), and along the nationally designated America's Byway. In fact, more than 2.5 million Americans visit the Towpath Trail annually, voted the 2015 "Best of Ohio" Bike Trail by Ohio Magazine readers.¹⁰

The NHA's two Founding Organizations — Canalway Partners (working in Cuyahoga County) and the Ohio & Erie Canalway Coalition (working in Summit, Stark, and Tuscarawas Counties) — collaborate with 58 communities, four counties, four regional park districts, many non-profit organizations, and Cuyahoga Valley National Park to build and enhance the visitor components and travel routes.

The NHA leads a collaboration with these many partners to package the Canalway experience to attract tourists to the region's offerings by building regional marketing platforms through a dedicated visitor web site (ohioanderiecanalway.com), a Visitor's Guide, cross-promotional marketing and other social media strategies. They continue to support economic investment to the region. By doing so, the Ohio & Erie Canalway also has helped spur a sustainable approach to these connected communities within the footprint of the Canalway.

Cuyahoga Valley National Park, the Cuyahoga Valley Scenic Railroad, the County Park Districts of Cuyahoga, Summit, Stark, and Tuscarawas Counties, and sites along the nationally designated America's Byway work with the Canalway to give residents and visitors the opportunity to further experience the natural beauty and recreational resources of the area, while coming to better understand the culture and history of the National Heritage Area.

10. Ohio Magazine. "Best of Ohio 2015." http://www.ohiomagazine.com/Main/Articles/Best_of_Ohio_2015_5067.aspx. January 2015.

The Ohio & Erie Canalway NHA adds significant quality of life/quality of place features to the region through its continued focus of developing a linear greenway anchored by a trail system that includes and extends from the Towpath Trail. The length of improved Towpath Trail has now exceeded 85 miles with many hundreds of acres of conserved natural landscapes. These added greenspaces address a host of relevant issues such as flooding and habitat restoration. Their presence adds measurable value to adjacent and nearby properties.

Since receiving its National Heritage Area designation in 1996, the Ohio & Erie Canalway NHA has directed most of its federal funding into grants that develop sites and amenities that add value to the region. The Ohio & Erie Canalway has been able to leverage \$350 million in Federal, State, Local, and Private investments throughout the region. For example, the NHA has worked with partners to expand the Towpath Trail and create more connector trails between the Towpath and various towns and communities. It has opened new residential options to the local communities. As visitors to the Towpath Trail grows, communities along the trail have benefited greatly from the growing business and tourism that has followed.

As the Ohio & Erie Canalway NHA fosters connections among partners and communities, the NHA also creates ways for residents and visitors to become more connected to the sites, history, and offerings of the heritage area. Social media has served as important marketing tool and method for the Ohio & Erie Canalway to reach its audience, making them aware of events taking place in the NHA. The Ohio & Erie Canalway sees the importance of allowing visitors to stay connected to the heritage area; using online platforms to activate real-world experiences, allowing users to learn of opportunities and ways to experience the Canalway's rich history.

The Ohio & Erie Canal served as an important asset to the nation in the early 1800s, becoming an economic resource to the nation. Today, that impact continues. Whether biking on the Towpath Trail, traveling by rail on the Cuyahoga Valley Scenic Railroad, or visiting the various parks and museums on drives along the nationally designated America's Byway, the Ohio & Erie Canalway NHA adds significantly to the quality of life in the region.

Just as the Ohio & Erie Canal helped spur economic development and the growth of communities and towns along the canal, the NHA is charting a new course to connect communities to the natural, cultural, historic and recreational resources of the region. The regional Vision of the Ohio & Erie Canalway has been integrated into local plans and projects. As the Ohio & Erie Canalway NHA continues to expand its partnerships, sites, and ability to reach users through regional marketing and social media, the NHA is poised to continue leveraging funding, having an even greater impact on preserving the area's culture, history, recreation and natural beauty – and furthering the economic development of the region.

