

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

NATIONAL COAL HERITAGE AREA  
JANUARY 2017

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## INTRODUCTION

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

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

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

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 National Coal Heritage Area (NCHA) study shows:

- **National Coal Heritage Area** generates **\$207.0 million** in economic impact, supports **2,744 jobs**, and generates **\$16.8 million** in tax revenue.

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# NHAs SUPPORT REGIONAL ECONOMIES

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**NATIONAL COAL HERITAGE AREA**  
GENERATES **\$207.0 MILLION** IN ECONOMIC IMPACT



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SUPPORTS **2,744** JOBS



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GENERATES  
**\$16.8 MILLION**  
IN TAX REVENUE.

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## PROJECT OVERVIEW

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

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

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

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

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

### NATIONAL COAL HERITAGE AREA – QUICK FACTS

- National Park Service Northeast Region
- 13 counties in West Virginia
- 5,801 square miles

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

The objectives of each NHA are connected by their federal designation and mission.<sup>2</sup> Similarities do exist and the impact study attempts to illustrate this by identifying the areas (visitor, operational, grantmaking, and capital funding) where NHAs have the greatest economic value to their local regions and states.

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

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

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

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

**Operational Expenditures:** These expenditures are the economic impact of the NHA's organizational spending and staff. This refers to the day-to-day spending of the NHA, such as

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

<sup>3</sup> The analysis of visitor spending includes local spending estimates.

wages, rent, and professional fees paid by the NHA on an annual basis are included in this segment.

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

NHAs also provide intangible benefits that are not able to be quantified. Knowledge sharing, facilitating collaborative partnerships, and increasing the quality of life are elements that each NHA brings to its community. While these critical concepts 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 NHAs have on the regions they are located in, Tripp Umbach conducted stakeholder interviews for each of the NHA sites. Tripp Umbach interviewed community leaders and representatives of organizations that have knowledge of the mission of each NHA. These stakeholders were asked a series of questions to determine the strengths of the NHA and the most important key messages regarding the NHA's economic and community impact.

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

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

## I. NATIONAL COAL HERITAGE AREA AUTHORITY

### A. OVERVIEW OF NATIONAL COAL HERITAGE AREA AUTHORITY



The National Coal Heritage Area (NCHA) encompasses 13 counties in southern West Virginia and works to preserve and interpret coal resources in the region. The NCHA is the result of legislation and hard work by both lawmakers and experts. The National Coal Heritage Area Act was first passed in 1996 and a board of experts, meant to assist in the

development of the heritage area, was established in 1999. This culminated in 2002 in the creation of the National Coal Heritage Area Authority: a state agency that serves as the management entity for the NCHA. Since that time, the NCHA has been a driver of economic development in the region and worked to transform communities through preservation and celebration of the storied history of the coal area.

The NCHA serves as an economic boost for an ailing region, bringing in tourism dollars and working collaboratively with local authorities to transform towns. Several activities and attractions draw in tourists – among them are the Beckley Exhibition Coal Mine, Coal Heritage Trail, and the Coal Heritage Interpretive Center. Visitors, specifically those from out-of-state, create a significant value-added that would otherwise not exist without the NCHA. Additionally, the NCHA works closely with local businesses and provides expertise to organizations regarding state and federal programs.

Tourism dollars resulting from the NCHA's activities and programming is helping to

### **“SPOTLIGHT” PROJECT – COAL HERITAGE DISCOVERY CENTER**

The Coal Heritage Discovery Center involves the continued restoration and adaptive reuse of a commercial building located in the national register historic district of the City of Mount Hope in Fayette County. The building will serve as a visitor and interpretive center for the traveling public as well as functioning as a cultural center for the community and serving as a catalyst for the revitalization of the community.

When completed the Coal Heritage Discovery Center will serve as the heritage tourism gateway to the southern coalfields, engaging visitors in the important and complex history of the development of a region and its people. Programming for the completed facility will include visual and performing arts presentations, educational programs including school programs and lectures, and exhibits of historical photographs and artifacts.

replace the sharp decline in coal severance taxes, serving as a lifeline for local communities in southern West Virginia.

