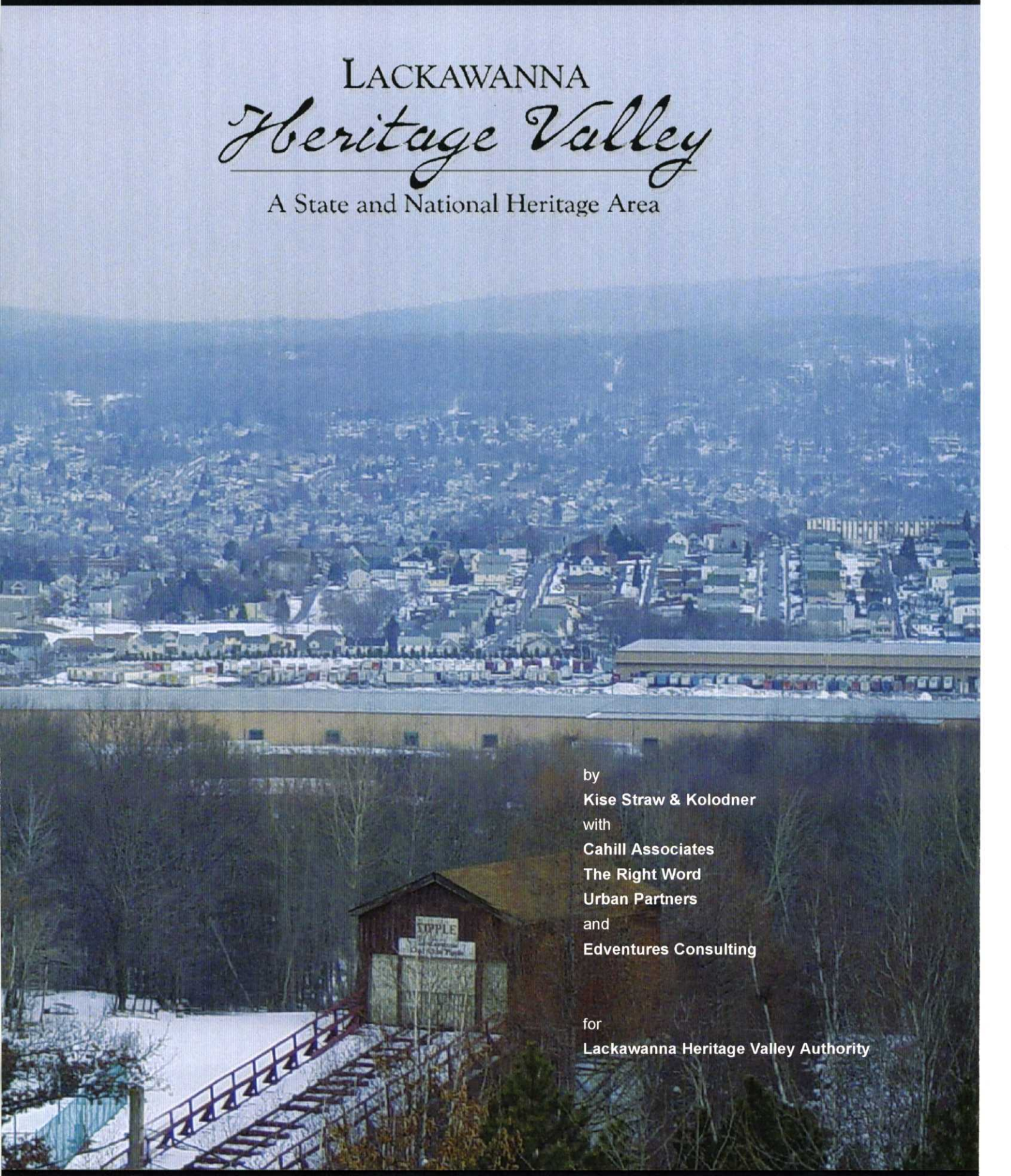
LACKAWANNA *Heritage Valley*

A State and National Heritage Area



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for
Lackawanna Heritage Valley Authority

March 2004

Lackawanna Heritage Valley

Environmental Impact Statement and Management Action Plan

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Introduction

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- The Lackawanna Heritage Valley
- Plans and Accomplishments
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THE LACKAWANNA HERITAGE VALLEY

The Lackawanna Heritage Valley was a great, integrated industrial system designed to extract, process and transport the anthracite coal that fueled the building of America. The mechanical elements of the system, the mines and works, the rails and mills, were abandoned piecemeal when their usefulness was done. But the organic element of the system, the people, rich in character, resilience and enterprise, survives. The people of the Heritage Valley today shape a new era of reclamation based on community, heritage and the natural environment. - Core Message, 2004 Management Action Plan

The story of the anthracite region in Northeast Pennsylvania encapsulates the story of America's rise to industrial pre-eminence. The region's anthracite coal fueled the nation's massive industrial expansion, its industry staged some of the great battles between capitalism and social responsibility, and its people - immigrants who came to find a better life - ended up founding a nation.

Anthracite coal burns longer and hotter than wood and other fuels available in the 1800s, and its abundant amounts (80% of the world's supply is in Pennsylvania) in locations close to major industrial markets led to its rise as the fuel for home and manufacturing uses. Anthracite allowed a rapid growth in iron production, benefiting the railroad industry, and other fuel intensive industries such as textile and food production. As such, the Lackawanna Heritage Valley played a pre-eminent role in the creation of the American economy prior to World War I.

The enormous growth in mining and transporting anthracite created boom towns throughout the Heritage Valley, inhabited by groups of wealthy industrialists and an ethnically diverse workforce, largely consisting of recent immigrants. These residents gave character to the boom towns, creating lively entertainment and commercial districts, building splendid architectural expressions of faith and community, and bringing special traditions and cultures together in a unique mix. At the same time, clashes between laborers and capitalists also led to the Lackawanna Heritage Valley playing a central role in shaping labor unionism and labor policy in the United States. With the advent of cheaper fuels and imports, the coal and other industries in the Heritage Valley began a slow de-industrialization. Now,

Downtown Scranton, 1912 Library of Congress

LHVA's Environmental Fair Lackawannna Heritage Valley Authority (LHVA) Photograph

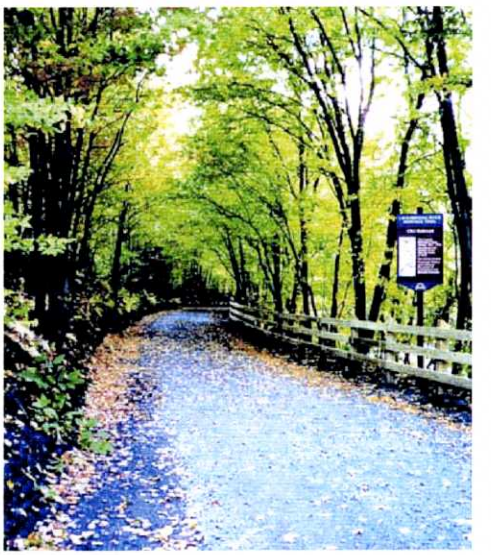
as the resolute residents continue to forge a new future, they look to the importance of their story to guide them. Indeed, the story of the Lackawanna Heritage Valley is so important to the history of Pennsylvania and the United States that several decades of effort has led to the establishment of the Lackawanna Heritage Valley as both a State and National Heritage Area. The following abbreviated chronology demonstrates the evolution of this designation:

- 1972: The National Park Service (NPS) conducts the "New Area Study - Master Plan for a Proposed Cultural Coal Park" before the heritage park concept was developed. Phase I of the plan recommended that the project center around the anthracite industry in the Lackawanna Valley.
- 1984: Pennsylvania considers creating a statewide heritage park system based upon a study called "Pennsylvania Heritage Park: a Concept with Applications." The Lackawanna Valley is recommended as a potential corridor.
- 1986: Congress designates the Delaware, Lackawanna and Western Railyards as Steamtown National Historic Site after local citizens bring a large collection of steam engines and rolling stock to Scranton.
- 1988: The Steamtown Comprehensive Management Plan recommends that a heritage park be developed.
- 1990: The Lackawanna Heritage Valley is designated as one of the first Pennsylvania State Heritage Park Planning Areas.
- 1991: The "Plan for the Lackawanna Heritage Valley" is completed.
- 2000: The Lackawanna Heritage Valley is designated in bill H.R. 940 as a National Heritage Area by Congress. The Heritage Valley becomes one of 23 nationally designated heritage areas and is eligible to receive federal funding through the NPS.
- 2001: The Management Plan Update, a strategic plan looking to the future, is completed.

The Lackawanna Heritage Valley, as designated in 1990, consists of the area within the Lackawanna River watershed, which is mostly in Lackawanna County but contains portions of Luzerne, Susquehanna, and Wayne Counties (see Map I-1). The major center with the Heritage Valley is the city of Scranton, while others include Forest City, Carbondale, Mayfield, Jermyn, Archbald, Jessup, Blakely, Olyphant, Dunmore, Taylor, and parts of Pittston.