B. OVERALL ECONOMIC IMPACT

The economic impact of the Ohio & Erie Canalway National Heritage Area is **\$408.1 million annually**. This economic impact consists of four main components: tourism (\$387.2 million), operations (\$1.8 million), grantmaking (\$142,000), and capital expenditures (close to \$19 million).¹¹ See Figure 1. The Metroparks of the Ohio & Erie Canalway National Heritage Area also bring millions of local residents and non-local residents to the NHA. The direct impact of all Metropark users is **\$24.0 million**.¹²

FIGURE 1: OVERALL ECONOMIC IMPACT OF OHIO & ERIE CANALWAY NHA

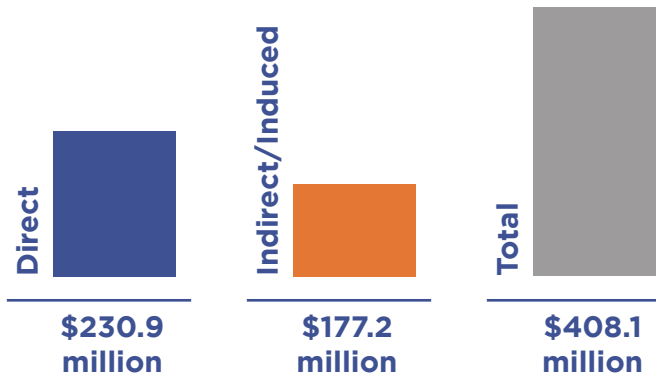


TABLE 3: OHIO & ERIE CANALWAY NHA - OVERALL ECONOMIC IMPACT

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Economic Impact	\$230,910,077	\$94,459,602	\$82,767,490	\$408,137,169
<i>Tourism</i>	\$219,054,862	\$90,094,594	\$78,066,840	\$387,216,261
<i>Operations</i>	\$1,047,835	\$267,633	\$497,973	\$1,813,440
<i>Grantmaking</i>	\$0	\$0	\$142,416	\$142,416
<i>Capital Projects</i>	\$10,807,416	\$4,097,375	\$4,060,261	\$18,965,052

The table below shows the top 10 sectors in the NHA region impacted by Ohio & Erie's activities and visitor (See Table 4).

TABLE 4: OHIO & ERIE CANALWAY NATIONAL HERITAGE AREA TOP 10 ECONOMIC IMPACT SECTORS

Industry	Economic Output
Limited-service restaurants	\$82,275,912
Hotels and motels, including casino hotels	\$71,702,480
Museums, historical sites, zoos, and parks	\$28,177,439
Real estate	\$22,490,676
Retail - Miscellaneous store retailers	\$20,158,103
Construction of other new nonresidential structures	\$10,807,416
Owner-occupied dwellings	\$9,450,316
Wholesale trade	\$9,077,507
Retail - Food and beverage stores	\$8,906,344
Transit and ground passenger transportation	\$7,914,574

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

12. Ohio & Erie Canalway NHA Metroparks impact was calculated based only on direct use value of visitors using three-year averages.

C. TOURISM IMPACT

The effects of visitation and tourism have the greatest economic benefit for the regions in which NHAs operate. NHAs play a substantial role in supporting and encouraging tourism within their regions. Tourism numbers are calculated by Ohio & Erie Canalway's regional partners. The three-year average total of visitors and tourists to Ohio & Erie Canalway region (with the exclusion of Metroparks) is 7,534,913 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 NHA region and its partner sites, \$408.1 million in economic benefit was supported annually within the region and state.