The economic benefits, while vital for the region, are not the only purpose of the NCHA. Central to the mandate of the NCHA is preservation and celebration of the history of coal in the area. Between 1950 and 2000, southern West Virginia's population decreased by one-third as unemployed miners and their families sought opportunities elsewhere. Recent economic distress caused by the Great Recession and a coal industry in decline has continued this trend and the legacy of coal could have been forgotten with the passage of time. The NCHA works to ensure that the stories of miners and a once-booming region remain intact. Throughout the 187 rugged miles of the NCHA, visitors can view the remnants of coal miners' homes, company stores, offices, and railroad yards. These remnants serve as reminders of the thousands of miners that labored to keep an industrialized nation at the forefront of progress. Coal from southern West Virginia was vital during the industrialization of the United States and in the war efforts of the early twentieth century. Thanks to the NCHA, this proud legacy of a working-class culture and industrial might will be preserved for future generations.

The NCHA is committed to preserving and protecting the history of coal in southern West Virginia. Whether creating recreational opportunities, such as the Coal Heritage Geocache Trail and Guyandotte Water Trail, working with local businesses, or providing knowledge of state and federal programs to local organizations, the NCHA serves as a buffer for the region's residents to the economic difficulties brought on by changing times. The NCHA's activities are helping local communities transform themselves and create new identities that were once focused on coal mining. Preserving the history of this region provides not only economic benefits, but protects a proud legacy for residents' children and grandchildren and many generations to come.

## **B. OVERALL ECONOMIC IMPACT**

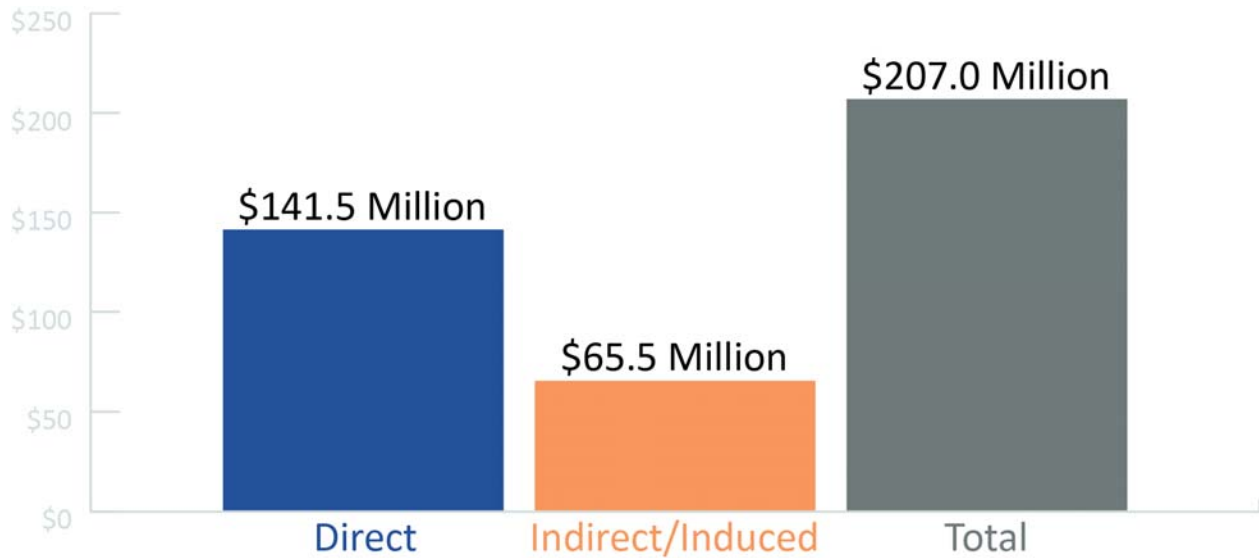
The economic impact of the NCHA is **\$207 million annually**. This economic impact consists of four main components: tourism (\$205.3 million), operations (\$1.1 million), grantmaking activities (\$419,000), and capital expenditures (\$238,000) (See Figure 1 and Table 1).<sup>4</sup>

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



**FIGURE 1. OVERALL ECONOMIC IMPACT**



**TABLE 1. OVERALL ECONOMIC IMPACT**

|                         | Direct Effect        | Indirect Effect     | Induced Effect      | Total Effect         |
|-------------------------|----------------------|---------------------|---------------------|----------------------|
| <b>Economic Impact</b>  | <b>\$141,548,189</b> | <b>\$31,075,671</b> | <b>\$34,428,071</b> | <b>\$207,051,931</b> |
| <i>Tourism</i>          | <i>\$140,389,439</i> | <i>\$30,706,964</i> | <i>\$34,174,420</i> | <i>\$205,270,819</i> |
| <i>Operations</i>       | <i>\$724,549</i>     | <i>\$288,561</i>    | <i>\$111,006</i>    | <i>\$1,124,116</i>   |
| <i>Grantmaking</i>      | <i>\$273,201</i>     | <i>\$45,054</i>     | <i>\$100,947</i>    | <i>\$419,202</i>     |
| <i>Capital Projects</i> | <i>\$161,000</i>     | <i>\$35,093</i>     | <i>\$41,699</i>     | <i>\$237,792</i>     |