PLANS AND ACCOMPLISHMENTS

The creation of the Lackawanna Heritage Valley was accompanied by the 1991 Plan for the Lackawanna Heritage Valley, which laid out a plan to initiate a regional heritage tourism effort. Many of the ideas in this plan have been carried forward and continue to guide planning efforts. The 1991 Plan also created the basic interpretive framework still in use today when it declared that everything in the Heritage Valley falls under three themes: THE LAND, and how it shaped development of the region; THE INDUSTRY, its workings and unworkings; and THE PEOPLE, who lived, worked, and grew with the places they inhabited. Key development initiatives that started with the 1991 Plan include tying the Heritage Valley communities together via connections along the Lackawanna River, creating a regional Visitors Center, and connecting existing heritage attractions together with road signage and specialized transportation. Also present in the 1991 Plan and subsequent plans are suggestions for a series of programs intended to protect natural and cultural resources, improve local history education, and promote local culture. The Lackawanna Heritage Valley Authority (LHVA) was then created to manage the Heritage Area and implement the plan. Over the past 12 years, the LHVA has accumulated



Lackawanna River Heritage Trail Lackawannna Heritage Valley Authority (LHVA) Photograph

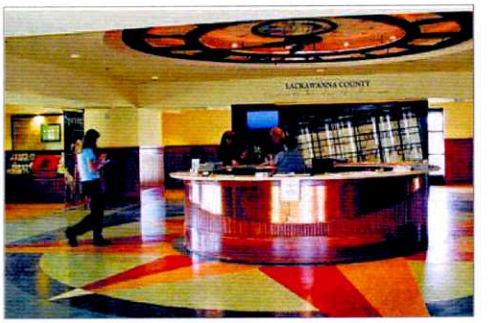
an impressive list of accomplishments. Physical developments include an attractive new Lackawanna County Visitors Center, new centerpiece train stations in four Heritage Valley towns, the beginnings of a 40-mile long Heritage Trail along the Lackawanna River, a new museum dedicated to Scranton's pioneering history of trolleys, a directional signage system in downtown Scranton, and plans for a Heritage Interpretive Center and trolley link from the Visitors Center to downtown Scranton. A variety of educational and interpretive programs, including the "Stories from the Mines" documentary, teacher curriculum guides, the Young Peoples Heritage Festival programs, environmental fairs and career forums, and walking tours have illustrated the importance of the region's past to children and adults, residents and visitors alike. To further conservation, the LHVA sponsored a Natural Areas Inventory, a Folklife Resources survey, and two Heritage Development Plans for local towns. In addition, the LHVA has helped sponsor many community and ethnic festivals, economic development initiatives, and has maintained a strong unity and sense of cooperation between the region's heritage and tourism attractions and entities.

In 2001, a Management Plan Update was completed with the purpose of assessing the previous decade's accomplishments and re-examining its focus. The Update presented Core Commitments that continue to guide LHVA's efforts:

- Facilitate partnerships and strengthen local capacity
- Tell the Heritage Valley's story
- Preserve and enhance the physical character and economic vitality of Heritage Valley communities
- Improve the visitor experience
- Reconnect communities to the Lackawanna River

THIS AND OTHER PLANNING EFFORTS

As a result of the 2001 Update's Core Commitments and the federal designation as a National Heritage Area, the LHVA intends to focus heavily on interpretation, education, and improving the visitor experience. This EIS and Management Action Plan, required as a result of the federal designation, builds on the previous two plans, and reflects this new focus. An Interpretive Plan (Appendix C) and an Education Plan (Appendix D) inform and guide the recommendations of the Management Action Plan, which appears at the end of Part II.



Lackawanna County Visitors Center LHVA photograph

The previous two management action plans are not the only planning efforts to guide this Management Action Plan. A host of other plans for the region were consulted so that any recommendations would be congruent with other established goals and principles. These plans, which are referenced throughout the EIS and Management Action Plan, include the following:

- Lackawanna Heritage Valley Rails-to-Trails Inventory and Recommendations, 1992
- Lackawanna River Greenway River Park and Trail Plan, 1993
- Olyphant Heritage Development Strategy, 1994
- Carbondale Center Heritage Plan, 1994
- Lackawanna Heritage Valley Folklife Resources Survey, 1996
- Lackawanna County Natural Areas Inventory, 1997
- Lackawanna River Watershed Conservation Plan, 2001
- US Army Corp Engineers 206 Ecosystem Restoration Report Phase I, 2001
- Upper Lackawanna Watershed Conservation Management Plan, 2003
- Lackawanna/Luzerne Bi-County Open Space Plan (Draft), 2003

These plans all contain recommendations that strongly reinforce each other. Common themes include emphasis on restoring and protecting natural areas and water resources, promoting restoration and reuse of historic and cultural resources, and creating recreational and non-automobile connections between existing communities. The recommendations contained in this Management Action Plan are influenced by this common vision, and further reinforce it.

Part I:

Purpose and Need for Action

CONTENTS

- Introduction
- Enabling Legislation
- Cultural Resources and Their Period of Significance
- The Planning Process and Public Involvement
- Planning Issues

INTRODUCTION

Part I of an Environmental Impact Statement provides an overview of the purpose and need of the proposed action - the approval and adoption of a management action plan for the Lackawanna Heritage Valley, as required by its federal designation as a National Heritage Area. Part I also describes the Lackawanna Heritage Valley's critical resources, the process of engaging the public in creating the plan and EIS, and the relevant issues that affect the resources and the formation of the plan.

The National Park Service NPS has advised the Lackawanna Heritage Valley Authority (LHVA) that neither the 1991 plan nor the 2001 update contained an Environmental Impact Statement (EIS) as required by the national Environmental Policy Act (NEPA) of 1969. Therefore, the Scope of Work for a Management Action Plan/EIS for the Lackawanna Heritage Valley National Heritage Area stated:

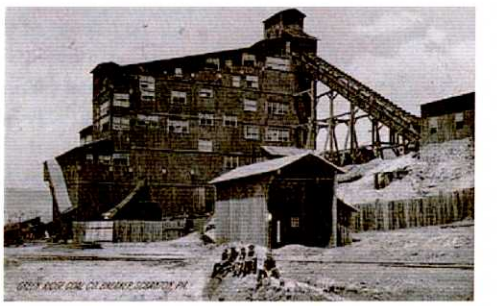
> "In order to meet the legislative requirements of the national designation, the LHVA will develop a new Management Plan that focuses on interpretive and educational initiatives in the heritage area. The Plan will also include a Compact that describes the management entity (LHVA) and geographic boundaries of the heritage area. The plan will be developed using the NEPA process as required to complete an Environmental Impact Statement (EIS)."

This EIS has been prepared in accordance with the National Environmental Policy Act of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9). This EIS has been prepared in accordance with the National Environmental Policy Act of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9).

ENABLING LEGISLATION

Congress made the following findings in the Lackawanna Heritage Valley National Heritage Area Act of 2000:

(1) the industrial and cultural heritage of northeastern Pennsylvania, including Lackawanna County, Luzerne County, Wayne County, and Susquehanna County, related directly to anthracite and anthracite-related industries, is nationally significant;
(2) the industries referred to in paragraph (1) include anthracite mining, ironmaking, textiles, and rail transportation;
(3) the industrial and cultural heritage of the anthracite and anthracite-related industries in the region described in paragraph (1) includes the social history and living cultural traditions of the people of the region;



Greenridge Breaker and breaker boys, 1901
Northeast Pennsylvania Photo Collection

(4) the labor movement of the region played a significant role in the development of the Nation, including -
(A) the formation of many major unions such as the United Mine Workers of America; and
(B) crucial struggles to improve wages and working conditions, such as the 1900 and 1902 anthracite strikes;
(5) (A) the Secretary of the Interior is responsible for protecting the historical and cultural resources of the United States; and
(B) there are significant examples of those resources within the region described in paragraph (1) that merit the involvement of the Federal Government to develop, in cooperation with the Lackawanna Heritage Valley Authority, the Commonwealth of Pennsylvania, and the local and governmental entities, programs and projects to conserve, protect, and interpret this heritage adequately for future generations, while providing opportunities for education and revitalization; and
(6) the Lackawanna Heritage Valley Authority would be an appropriate management entity for a Heritage Area established in the region described in paragraph (1).

The purposes of the legislation are stated as being:

(1) to foster a close working relationship among all levels of government, the private sector, and the local communities in the anthracite coal region of northeastern Pennsylvania and enable the communities to conserve their heritage while continuing to pursue economic opportunities; and
(2) to conserve, interpret, and develop the historical, cultural, natural, and recreational resources related to the industrial and cultural heritage of the 4-county region described in subsection (a)(1).

The Heritage Area boundaries in the legislation are defined as including all or parts of the counties of Lackawanna, Luzerne, Wayne, and Susquehanna for which the Lackawanna Heritage Valley Authority is the designated management entity. In practice the Lackawanna River watershed boundaries have been adopted as the Heritage Area, most of which is located within Lackawanna County.

The legislation charges the Lackawanna Heritage Valley Authority with preparing a management plan for the conservation, funding, and management of the Heritage Area.

The management plan is to:
- Consider other plans and actions and involve residents, public agencies, and private organizations within the Heritage Area.
- Specify funding sources to implement the plan.
- Inventory resources that should be preserved, restored, managed, developed, or maintained for cultural and historic purposes within the Heritage Area.
- Recommend policies for land and water management.
- Prepare an implementation program that includes restoration and construction plans as well as commitments by specific partners during the first 5 years of operation.
- Analyze ways to coordinate local, state, and federal programs for the Heritage Area's benefit.
- Prepare an interpretive plan.

The legislation authorized an appropriation of $10,000,000 to carry out the purposes of the Act, limited to not more than $1,000,000 in any fiscal year, and requiring a 50 percent match from other sources.