TABLE 5: OHIO & ERIE CANALWAY NATIONAL HERITAGE AREA ANNUAL ECONOMIC IMPACT OF TOURISM AND VISITATION

Visitor Segment	% of Total Visitation ¹³	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Local Day	60%	\$58,092,907	\$24,178,996	\$21,527,429	\$103,779,332
Non-Local Day	20%	\$22,689,831	\$9,670,360	\$8,642,647	\$41,002,838
Overnight	20%	\$138,272,088	\$56,245,238	\$47,896,763	\$ 242,414,090
Total	100%	\$219,054,826	\$90,094,594	\$78,066,840	\$387,216,261

TABLE 6: OHIO & ERIE CANALWAY NATIONAL HERITAGE AREA DIRECT ECONOMIC IMPACT OF METROPARKS

Visitor Segment	% of Total Visitation	Direct Effect
General Park Users	95.2%	\$22,304,621
Special Park Users	4.8%	\$1,678,441
Total	100%	\$23,983,062

The Ohio & Erie Canalway includes major parks and trails which are managed by Cleveland Metroparks, Summit Metro Parks, Stark Parks, and Tuscarawas County Park Department. These units annually draw 8,584,621 local visitors and tourists. The IMPLAN methodology cannot accurately incorporate their economic impact. However, a separate local study by TPL has concluded that these parks/trails provide a direct use value to local visitors, based on a "willingness to pay" scenario. When that formula is applied to these Ohio & Erie Canalway Metroparks visitors, it calculates an additional **\$24 million** direct impact.¹⁴

13. Visitation percentages for the Ohio & Erie Canalway were based on visitation statistics provided by Ohio Tourism in 2014 to better reflect visitation patterns for the Ohio & Erie Canalway NHA. For additional information, visit: <http://www.ohio.org/about-tourism-ohio>.

14. The Metroparks of the Ohio & Erie Canalway NHA were calculated separately from the total economic impact and measuring only the direct impact of the parks. Visitor percentages and spending patterns (ranging from \$2.73 to \$4.05 per day) were based off of "The Economic Benefits of Cleveland Metroparks," produced by the Trust for Public Land, October 2013. For additional information, visit page 20 of the report: <https://www.tpl.org/sites/default/files/local-cleveland-econbenefits.pdf>.

D. OPERATIONAL IMPACT

In addition to attracting visitors and promoting tourism in the region, the analysis quantifies the economic benefit of the Ohio & Erie Canalway NHA 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 NHA staff serve as independent catalysts for their regional economy.

**TABLE 7: OHIO & ERIE CANALWAY NATIONAL HERITAGE AREA
ANNUAL ECONOMIC IMPACT OF OPERATIONS**

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Operations	\$1,047,835	\$267,633	\$497,973	\$1,813,440

E. GRANTMAKING

The Ohio & Erie Canalway NHA 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 NHAs. 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. For the purposes of this study, grants are quantified as increased salary provided by the NHA within their region.

**TABLE 8: OHIO & ERIE CANALWAY NATIONAL HERITAGE AREA
ANNUAL ECONOMIC IMPACT OF GRANTMAKING**

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Grantmaking	\$0	\$0	\$142,416	\$142,416

The grantmaking activities of the Ohio & Erie Canalway NHA 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 NHA. While not accounted for in the overall economic impact of the NHA, the grantmaking of the Ohio & Erie Canalway NHA allowed for leveraged funding for projects and initiatives, contributing an **additional \$869,286 in economic impact**.

F. CAPITAL PROJECTS

Capital investment of the Ohio & Erie Canalway supports the creation of projects and sites within the NHA that allow for the further development of opportunities and mission expansion of the NHA. Similar to how tourism and operations support economic activity within the region, capital expenditures provide an infusion of funds to assist with the development of buildings, sites, and projects within the NHA.

**TABLE 9: OHIO & ERIE CANALWAY NATIONAL HERITAGE AREA
ANNUAL ECONOMIC IMPACT OF CAPITAL PROJECTS**

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Capital Projects	\$10,807,416	\$4,097,375	\$4,060,261	\$18,965,052

G. OVERALL EMPLOYMENT IMPACT

The Ohio & Erie Canalway NHA supports a substantial number of jobs in the region. The total employment impact is **4,200 jobs** (3,026 direct jobs and 1,174 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 NHAs.