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

**TABLE 2. TOP 10 ECONOMIC IMPACT SECTORS**

| Industry                                    | Economic Output |
|---|-----------------|
| Hotels and motels, including casino hotels  | \$57,878,960    |
| Full-service restaurants                    | \$33,643,722    |
| Limited-service restaurants                 | \$15,216,164    |
| Other amusement and recreational industries | \$14,812,785    |
| Retail – Miscellaneous store retailers      | \$10,189,883    |
| Real estate                                 | \$5,961,692     |
| Owner-occupied dwellings                    | \$5,756,098     |
| Transit and ground transportation           | \$4,794,278     |
| Retail – Food and beverage stores           | \$3,840,517     |
| Retail – Gasoline stores                    | \$3,060,875     |

*The components of the economic impact are broken out below.*

### C. TOURISM IMPACT

The effects of visitation and tourism have the greatest economic benefit for the regions in which NHAs operate. NHAs play a substantial role in supporting and encouraging tourism within their regions. Tourism numbers are calculated by NCHA’s regional partners. The three-year average total of visitors and tourists to the NCHA region is approximately 1.4 million visitors.<sup>5</sup> 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, more than \$205.3 million in economic benefit was supported annually within the region and state through tourism (See Table 3).

**TABLE 3. ANNUAL ECONOMIC IMPACT OF TOURISM AND VISITATION**

| Visitor Segment | % of Total Visitation | Direct Effect        | Indirect Effect     | Induced Effect      | Total Effect         |
|-----------------|-----------------------|----------------------|---------------------|---------------------|----------------------|
| Local Day       | 19%                   | \$6,519,921          | \$1,326,170         | \$1,655,834         | \$9,501,975          |
| Non-Local Day   | 41%                   | \$22,010,293         | \$4,542,502         | \$5,613,295         | \$32,166,090         |
| Overnight       | 40%                   | \$111,859,225        | \$24,838,291        | \$26,905,241        | \$163,602,757        |
| <b>Total</b>    | <b>100%</b>           | <b>\$140,389,439</b> | <b>\$30,706,964</b> | <b>\$34,174,419</b> | <b>\$205,270,822</b> |

The economic spending analysis demonstrates that within the region, visitors traveling from outside the region and staying overnight represent the largest economic benefit to the economy of the local region and the state. Although overnight visitors only comprise an estimated 40 percent of NHA visitation, overnight visitors account for close to 80 percent of the economic benefit of the NHA. This is primarily driven by the increased amount of fresh dollars from outside the region spent on lodging, accommodations, restaurants, transportation, etc.

<sup>5</sup> Annual tourism projections were utilized from 2013, 2014, and 2015.

#### D. OPERATIONAL IMPACT

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

**TABLE 4. ANNUAL ECONOMIC IMPACT OF OPERATION**

|                   | Direct Effect | Indirect Effect | Induced Effect | Total Effect       |
|-------------------|---------------|-----------------|----------------|--------------------|
| <b>Operations</b> | \$724,549     | \$288,561       | \$111,006      | <b>\$1,124,116</b> |

#### E. GRANTMAKING

The NCHA 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 (See Table 5).

**TABLE 5. ANNUAL ECONOMIC IMPACT OF GRANTMAKING**

|                    | Direct Effect | Indirect Effect | Induced Effect | Total Effect     |
|--------------------|---------------|-----------------|----------------|------------------|
| <b>Grantmaking</b> | \$273,201     | \$45,054        | \$100,947      | <b>\$419,202</b> |

The grantmaking activities of the NCHA 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 NCHA, the grantmaking of the NHA allowed for leveraged funding for projects and initiatives, contributing an additional \$375,000 in economic impact.

#### F. CAPITAL PROJECTS

Capital investment of the NCHA 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 projects provide an infusion of funds to assist with the development of buildings, sites, and projects within the NCHA (See Table 6).