CULTURAL RESOURCES AND THEIR PERIOD OF SIGNIFICANCE

The 1991 "Plan for the Lackawanna Heritage Valley" identified 1840 to 1930 as the period of significance. This is the time frame of anthracite's rise and fall as a major force in America's industrialization and of major anthracite-related cultural resources. As property types, the Lackawanna Heritage Valley resources include collieries, railroads, company offices, ancillary industries / services, and housing. Other property types include canals, miners hospitals, and patch towns, but are not represented on the list of 143 resources in the Lackawanna Heritage Valley. This list is drawn from the Pennsylvania Historical and Museum Commission's Inventory of Historic Places. It does not represent a balanced view of historic resources since a complete survey of the region has not been undertaken. The current list is also subject to ongoing loss as redundant anthracite industry structures deteriorate and are demolished.

THE PLANNING PROCESS AND PUBLIC INVOLVEMENT

The Lackawanna Heritage Valley has more than a decade of activity focused on plans for the region, public discussions of options, and a growing list of accomplishments in telling the heritage story. That process has been continued in preparation of the Management Action Plan and EIS.

LHVA Director John Cosgrove addresses a stakeholder meeting.
Kise Straw & Kolodner photograph

Three Scoping Meetings were held by the consultant team. The first two were with LHVA staff and advisors and the National Park Service representative to define issues, alternatives, and needed data. The third was held in Scranton with the Heritage Valley Roundtable, which represents the leadership of local heritage partners. These meetings resulted in the list of issues contained in this part of the EIS, which reviews issues selected for investigation and ones judged to be less important. Numerous site visits were made by the consultant team as part of the scoping process, especially by the interpretive planners in seeking out and creating a themed heritage story that would appeal to visitors.

In addition, three public meetings were held to seek comment from the public. The first of these was in Mayfield at LHVA's office and educational center, and the second was in Scranton at Steamtown NHS. Issues and alternative plans were thoroughly aired in these meetings, which resulted in numerous changes to the alternatives, with a clearly defined preferred alternative. The third meeting also occurred at Steamtown NHS and consisted of a presentation of the draft EIS and Management Action Plan with time for public feedback.

PLANNING ISSUES

Issues discussed in public workshops and meetings, among the project team members, and with LHVA staff have revolved around five broad topics. Addressing these issues is part of what the alternative plans attempt to do, with varying degrees of success depending upon the plan.

Resource Protection Issues

- Natural Environment
  - water quality - stormwater runoff, acid mine drainage, floodplains
  - biological - endangered species, habitat protection, restoration
  - conservation areas, open space
  - recreational resources
- Cultural and Historic Resources
  - preventing further loss
  - preservation and rehabilitation

Interpretive Issues

- Limited and uncoordinated interpretation of Heritage Valley history
- Uninviting settings of interpretable places
- Linkages between visitor attractions
- Funding and implementing improvements

Education Issues

- Teaching regional history in local schools
- Engaging students and teachers at site visits
- Protecting "first person" stories

Tourism-Based Economic Development Issues

- Flat visitation numbers
- Tapping recreational visitation
- Improving visitor destinations
- Marketing sites and the region
- Gauging economic impact

Resource Protection Issues

Natural Environment

The most serious natural environment issues in the region are the legacy of the active mining era such as subsidence, runoff from culm piles, acid mine drainage, and disturbed landscapes. Other significant issues include flooding and erosion along the Lackawanna River, stormwater management problems (especially in Scranton with its combined sewer system), and the loss of open space, natural areas, and critical habitats to development. However, while these are all significant problems in the Heritage Valley, they are not judged to be of major consequence in the formation of a Management Action Plan that deals mostly with interpretation and

education. The activities recommended in the alternative actions described in Part II of this EIS deal mostly with protecting and interpreting cultural resources and improving visitor experiences and are expected to have only beneficial, if any, effects on the natural environment. Even so, NEPA requires many natural environment issues to be evaluated, which they are in this EIS.

Cultural and Historic Resources

Cultural and historic resources are major issues for the Lackawanna Heritage Valley since the ability to tell the heritage story effectively is tied to these resources. A major handicap is the absence of a complete cultural and historic resource survey within the Heritage Valley. Preventing further loss of resources is an objective for LHVA, but it is difficult to set priorities for preservation and rehabilitation without an inventory that assesses what is really

Many historic resources in the Heritage Valley have not been inventoried. Kise Straw & Kolodner photograph

important compared to what is contributing or lacking integrity. In addition, without any economically viable uses for many of historic resources, especially for industrial remnants, there continues to be significant losses. Further loss will seriously erode the region's interpretability.

Interpretive Issues

Apart from the loss of interpretable resources, the most significant interpretive issue is the limited and uncoordinated nature of interpretation within the Lackawanna Heritage Valley. Currently there are many attractions and sites which interpret part of the Lackawanna Heritage Valley's past, but none which presents an overall introduction to the themes that define the story. In addition there are many stories which are under-told. The planned construction of a Heritage Interpretive Center next to the Lackawanna Visitors Center will certainly help create a central interpretive message, but a coordinated and interconnected way of visiting the actual historic resources and attractions would help reinforce it.

Another issue in interpretation is the uninviting setting of many of the interpretable resources, which deters visitors and creates problems relating the history of these special places. Focused cleanup and physical improvements in many of the historic towns are needed.

The lack of clear linkages between visitor attractions also hinders an effective interpretive experience. Some of the most important sites are difficult to find by visitors with little local knowledge, and there is no programmed route between sites that could help tell the Heritage Valley story. The Lackawanna Heritage Trail along the Lackawanna River, and signage in downtown Scranton have provided some linkages, but more must be done.

A significant issue, one that goes beyond interpretation, is the funding of improvements. A concerted fund raising and grant writing effort will be necessary to raise money and sustained support from local political, business, and community leadership will be necessary to see the improvements through. This may be difficult for a region where there are competing visions of the future and a limited amount of funding sources. It is recommended that interpretive improvements be cost effective and support other economic development.

Education Issues

The young residents of the Lackawanna Heritage Valley are its future, and their appreciation of the area's past is vital to the betterment of the region's tomorrow. Teaching regional history in local schools has become more common under LHVA's education initiatives of the past decade. However, additional enhancements are needed to mainstream local history into curriculums. Likewise, engaging students and teachers at site visits has been improved under LHVA's programs and should be furthered.

On the other hand, older residents provide irreplaceable links to the past and protecting "first person" stories is a significant issue. Progress has been made, but not at a pace that

will keep up with the rate at which death silences these stories. A concerted program of taping, videotaping, and transcribing needs to be given top priority.

Tourism-Based Economic Development Issues
There are several important tourism-based development issues. First, many heritage sites have experienced flattening visitation numbers and are looking for ways to increase repeat visitation, as well as reach out to new visitor markets. A related issue is the ability to tap the large and growing recreational visitation. Most of this visitation occurs in the winter ski season when some of the more important heritage attractions are closed or have limited hours. Investments in heritage tourism should strengthen connections to Montage Mountain and other recreational attractions that broaden appeal, increase length of stay, and create a critical mass of visitors year round who view the region as having multiple destinations rather than singular.

Another issue is the lack of visual appeal and engaging messages in some of the heritage attractions. For example, the Pennsylvania Anthracite Heritage Museum is not a visually appealing building and its exhibits are static and dated. The Museum, however, has an excellent collection of artifacts enabling a compelling attraction to be created. Other attractions, especially major ones, should be reviewed. Similarly, routes for driving and walking tours should be visually attractive, especially for pedestrians, so that tours to historic sites can succeed in drawing new and repeat visitors. One of the largest issues is the need for a large marketing program for the region that packages the recreation, heritage, and cultural attractions as one, widening appeal to all types of visitors and lengthen visits. People do not visit what they do not know about, and Philadelphia's recent success in increasing tourism in spite of reductions in other cities after 9/11 is testimony to an effective marking campaign tied to significant improvements at visitor attractions. This lesson could be useful for the Lackawanna Heritage Valley.

Gauging economic impact is another issue of importance, since investments are often justified by the benefits they will bring. Selecting key parameters to gauge impact should be reviewed. These may include attendance and revenue growth at attractions, employment growth, tax base increases, improved property value, and enhanced conditions in low-income areas.

PART II:

Description of the Alternatives

CONTENTS

- Introduction
- Overview of Alternatives
- Options and Alternatives Eliminated from Consideration
- Alternative A: No Action / Continue of Current Activities
- Alternative B: Heritage Preservation
- Alternative C: Heritage Explorer
- Comparison of Alternatives
- Management Action Plan

INTRODUCTION

The Lackawanna Heritage Valley Authority, in consultation with its partners and the public, has developed several alternatives to address the goals and mandates for resource protection, interpretation, visitor service, and management mandates explained in Part I. This part of the EIS provides an overview of three alternatives, and explanation of the alternatives and options eliminated from consideration, an description of each alternative, and concludes with a comparison of the alternatives and a statement of which is preferred.

For an orientation to the resources of the Lackawanna Heritage Valley, consult Part III: Description of the Affected Environment, and also refer to the matrix in Appendix B.

Scranton Iron Furnace workers
courtesy LHVA

OVERVIEW OF ALTERNATIVES

The three alternatives under consideration are:

- *Alternative A:* No Action / Continue Current Activities. This alternative is required in an Environmental Impact Statement, to provide a "base level" to compare against other alternatives. In Alternative A, existing activities, programs and developments continue and any already-planned developments would take place. It shows the success and magnitude of LHVA's current and planned activities, but also illustrates their shortcomings.

- Alternative B: Heritage Preservation. In addition to continuing current activities, this alternative focuses strongly on a major issue in the Lackawanna Heritage Valley - the loss of historic resources. A large historic preservation program would work to stabilize and preserve most of the remaining resources throughout Lackawanna County. Interpretation would be decentralized with only the Lackawanna Visitors Center (and existing partners) providing structured interpretation and visitors would create their own personalized visitation agendas. LHVA would be encouraged to partner with private owners of important resources.