FIGURE 2: OVERALL EMPLOYMENT IMPACT OF OHIO & ERIE CANALWAY NHA

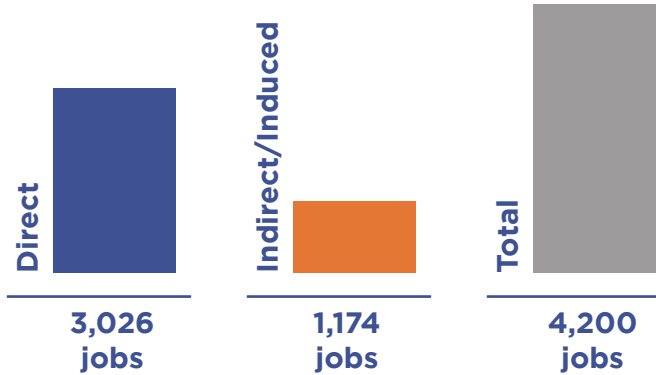


TABLE 10: OHIO & ERIE CANALWAY NHA - OVERALL EMPLOYMENT IMPACT

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Employment Impact	3,026 jobs	571 jobs	603 jobs	4,200 jobs
<i>Tourism</i>	2,945 jobs	544 jobs	569 jobs	4,058 jobs
<i>Operations</i>	9 jobs	2 jobs	4 jobs	15 jobs
<i>Capital Projects</i>	72 jobs	24 jobs	30 jobs	127 jobs

**Leveraged grantmaking contributes an additional 6 jobs to regional employment.*

The “Top Employment Sectors” table below illustrates the sectors with the largest number of jobs (includes direct, indirect and induced) supported by the Ohio & Erie Canalway NHA. 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 employment services are also supported by the spending attributable to the Ohio & Erie Canalway NHA.

TABLE 11: OHIO & ERIE CANALWAY NATIONAL HERITAGE AREA TOP 10 EMPLOYMENT IMPACT SECTORS

Industry	Jobs
Limited-service restaurants	1,111 jobs
Hotels and motel, including casino hotels	739 jobs
Retail - Miscellaneous store retailers	523 jobs
Museums, historical sites, zoos, and parks	328 jobs
Retail - Food and beverage stores	144 jobs
Transit and ground passenger transportation	112 jobs
Real estate	79 jobs
Retail - Gasoline stores	77 jobs
Construction of other new nonresidential structures	72 jobs
Full-service restaurants	44 jobs

H. GOVERNMENT REVENUE IMPACT

NHAs also support state and local governments with the generation of government revenue or tax revenue. As a result of the Ohio & Erie Canalway's attraction of visitors, operations, and capital activity, the NHA generates **\$34.7 million** in tax revenue annually (\$22.5 million direct taxes).

TABLE 12: OHIO & ERIE CANALWAY NHA – STATE AND LOCAL TAX IMPACT

Description	Employee Compensation	Tax on Production and Imports	Households	Corporations
Dividends				\$80,592
<i>Socials In Tax – Employee Contribution</i>	\$162,992			
<i>Social Ins Tax – Employer Contribution</i>	\$318,343			
<i>Tax on Production and Imports: Sales Tax</i>		\$14,491,765		
<i>Tax on Production and Imports: Property Tax</i>		\$11,280,935		
<i>Tax on Production and Imports: Motor Vehicle License</i>		\$287,402		
<i>Tax on Production and Imports: Severance Tax</i>		\$7,678		
<i>Tax on Production and Imports: Other Taxes</i>		\$2,633,439		
<i>Tax on Production and Imports: S/L NonTaxes</i>		\$201,742		
<i>Corporate Profits Tax</i>				\$239,274
<i>Personal Tax: Income Tax</i>			\$4,107,095	
<i>Personal Tax: NonTaxes</i>			\$567,990	
<i>Personal Tax: Motor Vehicle License</i>			\$183,775	
<i>Personal Tax: Property Taxes</i>			\$71,323	
<i>Personal Tax: Other Tax (Fish/Hunt)</i>			\$54,131	
Total	\$481,335	\$28,902,961	\$4,984,314	\$319,867