**TABLE 6. ANNUAL ECONOMIC IMPACT OF CAPITAL PROJECTS**

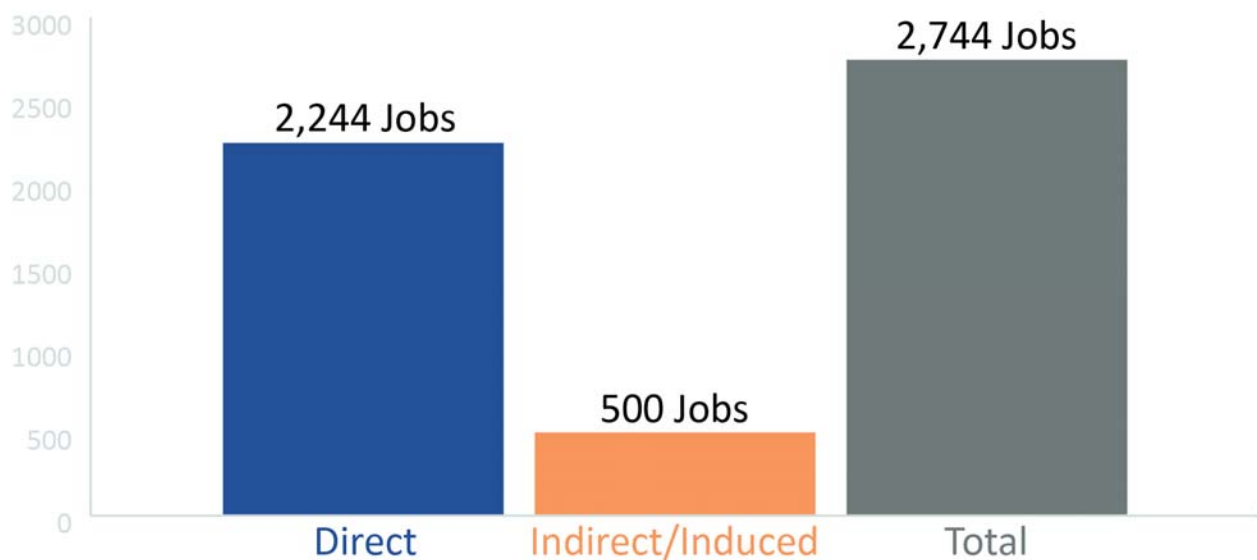
|                         | Direct Effect | Indirect Effect | Induced Effect | Total Effect     |
|-------------------------|---------------|-----------------|----------------|------------------|
| <b>Capital Projects</b> | \$161,000     | \$35,093        | \$41,699       | <b>\$237,791</b> |

## G. OVERALL EMPLOYMENT IMPACT

The NCHA supports a substantial number of jobs in the region. The total employment impact is **2,744 jobs** (2,244 direct jobs and 500 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 (See Figure 2 and Table 7).

**FIGURE 2. OVERALL EMPLOYMENT IMPACT**



**TABLE 7. OVERALL EMPLOYMENT IMPACT**

|                         | Direct Effect     | Indirect Effect | Induced Effect  | Total Effect      |
|-------------------------|-------------------|-----------------|-----------------|-------------------|
| <b>Economic Impact</b>  | <b>2,244 jobs</b> | <b>218 jobs</b> | <b>282 jobs</b> | <b>2,744 jobs</b> |
| <i>Tourism</i>          | <i>2,228 jobs</i> | <i>215 jobs</i> | <i>280 jobs</i> | <i>2,723 jobs</i> |
| <i>Operations</i>       | <i>10 jobs</i>    | <i>2 jobs</i>   | <i>1 job</i>    | <i>13 jobs</i>    |
| <i>Grantmaking</i>      | <i>5 jobs</i>     | <i>0 jobs</i>   | <i>1 job</i>    | <i>6 jobs</i>     |
| <i>Capital Projects</i> | <i>1 job</i>      | <i>1 job</i>    | <i>0 jobs</i>   | <i>2 jobs</i>     |

The “Top Employment Sectors” table below illustrates the sectors with the largest number of jobs (includes direct, indirect, and induced) supported by the NCHA (See Table 8). 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 transit also are supported by the spending attributable to the NCHA.