- Alternative C: Heritage Explorer. In addition to continuing current activities, this alternative envisions a much more structured interpretation and visitor service experience. Preservation, interpretation, and visitor service efforts would be focused along a delineated tour of the Lackawanna Heritage Valley that would act as an introduction to the Heritage Valley's story as well as an activity itself. Visitors would be strongly encouraged to visit partner attractions in conjunction with the tour. LHVA would develop partnerships with local communities to implement the alternative.

OPTIONS AND ALTERNATIVES ELIMINATED FROM CONSIDERATION

While developing the three alternatives a number of ideas were rejected, based on experience, public comment, and past studies. As these ideas were not developed into full alternatives, it may be said that no alternatives were eliminated, only potential parts of alternatives. Options considered and eliminated included the following:

- *Expanding the existing boundaries of the Lackawanna Heritage Valley.* It is unnecessary to increase the management region of the LHVA beyond the watershed of the Lackawanna River for three reasons. First, many of the historic and cultural resources beyond the watershed are not intrinsically related to the anthracite story of the Lackawanna Heritage Valley. Second, many of the resources outside the watershed are included within the management of other heritage programs. Thirdly, the natural watershed nicely coincides with the anthracite deposits underground and lies within a discreet physical and visual setting.

- *Making rail transportation the centerpiece of the visitor experience.* Without wanting to eliminate it altogether, many reviewers felt that relying on a new rail tour as the primary means of moving through the Lackawanna Heritage Valley would be too costly, and would duplicate services already offered to some extent by Steamtown NHS.

- *The inclusion of more than four stops in the "Heritage Explorer Tour" of Alternative C.* Several options for a Lackawanna Heritage Valley tour included stops in many other places in the Heritage Valley and several places beyond the watershed. While planners attempted to be as inclusive as possible when directing visitors on a delineated tour, it is also necessary to make the tour as focused as possible. Visitors should have a few "wow" experiences in highly legible places and then be encouraged to visit existing heritage attractions. However, visitors should receive information on these other places and the tour route should be directed through them where possible.

- *Moving the PA Anthracite Heritage Museum to downtown Scranton.* One idea considered late in the process was the movement of the Anthracite Heritage Museum to a downtown location. However, the museum thematically works best in proximity to the coal mine tour and McDade Park, and the cost of such a move would be prohibitive.

ALTERNATIVE A: NO ACTION / CONTINUE CURRENT ACTIVITIES

Contents
- Introduction
- Resource Stewardship
- Interpretation
- Visitor Services
- Education
- Management

Introduction

Alternative A, the "No Action" Alternative represents a significant benchmark because it is the Lackawanna Heritage Valley Authority's track record of accomplishments since its formation in 1991 for the purpose of implementing the Plan for the Lackawanna Heritage Valley. LHVA's success in creating partnerships with other organizations has lead to an impressive list of places where important parts of the Lackawanna Heritage Valley's story is told. Similar initiatives in education have involved local school children in learning about their region's role in shaping American history. This has been supplemented by brochures, signs, informational materials, and the recently opened Lackawanna County Visitors Center.

Recreational projects, especially the 40-mile long Lackawanna River Heritage Trail under construction, encourage communities to rediscover the Lackawanna Heritage Valley's natural resources. The region's landscape shows clear signs of nature reclaiming the once dominant industrial landscape of breakers and culm piles, and LHVA's commitment to environmental education, open space preservation, and restoration projects encourages this process. Projects in economic development, cultural conservation, and intergovernmental cooperation further attest to LHVA's success in developing the story and benefits of a heritage park initiative.

The continuation of existing trends and planned activities would argue well for the future, validating the Authority's form of management

and its partnerships. However, three outstanding issues must be addressed. First, the loss of historic and cultural resources that act as testimony for the past. There are, for example, no more breakers, and all but the largest of the culm piles are disappearing beneath new growth trees and shrubs. Second, a cohesive story that interprets the Lackawanna Heritage Valley's special place in American history is not in place. Finally, there must be a method to connect the visitor's experience to both the interpretive story and the attractions and resources that help tell it.

Resource Stewardship

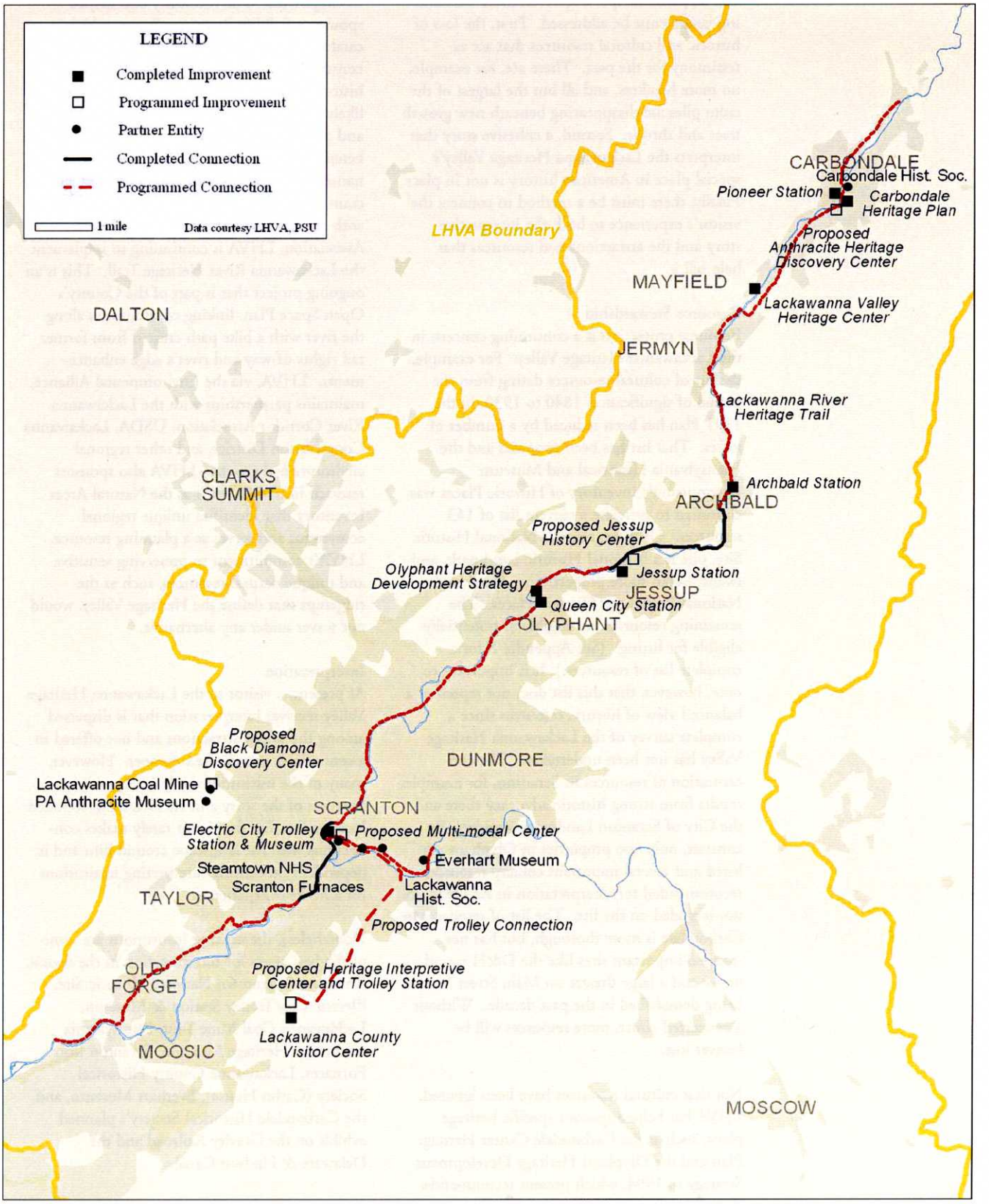
Resource protection is a continuing concern in the Lackawanna Heritage Valley. For example, the list of cultural resources dating from the period of significance, 1840 to 1930, in the 1991 Plan has been reduced by a number of losses. That list has been reviewed and the Pennsylvania Historical and Museum Commission's Inventory of Historic Places was consulted to generate a current list of 143 resources. Of these, one is a National Historic Site, one is a National Historic Landmark, and twenty-seven more properties are listed in the National Register of Historic Places. The remaining resources are eligible or potentially eligible for listing. (See Appendix B for a complete list of resources.) It is important to note, however, that this list does not represent a balanced view of historic resources since a complete survey of the Lackawanna Heritage Valley has not been undertaken. The concentration of resources in Scranton, for example, results from strong historic advocacy there and the City of Scranton Landmark Registry. By contrast, only two properties in Olyphant are listed and several important colliery resources recommended for interpretation in Archbald are not included on the list. The list of resources in Carbondale is more thorough, but has not stopped important sites like the D&H roundhouse and a large theatre on Main Street from being demolished in the past decade. Without a concerted effort, more resources will be forever lost.