OVERALL IMPACT: \$34,688,477

I. VOLUNTEER IMPACT

It is estimated that volunteers at sites throughout the NHA generate over **\$250,000** annually as a result of their volunteer services.¹⁵ Volunteers at the Ohio & Erie Canalway NHA give their time to helping to keep the canal clean by collecting trash from various sites along the canalway, helping with the construction of the Towpath trail extension, and giving their time to various NHA sponsored events throughout the year. These benefits are in addition to the **\$408.1 million** annual impact generated by the NHA.

15. Primary data about number of volunteers and hours volunteered was provided to Tripp Umbach by the Ohio & Erie Canalway NHA. 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 Ohio & Erie Canalway NHA serves as a vital part of the local and regional economy contributing millions of dollars annually and sustaining jobs.

- **Ohio & Erie Canalway National Heritage Area** (OH) generates **\$408.1 million** in economic impact, supports **4,200 jobs**, and generates **\$34.7 million** in tax revenue. The Metroparks of the Ohio & Erie Canalway NHA generate an additional direct impact of **\$24.0 million**.

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. Ohio & Erie Canalway NHA also utilized visitor count information from Ohio Tourism 2014 figures.

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.^{16,17} 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.

16. 2013 National Park Visitor Spending Effects, Economic Contributions to Local Communities, States, and the Nation. July 2014.

17. Visitation percentages for the Ohio & Erie Canalway were based on visitation statistics provided by Ohio Tourism in 2014 to better reflect visitation patterns for the Ohio & Erie Canalway NHA. For additional information, visit: <http://www.ohio.org/about-tourism-ohio>.

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.¹⁸

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.¹⁹

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.

18. 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>.

19. 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. Ohio & Erie Canalway NHA visitor data was also based on visitation statistics provided by Ohio Tourism 2014 to better reflect visitation patterns of the NHA.^{20, 21} 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 13: Visitor Spending by Segment.

TABLE 13: VISITOR SPENDING BY SEGMENT

Visitor Segment	% of Total Visitation*	Average Daily Spending
Local Day²²	60%	\$40.72
Non-Local Day²³	20%	\$64.79
Overnight²⁴	20%	\$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.²⁵ 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.²⁶

20. 2013 National Park Visitor Spending Effects, Economic Contributions to Local Communities, States, and the Nation. July 2014.

21. For Ohio Tourism 2014 visitation data, please visit <http://www.ohio.org/about-tourism-ohio>.

22. 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.

23. 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.

24. 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.

25. 2013 National Park Visitor Spending Effects, Economic Contributions to Local Communities, States, and the Nation. July 2014.

26. 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 14: 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 15: Spending Estimates by Sector Type. The Ohio & Erie Canalway NHA also utilized visitor count information from Ohio Tourism 2014 figures.

TABLE 15: 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.²⁷

27. 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. The Ohio & Erie Canalway NHA also utilized visitor count information from Ohio Tourism 2014 figures.

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.²⁸ 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.²⁹ Finally, the report provides recommendations based on the current protocol as a means to seek to improve future analysis and development.³⁰

28. 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.

29. 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.

30. 2013 National Park Visitor Spending Effects, Economic Contributions to Local Communities, States, and the Nation. July 2014.

ACKNOWLEDGEMENTS

This report has been prepared to provide information demonstrating the economic benefits supported by National Heritage Areas in the United States. Funding for this study was provided by the **Heritage Partnership Program Funds**.

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Special thanks given to the Ohio & Erie Canalway National Heritage Area and its partners for their participation in this report:

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