**TABLE 8. TOP EMPLOYMENT IMPACT SECTORS**

| Industry                                  | Jobs     |
|---|----------|
| Full-service restaurants                  | 683 jobs |
| Hotels and motel, including casino hotels | 609 jobs |
| Limited-service restaurants               | 284 jobs |
| Retail – Miscellaneous store retailers    | 281 jobs |
| Other amusement and recreation industries | 250 jobs |
| Transit and ground transportation         | 70 jobs  |
| Retail – Food and beverage stores         | 60 jobs  |
| Retail – Gasoline stores                  | 47 jobs  |
| Real estate                               | 31 jobs  |
| Other accommodations                      | 21 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 NCHA’s attraction of visitors, operations, and capital activity, the NHA generates over **\$16.8 million** in tax revenue annually (\$12.9 million direct taxes) (See Table 9).

**TABLE 9. STATE AND LOCAL TAX IMPACT**

| Description  | Employee Compensation | Tax on Production and Imports | Households         | Corporations     |
|--|-----------------------|-------------------------------|--------------------|------------------|
| Dividends  |                       |                               |                    | \$14,714         |
| Social Ins Tax – Employee Contribution               | \$55,017              |                               |                    |                  |
| Social Ins Tax – Employer Contribution               | \$106,367             |                               |                    |                  |
| Tax on Production and Imports: Sales Tax             |                       | \$7,990,608                   |                    |                  |
| Tax on Production and Imports: Property Tax          |                       | \$4,066,140                   |                    |                  |
| Tax on Production and Imports: Motor Vehicle License |                       | \$114,007                     |                    |                  |
| Tax on Production and Imports: Severance Tax         |                       | \$1,589,762                   |                    |                  |
| Tax on Production and Imports: Other Taxes           |                       | \$758,248                     |                    |                  |
| Tax on Production and Imports: S/L NonTaxes          |                       | \$100,141                     |                    |                  |
| Corporate Profits Tax                                |                       |                               |                    | \$222,463        |
| Personal Tax: Income Tax                             |                       |                               | \$1,575,716        |                  |
| Personal Tax: NonTaxes                               |                       |                               | \$148,888          |                  |
| Personal Tax: Motor Vehicle License                  |                       |                               | \$60,680           |                  |
| Personal Tax: Property Taxes                         |                       |                               | \$20,620           |                  |
| Personal Tax: Other Tax (Fish/Hunt)                  |                       |                               | \$322              |                  |
| <b>Total</b>   | <b>\$161,384</b>      | <b>\$14,618,906</b>           | <b>\$1,806,227</b> | <b>\$237,177</b> |
| <b>Overall Impact: \$16,823,694</b>                  |                       |                               |                    |                  |

## I. VOLUNTEER IMPACT

It is estimated that volunteers at sites throughout the NHA generate more than **\$115,000 annually** as a result of their volunteer services.<sup>6</sup> Volunteers at the NCHA give their time to helping in the preservation and development of various sites and communities within the heritage area region. In addition, the National Coal Heritage Area provides Volunteers in Service to America (\*VISTA) resources to organizations within the NHA that demonstrate an anti-poverty focus. These volunteer benefits are in addition to the **\$207.0 million annual impact** generated by the NHA.

<sup>6</sup> Primary data about number of volunteers and hours volunteered was provided to Tripp Umbach by the National Coal Heritage Area. A conservative assumption of \$23.56 per hour was used to calculate the value of volunteer services. This amount was calculated independently by the Points of Light Foundation.

## CONCLUSION

NHAs are valuable economic contributors to the local regions in which they operate. The partnerships they create and facilitate, and the efforts put forth by each to attract visitors, create economic development, and preserve the culture, history, and assets of their regions truly make a difference in local communities. The National Coal Heritage Area (WV) serves as a vital driver in the local and regional economy, contributing millions of dollars annually and sustaining thousands of jobs.

- **National Coal Heritage Area (WV)** generates **\$207.0 million** in economic impact, supports **2,744 jobs**, and generates **\$16.8 million** in tax revenue.