Not that cultural resources have been ignored. LHVA has helped sponsor specific heritage plans, such as the Carbondale Center Heritage Plan and the Olyphant Heritage Development Strategy in 1994, which present recommendations for preservation efforts and heritage developments. The Authority also helped sponsor a Folklife Resources Survey which catalogued vernacular building styles and construction, folk festivals, trades, and a folk history of the region. These plans and surveys, likely to continue, serve to further an awareness and pride in the region's past, which has positive benefits for cultural resources. Stewardship of natural and recreational resources would also continue, with impressive results. Partnering with the Lackawanna River Conservation Association, LHVA is continuing to implement the Lackawanna River Heritage Trail. This is an ongoing project that is part of the County's Open Space Plan, linking communities along the river with a bike path created from former rail rights-of-way and river's edge enhancements. LHVA, via the Environmental Alliance, maintains partnerships with the Lackawanna River Corridor Association, USDA, Lackawanna Conservation District, and other regional environmental groups. LHVA also sponsors research initiatives, such as the Natural Areas Inventory that identifies unique regional ecosystems and serves as a planning resource. LHVA's commitment to preserving sensitive and unique natural resources, such as the ridgetops that define the Heritage Valley, would not waver under any alternative.

Interpretation

At present, a visitor to the Lackawanna Heritage Valley receives interpretation that is dispersed among the major attractions and not offered in a centralized, coordinated manner. However, many of the institutions only interpret select portions of the story and are located in secluded locations so that the visitor rarely makes connections with the landscape around him and is dependent on existing interpreting institutions for a heritage experience.

Nonetheless, the existing institutions are some of the best assets for interpretation in the region. These are Steamtown National Historic Site, Electric City Trolley Station & Museum, Lackawanna Coal Mine Tour, Pennsylvania Anthracite Heritage Museum, Scranton Iron Furnaces, Lackawanna County Historical Society (Catlin House), Everhart Museum, and the Carbondale Historical Society's planned exhibit on the Gravity Railroad and the Delaware & Hudson Canal.



Map II-1: Alternative A

Steamtown NHS National Park Service

- *Steamtown National Historic Site*
  Steamtown currently interprets steam railroading in America and Pennsylvania in particular. Steamtown's excellent interpretive programs provide orientation and interpretive coverage for the Heritage Valley's important railroad element. Steamtown also offers tours: a rail excursion to Moscow to the east, seasonal trips to Carbondale and other upriver towns, and shorter, more regular rides to nearby Catlin House and Nay Aug Gorge. With 120,000 visitors per year, Steamtown is the largest heritage draw in the region, yet was designed for many times that attendance. Visitation has reached a plateau in recent years. Changing exhibits and excursion options, with stronger ties to the region-wide heritage story, may help draw new visitors.

Electric City Trolley Station and Museum
Kise Straw & Kolodner photograph

- *Electric City Trolley Station & Museum*
  The Trolley Station & Museum illustrates through its exhibits and tour how the interurban electric trolley tightened the linked development of the Lackawanna Heritage Valley by creating a model of how to move people around a region more quickly and efficiently. It also introduces the idea of electricity supplementing then replacing steam power to drive colliery and industrial processes and transform domestic life. Regular excursions to the Scranton Iron Furnaces site is offered, linking two of the interpreting partners. Future plans will allow visitors to travel to and from the Lackawanna Visitors Center and new Heritage Interpretive Center via a recently restored Laurel Line tunnel, linking more institutions and freeing tourists from into downtown Scranton.

Lackawanna Coal Mine LHVA photograph

- *Lackawanna Coal Mine*
  The Coal Mine Tour, run by Lackawanna County, is probably the most dramatic experience of any heritage attraction in the Lackawanna Heritage Valley. Visitors descend deep into a coal mine with a guide. The tour operates now at near-capacity, more than 65,000 visitors per year. A planned "Black Diamond Discovery Center" will be built at the mine head and will expand capacity and offer a more thorough interpretation of coal mining, complete with age-appropriate exhibits that entertain as well as teach. However, this may not help overcome the mine's remote location in McDade Park, which is often difficult for visitors to find.

- *Pennsylvania Anthracite Heritage Museum*
  The Anthracite Museum, located adjacent to the Lackawanna Coal Mine in McDade Park and operated by the Pennsylvania Historical and Museum Commission (PHMC), focuses on the life and work of the people in the collieries. Secondary themes deal with mills and factories, canals, and railroads. The Anthracite Museum should be a key attraction in the Lackawanna Heritage Valley, but its tough-to-find location and aging exhibits often deters visitors. In the hands of a superb guide, however, the exceptional richness of its collection comes alive. Modernization and a complete reinstallation in the hands of a skilled exhibit person is dependent upon the PHMC, which is hard pressed statewide to maintain current sites. Without a viable connection to Steamtown and other attractions that present an economic spin-off opportunity, state funding for improvements may be hard to secure.

PA Anthracite Heritage Museum Kise Straw & Kolodner photograph

- *Scranton Iron Furnaces*
  Founded in 1842 by a partnership that included George and Selden Scranton, the Iron Furnace was among the first to produce railroad rails, thus reducing the nation's dependence upon imported British T-rails. The Scranton Iron Furnaces went on to become one of the largest manufacturers of iron and steel rail in America. Now in a ruins-in-a-park setting, this property of PHMC is minimally interpreted and the four huge masonry chimneys bear little resemblance to the industrial giant once residing there. The No Action/Continue Current Activities Alternative may not have the muscle to help the Iron Furnaces become a compelling attraction.

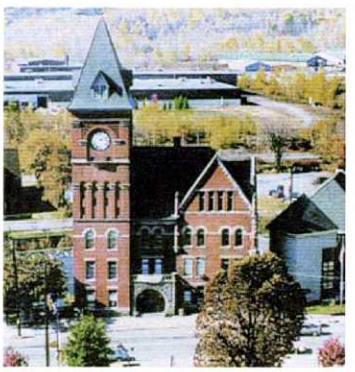
Scranton Iron Furnaces NEPA Convention and Visitor Bureau

Catlin House courtesy Lackawanna County Historical Society

- *Lackawanna County Historical Society (Catlin House)*
  The Catlin House, as one of the few house museums in the Lackawanna Heritage Valley available to visitors, interprets a great urban house built in 1911 for banker George Catlin. Also the home of the Historical Society, the house is capable of playing a major interpretive role showing the relationships between industrialists and laborers, which the Society with LHVA would be capable of implementing. The Society's experience in developing walking tours is an important asset for developing a program of tours.

Everhart Museum courtesy Everhart Museum

- *Everhart Museum*
  The Everhart Museum is a dynamic cultural center for the Lackawanna Heritage Valley, with energetic leadership, good collections, a fine building, and a beautiful setting in Nay Aug Park. Among the museum's many resources are a series of paintings by two artists featuring coal breakers. In addition, the museum is next to the Brooks Coal Mine. Without displacing its important cultural role in the region, the museum could be a focal point for the art of the Anthracite Era. Nay Aug Park is an important natural resource, and there is an ongoing effort to improve and restore its grounds.



Carbondale Historical Society
LHVA photograph

- *Carbondale Historical Society*
  The Society is a leading authority on and owns a major collection of material about the Delaware & Hudson Canal and the Gravity Railroad so important to the Lackawanna Heritage Valley's beginnings as a center of anthracite mining. However, it is housed on the third floor of City Hall and does not have a public space.

In addition to existing attractions and their proposed additions, there are a number of proposed interpretive attractions and institutions in various stages of planning that LHVA will likely contribute to. Foremost of these is the Heritage Interpretive Center, to be located next to the Lackawanna Visitors Center and connected via trolley to downtown Scranton. This will offer a general introductory story of the Heritage Valley with changing exhibits and a short movie, and will help make mental connections with existing resources and interpreting institutions. The Borough of Jessup is exploring the establishment of a heritage museum in a prominent historic church building along its main commercial street. Possible subjects for interpretation include Jessup's industrial past, the temperance movement and local wine-making, the D&H railroad, local religions Saint Ubaldo, and the town's unusual connection with Mexican general Santa Ana who proposed a labor-for-coal deal in the 1830s. Finally, there are a couple of initiatives in Carbondale. These include a Lackawanna River Conservation Association proposal for a community festival center on the site of the D&H roundhouse, and a proposed Anthracite Heritage Discovery Center in a large building on Eight Street which would interpret the region's mining and railroading past with a special emphasis on appealing to children and families.

Visitor Services

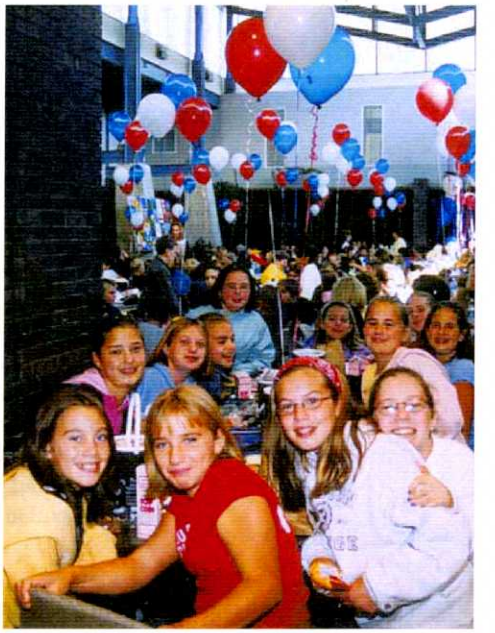
With the No Action/Continue Current Activities Alternative, visitor reception services have been significantly improved with the recent opening of the Lackawanna Visitors Center at a gateway location off I-81 south of Scranton. Available maps and brochures, a reception desk staff to answer questions, and a small but cogent exhibition telling the Lackawanna Heritage Valley's story add an important focus for visitor information. This center is to be connected with a new Heritage Interpretive Center, which will have a direct connection to the trolley line originating at the Electric City Trolley Station & Museum adjacent to Steamtown and downtown Scranton's Lackawanna Avenue. As a result, visitors will be able to reach two of the Heritage Valley's most important attractions and walk to many others. But McDade Park, a remote location to the west with two significant attractions (the Pennsylvania Anthracite

Heritage Museum and the Lackawanna County Coal Mine Tour), is inaccessible now except by car. So, too, is the Everhart Museum in Nay Aug Park to the east, as are all the attractions in the towns stretching north along the Lackawanna River to Carbondale. A seamless visit experiencing the full anthracite heritage story is likely to be available only by a self-guided driving tour, although this too will require a brochure, perhaps an audio-cassette, a clear map for routing, and a Heritage Valley-wide heritage sign system.