## APPENDIX A: GLOSSARY OF TERMS

|                                  |   |
|----------------------------------|---|
| <b>Study Year</b>                | Three Year Average of 2013, 2014, and 2015  |
| <b>Total Economic Impact</b>     | 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.   |
| <b>Direct Economic Impact</b>    | <p>Direct impact includes items such as operational spending, spending by visitors to the NHA, and grantmaking/capital expenditures.</p> <p>For example, the economic impact of visitors to NHAs is the primary source of economic benefit to the regions in which NHAs operate. The direct consequence of travel expenditures become business receipts which in turn are used to pay wages and salaries and taxes.</p>   |
| <b>Indirect Economic Impact</b>  | <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> |
| <b>Induced Economic Impact</b>   | 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.  |
| <b>Direct Employment</b>         | Total number of jobs created in the economy as a result of operations, tourist spending and grantmaking activities.   |
| <b>Indirect Employment</b>       | 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.  |
| <b>Multiplier Effect</b>         | 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.  |
| <b>Government Revenue Impact</b> | 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 this report 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.<sup>7</sup> Day visitors were more likely to make the trip specifically to visit the heritage area attraction than visitors on overnight trips. The report identifies these limitations and the effect they have on the analysis. Collecting visitor data is a challenge to the existing resources of NHAs. Approximations of visit data for different facilities may not be completely consistent and vary considerably. As with all economic impact assessments, data utilized and estimates should be viewed as estimates based on the best information presently available.

Tripp Umbach based visitor and general tourist spending patterns on National Park Visitor Spending estimates established in 2015.<sup>8</sup> The use of a secondary source provides the analysis with a research-based assumption that can be readily duplicated in future years for additional impact studies.

The bulk of economic activity supported by NHAs is accounted by the spending of visitors to NHAs. The type of visitor can be segmented into specific groups 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

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

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

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

## ECONOMIC ANALYSIS PROCESS

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

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 the NHA operates. The **direct** consequence of travel expenditures become business receipts which in turn are used to pay wages and salaries and taxes.

**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

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

effects refer to money recirculated through the spending patterns of households causing further local economic activity.

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

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

### ***Step One – Data Collection***

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

### ***Step Two – Visitation inputs***

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

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

Annual visitation averages are applied to three specific visitor segments approximated from national NPS visitor information data.<sup>10</sup> The segments identified within qualitative interviews with NHA site directors and stakeholders as the most likely visitors to NHAs are local day, non-

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<sup>10</sup> Thomas, Catherine C. and Lynne Koontz. 2015 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation. April 2016.

local day, and overnight visitors. The percentage of the overall visitors and their respective segments are represented in the following table (See Table 10).

**TABLE 10. VISITOR SPENDING BY SEGMENT**

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

Each of the visitor segments spends varying amounts of money while visiting the NHA region. The spending estimates of these groups are then applied to spending averages from the 2015 National Park Service (NPS) spending study.<sup>11</sup> The ratio of visitors and spending averages are then calculated to provide total spending estimates for each segment and for each specific type of spending associated with visitation and tourism (See Table 11).<sup>12</sup>

**TABLE 11. SPENDING ESTIMATES BY VISITOR TYPE**

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

Each spending category has an associated IMPLAN code for which it is related to within the IMPLAN software (See Table 12).

<sup>11</sup> Ibid.

<sup>12</sup> 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 SECTOR TYPE**

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

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

Economic impact measures attempt to estimate the likely losses in economic activity to the region in the absence of the heritage site. Should the heritage area and its partners not be available, it is assumed that local residents would spend the money on other local activities, while visitors from outside the region would not have made a trip to the region. Based on visitors sampled at heritage areas, approximately two-thirds of the associated economic impacts would be lost to the regions in the absence of the heritage attractions. The largest impacts result from overnight visitors staying in local lodging establishments. Local resident spending is included in the economic benefits measures, as this captures all economic activity associated with heritage area visits. Spending by local residents on visits to heritage areas does not represent new money to the region.<sup>13</sup>

### ***Step Three – Operational Impacts***

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

<sup>13</sup> The economic effect of NHAs is an overall contribution to their regional economies. Though local visitor spending is not considered within a marginal analysis due to the fact local residents have choices on where they spend their money within the region, in a contribution sense, residents of the local area do make choices to spend money in the local NHA region due to the NHAs mission fulfillment of preservation and education. In a contribution sense, this economic effect does benefit the regional economy.

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

#### ***Step Four – Grant Funding and Support***

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

#### ***Step Five – Capital Specific Funding***

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

## ACKNOWLEDGEMENTS

This report has been prepared to provide information demonstrating the economic benefits supported by the National Coal Heritage Area. Funding for this study was provided by the Heritage Partnership Program Funds.

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The logo for the National Coal Heritage Area Authority (ANHA) features the letters "ANHA" in a large, bold, serif font. A five-pointed star is positioned between the "N" and the "H".