Organized tours under the No Action Alternative would probably continue to be arranged through specialty tour groups, using local experts to lead them. Self guided architectural tours are available in Scranton, and Olyphant hosts a self-guided church tour. Guided tours around the Heritage Valley are sometimes available for special groups, but not on an ongoing basis to the casual visitor. Without moving to programs described in the other alternatives, many resources and parts of the Lackawanna Heritage Valley's story would still remain unmarked, uninterpreted, and unused.

Education

Through its Educational Alliance of area teachers, community leaders, universities and colleges, and heritage site education specialists, the LHVA has undertaken a number of educational programs in the past ten-years and is successfully teaching upcoming generations of the importance of the Lackawanna Heritage Valley's past. Programs such as "Living Legacies," where students research, write and perform their own radio and stage programs, and "Traveling Trunks," where classes dissect steamer trunks filled with artifacts from area museums, bring heritage education into the classroom. Meanwhile the "Heritage Express," "Environmental Fair," and "Environmental Career Forum" programs bring students out into the Heritage Valley for special tours, hands-on activities, and connections with jobs and colleges. The Educational Alliance also instructs teachers on the importance of the past and its use in the classroom through its curriculum guides, the "Museums as Classrooms" training course, and special academic conferences. A number of changes and additions to these programs are planned and are detailed in the Education Plan (Appendix D). Efforts to collect oral histories from those people who directly experienced the past are paramount as these generations are disappearing. These histories will be useful in learning situations, both with students in the classroom, and visitors to the Heritage Interpretive Center. Other planned programs focus on ways of teaching adult population about the importance of Heritage Valley's past, installing pride in a region that too often wallows in its "rust belt" image. LHVA also plans an Environmental Alliance of partner agencies and communities, similar to the Educational Alliance, that will promote conservation and develop continuing education and teacher materials concerning the natural environment. Finally, the LHVA has plans to forge partnerships with community theatre groups to write scripts and develop "living history" characters that interact with the public in schools and on-location sites, and plans to update its website to share educational materials and curriculum guides.



Young People Heritage Festival LHVA photograph

Management

Coordinated partnerships with existing entities would continue to grow and expand in the No Action/Continue Current Activities Alternative. Current LHVA partners include the National Park Service, Pennsylvania Department of Conservation and Natural Resources, County of Lackawanna, Lackawanna County Railroad Authority, Lackawanna County Historical Society, The Scranton Cultural Center, Electric City Trolley Station & Museum, Steamtown

National Historic Site, Everhart Museum, Lackawanna Coal Mine, Pennsylvania Anthracite Heritage Museum, Northeast Pennsylvania Convention and Visitors Bureau, Lackawanna River Corridor Association, Voluntary Action Center of Northeastern Pennsylvania, Scranton Tomorrow, and First Night Scranton. These partnerships have been reinforced by formation of the Lackawanna Heritage Valley Roundtable where representatives of the major visitor attractions gather monthly to coordinate activities and joint programs. Perhaps most important of all, the LHVA executive director is also president of the Northeast Pennsylvania Convention and Visitors Bureau. This dual appointment underscores the linkage between the Heritage Valley story and the role it can play in regional tourism, promotion, and economic growth. This may be a model for other Heritage Parks to emulate, not least because of an emphasis on marketing and promotion and the resources to boost visitation.

The No Action/Current Activities Alternative would continue LHVA's current agenda, which, in its own words, is to:

- Facilitate partnerships
- Tell the region's story
- Preserve and enhance the physical character and economic vitality of Northeastern Pennsylvania's communities
- Improve the visitor experience

The authority form of organization has served the Lackawanna Heritage Valley well, and should enable it to reach a new level as outlined in the recommended alternative.

Implementation

As the "no further action" alternative, most of the programmed activities as described in Alternative A are underway or are in advanced planning stages. As such, Alternative A has a relatively short horizon.

Years One to Four

- Complete and open trolley link between Electric City Trolley Station & Museum and the Lackawanna Visitors Center.
- Complete acquisition and construction of Lackawanna River Heritage Trail
- Complete construction of the Heritage Interpretive Center
- Complete planning and construction of Black Diamond Discovery Center
- Implement programs from Education Plan
- Provide guidance and assistance for other heritage developments, including Carbondale's Anthracite Heritage Discovery Center, Jessup's heritage project, and LRCA's proposed developments

The costs associated with the Alternative A activities is estimated to be around $9.6 million. Table II-2 provides details.

Table II-2: Alternative A Costs

Heritage Interpretive Center	$3,000,000
Black Diamond Discovery Center	$5,500,000
Lackawanna River Trail Completion	$1,100,000
Total Cost	$9,600,000

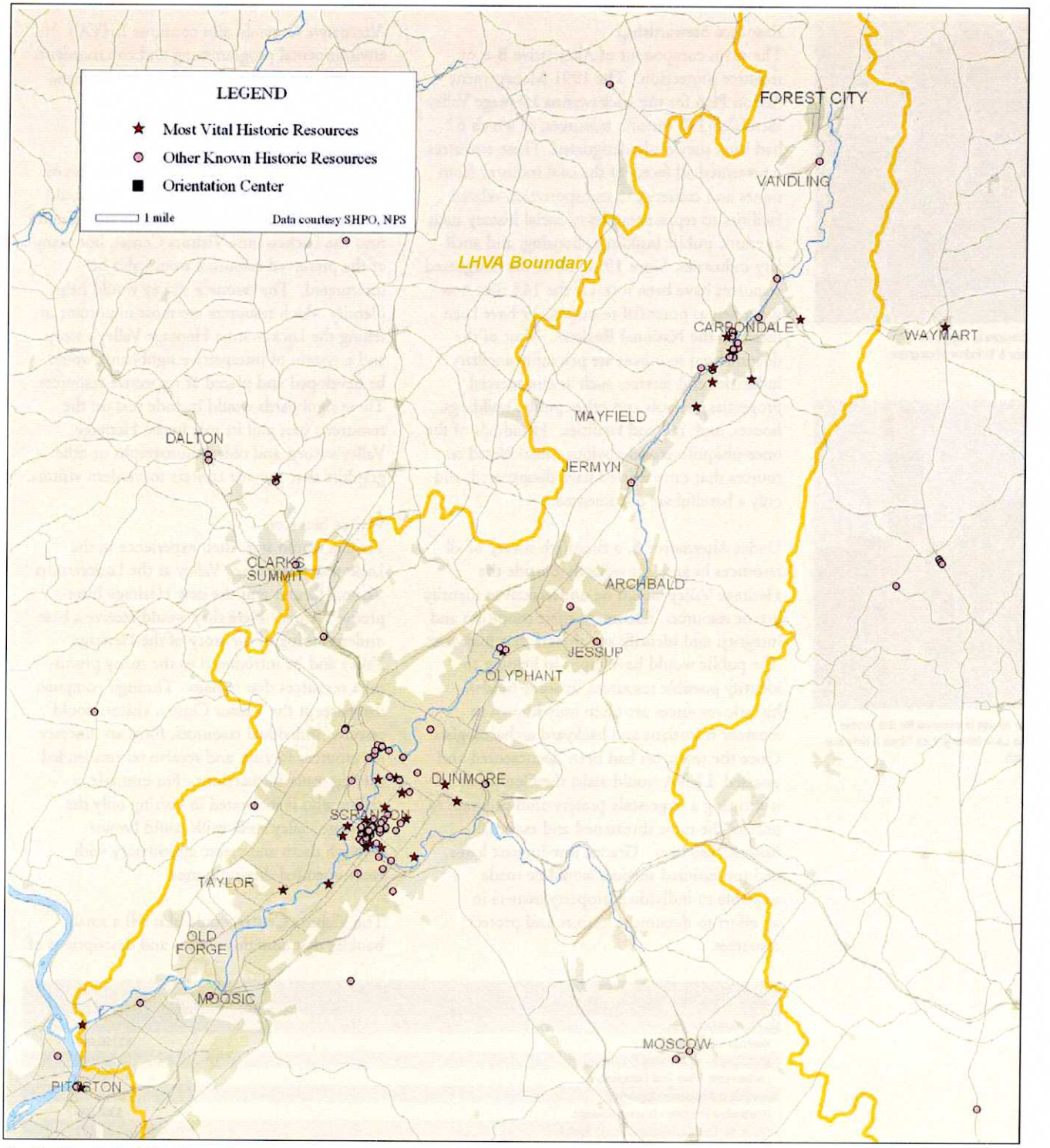
ALTERNATIVE B: HERITAGE PRESERVATION

Contents

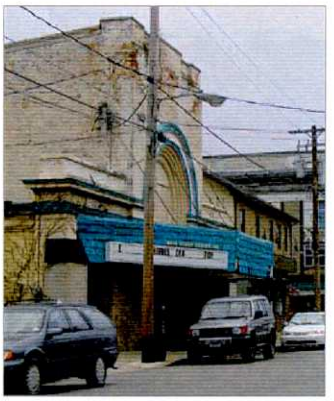
- Introduction
- Resource Stewardship
- Interpretation
- Visitor Services
- Education
- Management
- Implementation

Introduction

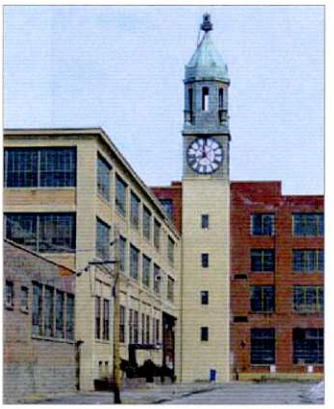
As with Alternative A, Alternative B: Heritage Preservation will continue the programmed work of the LHVA, such as the construction of a Heritage Interpretive Center and completion of the Lackawanna River Heritage Trail, and would not change the system of management and partnerships that has developed over time. However, Alternative B focuses on one of the largest problems facing the Lackawanna Heritage Valley - the need to preserve and interpret the disappearing physical remnants of the past. This alternative suggests a number of new initiatives and programs designed to protect critical resources, and outlines a way to create a personalized visitor experience. See Map II-3 for a graphical illustration of the alternative.



Map II-3: Alternative B: Heritage Preservation



Vacant theatre in Olyphant
Kise Straw & Kolodner photograph



Adoptive re-use is planned for the former Scranton Lace factory. Kise Straw & Kolodner photograph

Resource Stewardship

The main component of Alternative B is on resource protection. The 1991 Management Action Plan for the Lackawanna Heritage Valley identified 177 historic resources, of which 62 had been previously designated. These resources represented all facets of the coal industry from mines and collieries to transportation-related facilities to representatives of social history such as ethnic public buildings, housing, and ancillary industries. Since 1991, 30 of the designated resources have been lost. Of the 143 sites now suggested as potential resources, 29 have been listed on the National Register. Most of the documented resources are primarily ancillary industries and services such as commercial properties, schools and other public buildings, houses, and railroad facilities. Hundreds of the once-ubiquitous and obvious mine-related resources that once existed have disappeared, and only a handful are documented.

Under Alternative B, a thorough survey of all resources in and immediately outside the Heritage Valley would be undertaken to identify extant resources, document their condition and integrity, and identify any threats that may exist. The public would have input in helping to identify possible resources, as some hidden historic resources are often only known to amateur historians and backyard archaeologists. Once the resources had been documented and assessed, LHVA would assist the County in instituting a large-scale preservation program to protect the most threatened and essential historic resources. Grants, low-interest loans, and professional services would be made available to individual property owners in an effort to document, restore and protect resources.

Alternative C would also continue LHVA's environmental programming and commitments to preserving open space and sensitive natural areas.

Interpretation

In Alternative B, most of the interpretation of the Lackawanna Heritage Valley's story would be done in the new Heritage Interpretive Center near the Lackawanna Visitors Center, but many of the preserved resources would also be interpreted. The resource survey would help identify which resources are most important in telling the Lackawanna Heritage Valley's story, and a system of interpretive signboards would be developed and placed at respective resources. These signboards would include text on the resource's past and its role in the Heritage Valley's story, and older photographs or other graphics that provide context to modern visitors.

Visitor Services

Visitors would start their experience in the Lackawanna Heritage Valley at the Lackawanna Visitors Center and the new Heritage Interpretive Center. Here they would receive a base understanding of the story of the Heritage Valley and be introduced to the many prominent resources that remain. Through computer databases at the Visitor Center, visitors could research individual resources, form an itinerary of resources to visit, and receive recommended driving route instructions. For example, a visitor who is interested in visiting only the Heritage Valley's silk mills could browse through them and create an itinerary with recommended driving routes.

The Visitors Center would also sell a small booklet that contains photos and descriptions of

Table II-4: Alternative B Costs

No Action Elements		
Heritage Interpretive Center		$3,000,000
Black Diamond Discovery Center		$5,500,000
Lackawanna River Trail Completion		$1,100,000
Areawide Interpretive Upgrades		
Interpretive Program - Message/Design		$300,000
Computer Database/Route-Finding System		$200,000
Map/Booklet about Heritage Resources		$200,000
Resource Stewardship		
Resource Inventory/Survey		$200,000
Preservation Grant/Loan Program		$2,000,000
Interpretive Signboards	100 @ $1500	$150,000
Total Cost		$12,650,000
minus No Action Costs		$9,600,000
Additional Alternative B Costs		**$3,050,000**

the major resources of the Lackawanna Heritage Valley, and a fold out map showing their locations on a road map. A CD-ROM with the resource database would also be available for sale.

Education
Alternative B would continue the planned educational initiatives that appear in Alternative A and the Education Plan of Appendix D. Alternative B would enhance these programs as the interpreted resources present opportunities for outside-the-classroom learning, and the resource database could useful for both student and teacher research.

Management
LHVA would hire a consultant to complete the resource inventory, but as the vast majority of resources are in private hands, LHVA would partner with individual owners for preservation efforts. LHVA would manage the Heritage Valley-wide preservation program and provide loans, grants and help connect owners with professional services, but individual property owners would manage any construction or improvements. LHVA would also be responsible for interpretive signage, development of the Visitors Center database, and creation of the booklet and CD-ROM.

Implementation
Alternative B could be implemented relatively quickly, but some preservation activity would take a number of years to complete, depending on need and cost.

Years One to Four
- Complete ongoing activities described in Alternative A
- Complete inventory of historic and cultural resources
- Complete list of most critical and threatened resources
- Seek funds for preservation program
- Begin preservation program, contact property owners
- Develop 50% of interpretive signs
- Create booklet, CD ROM database

Years Five to Eight
- Develop remainder of interpretive signs
- Continue preservation program

Along with the costs of the activities associated with Alternative A, the cost of implementing Alternative B's historic resource survey and capital development programs is estimated to be around $12.7 million, or $3.1 million needed over the estimated spending in Alternative A: No Action / Continue Current Activities. See Table II-4 for details.

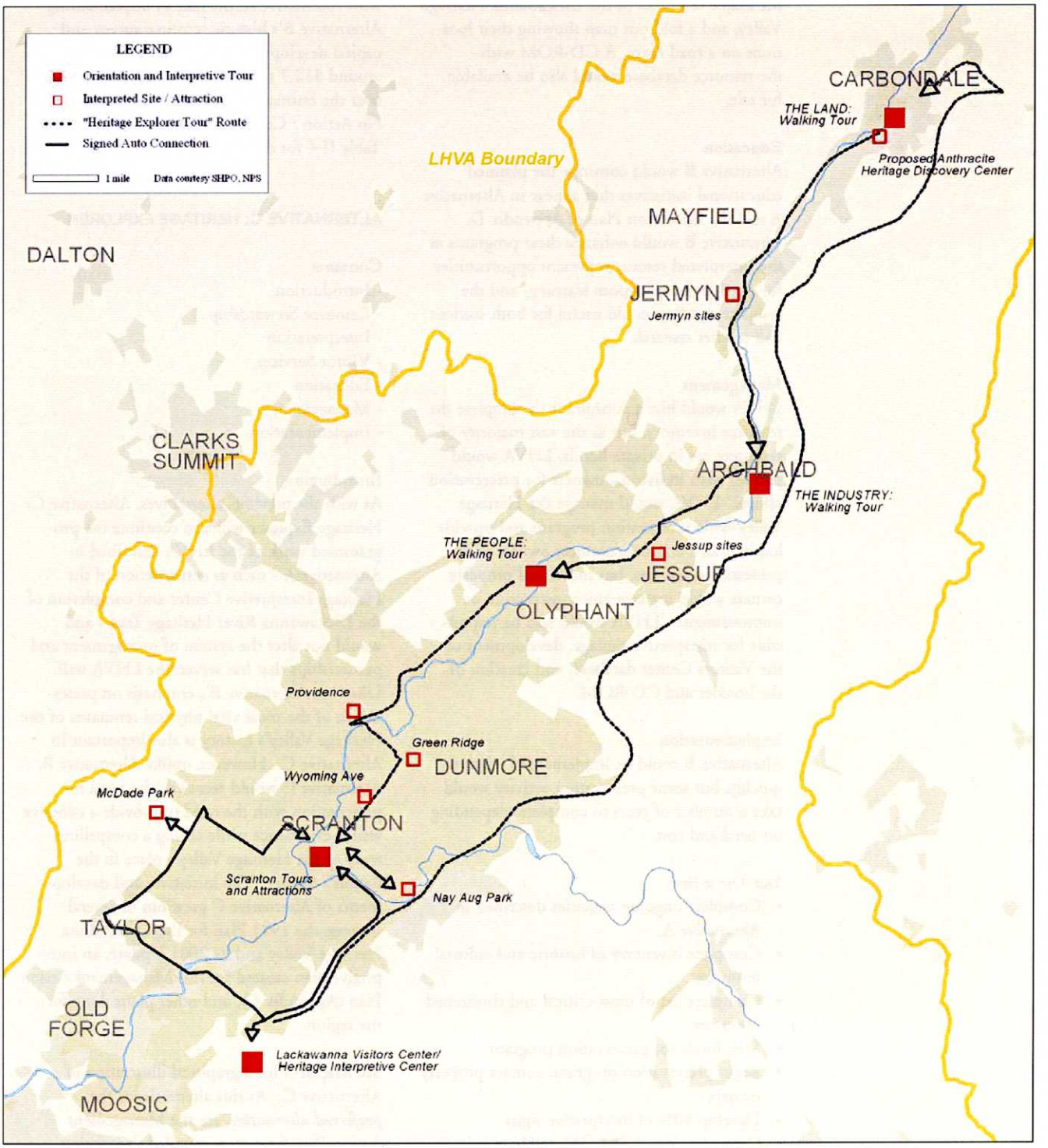
ALTERNATIVE C: HERITAGE EXPLORER

Contents
- Introduction
- Resource Stewardship
- Interpretation
- Visitor Services
- Education
- Management
- Implementation

Introduction
As with the previous alternatives, Alternative C: Heritage Explorer will also continue the programmed work of the LHVA described in Alternative A - such as construction of the Heritage Interpretive Center and completion of the Lackawanna River Heritage Trail - and would not alter the system of management and partnerships that has served the LHVA well. Likewise, Alternative B's emphasis on preservation of the most vital physical remnants of the Heritage Valley's history is also important in Alternative C. However, unlike Alternative B, Alternative C would reconcile the need for preservation with the need to provide a cohesive visitor experience while telling a compelling story of the Heritage Valley's place in the nation's history. The initiatives and developments of Alternative C grew out of several sources: the 1991 Plan for the Lackawanna Heritage Valley and its 2001 Update, an interpretive plan created for this Management Action Plan (Appendix C), and other plans done for the region.

See Map II-5 for a graphical illustration of Alternative C. As this alternative is the ***preferred alternative***, see the Management Action Plan for a more detailed description.

Resource Stewardship
As explained in Part I and in the other alternatives, the loss of cultural resources is a concern in the Lackawanna Heritage Valley, particularly colliery remnants. In Alternative C,



Map II-5: Alternative C: Heritage Explorer

the LHVA would sponsor a cultural and historic resource survey to identify remaining resources, their historic importance, their current state, and the threats each faces. The survey would look at known resources, and use public help in identifying "lost" resources. This survey would have many future uses. In contrast to Alternative B, which calls for widespread stabilization and restoration of historic resources, Alternative C suggests the preservation of a few key sites that are highly legible and useful for interpreting the Heritage Valley's history. Using help from partner organizations, these sites would be worked into a cohesive visitor experience as described below.

Alternative C would also continue LHVA's environmental programming and commitments to preserving open space and sensitive natural areas.

Interpretation

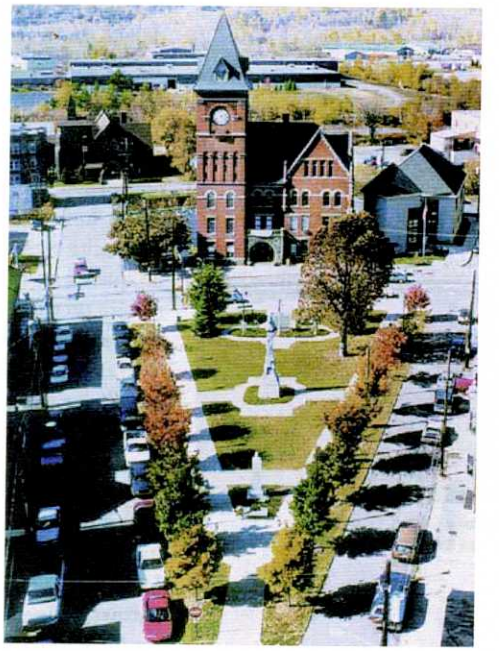
As noted in Alternative A, current interpretation largely occurs only within the major attractions and institutions. Though with Alternative A and B visitors will receive a new centralized and comprehensive story at the Heritage Interpretive Center, few will experience the actual settings important to the story. The story of the Lackawanna Heritage Valley is best illustrated by these significant places. Alternative C focuses interpretation on a physical experience of the Heritage Valley that illustrates interpretive themes established in the 1991 Plan. The centerpiece of the interpretation program will be the "Heritage Explorer Tour" - a signed route with stops and interpretation activities in four locations - Carbondale, Archbald, Olyphant, and Scranton - with jump-off connections along the route to existing institutions.

Marketed as a "first step" when visiting the region, the "Heritage Explorer Tour" will act as both an attraction and an introduction to the region, taking visitors on an easily followed route through important places a casual visitor might never encounter. The tour route takes place along the spine of the Lackawanna Heritage Valley paralleling the Lackawanna River, and can be accessed in several ways, including private automobile, special tour buses, train, bicycle, and even canoe.

Four stops in four distinct towns best illustrate the themes of the Heritage Valley's story and give visitors a physical experience in the Heritage Valley. In each of the four towns, visitors would be directed to an orientation point with parking, restrooms, and interpretive panels that tell of the place's history and its importance to the established story and themes. The orientation point would also map out and prepare visitors for a local walking tour that connects a series of important resources and interpretive stations designed to elicit a more meaningful visitor experience. Each orientation point would also point out local places to eat, play, shop, and stay overnight.

Carbondale

As the first stop on the tour and the northern gateway to the Lackawanna Heritage Valley, a general repeat of the interpretation found in the Heritage Interpretive Center would be given, but most of the interpretation found here would focus on the Land theme: how development was influenced by the Heritage Valley's natural setting, its natural resources, and its barriers to transportation. Here visitors would learn of the start of the Heritage Valley's economic importance with the extraction of coal and the construction of the gravity railroad in Carbondale. The orientation point in the Pioneer Dime Bank building on Main Street would anchor a walking tour of the town's historic sites. Upon continuing the "Heritage Explorer Tour," visitors would be directed toward Archbald through historic Jermyn.



Carbondale's historic center LHVA photograph

Archbald

Interpretation in Archbald would focus on the Industry theme. By visiting the forgotten remnants of the Gravity Slope Colliery at the foot of Laurel Street, visitors would learn how the anthracite industry operated as a complex system, and how laborers within the system spent their days. The four colliery remnants would be restored and outfitted with interpretive displays designed to give an appreciation of the enormity of the anthracite industry as well as its dangers. Specially arranged tours could also visit the nearby PEI Cogeneration Plant which, until recently, used remnant coal from the Gravity Slope's culm pile to generate electricity. Leaving Archbald, the "Heritage Explorer Tour" route winds by historic sites in Jessup on its way to Olyphant.

Olyphant

With its beautiful churches of every ethnicity, older housing, lively downtown and small size, the Borough of Olyphant would readily tell the People theme. Orientation at the Queen City Station would anchor a walking tour past ethnically diverse churches, historic commercial buildings, an old theater, and the attractive Town Hall - with the aim of illustrating the successive waves of immigrants that settled in the region and the lives they led. The active church communities would also provide an opportunity to organize lunches of local specialty foods for group tours. From Olyphant to downtown Scranton, the "Heritage Explorer Tour" route would wind through the historic Providence and elegant Green Ridge sections of Scranton.

St. Partick's Church, Olyphant
Kise Straw & Kolodner photograph

Scranton

As the hub of the northeast Pennsylvania anthracite region, downtown Scranton, with its uniquely gorgeous commercial and civic architecture presents the fullest flowering of the anthracite age, and would be used to illustrate all themes. As Scranton is too large to experience in a single walking tour, and its important sites cover a wide range of interests, orientation here would promote the many nearby attractions and recommend to visitors several thematic walking and driving tours. With its experience in developing walking tours, the Lackawanna County Historical Society could partner in developing the routes and brochures for these tours.

Visitor Services

Alternative C emphasizes visitor services much more than the other alternatives, with a number of improvements to better accommodate visitors and improve interpreted places.

The "Heritage Explorer Tour" will take visitors on an easily followed route through important places that tell the Lackawanna Heritage Valley story. Along the route, physical improvements such as streetscape improvements, new parks and plantings, façade improvements, and attractive walking tour directional signage would help give visitors positive impressions of places, while encouraging private investment in the historic centers. Orientation points at the four interpretive stops would provide bathrooms and information on local restaurants, shops, hotels, and other attractions.

Laurel St. laborer housing with nearby PEI Congeneration plant.
Kise Straw & Kolodner photograph

For the majority of visitors, who will tour via automobile, an attractive directional signage system will guide them through the "Heritage Explorer Tour," with help from a special brochure with historical information, maps, and photos, and an audio guide CD that accompany the tour. Special guided versions of the tour would be available in peak season, offering prepared lunches of local cuisine and a volunteer historian as guide. Other options for moving visitors between stops include expanded train excursions from Steamtown NHS, using the Lackawanna River Heritage Trail for bicycle touring once completed, and even canoe tours on the Lackawanna River.

Several improvements would also enhance connections solely between the most popular visitor attractions. A clear directional signage system would direct drivers between the Lackawanna Visitors Center, downtown

Scranton sites, and McDade Park. During peak visitation times, a colorful jitney would make links between the Everhart Museum in Nay Aug Park with Steamtown Plaza and the McDade Park attractions. Stops along the way would include the University of Scranton / Lackawanna County Historical Society, the Mall at Steamtown, and the downtown hotels on Lackawanna Avenue.

Along with the planned "Black Diamond Discovery Center" at the Lackawanna Coal Mine, a major upgrade of the displays and exhibits in the Pennsylvania Anthracite Heritage Museum would occur. Since many of the visitors to the museum are children, the exhibits would cater to all ages with more entertaining and engaging explorations of anthracite heritage.

Education

As with Alternative B, the current and planned initiatives described in Alternative A and the Education Plan (Appendix D) would continue under Alternative C. However, Alternative C would be the best fit for these initiatives, as the "Heritage Explorer Tour" could easily be

Lackawanna County Courthouse, Scranton.
Kise Straw & Kolodner photograph

adopted as an outdoor classroom and organized field trips from schools areas outside the region would be encouraged.

Management

The current form of management, where the Lackawanna Heritage Valley Authority coordinates partnerships with existing entities, has served the Heritage Valley well, and would continue under Alternative C. In creating and implementing the suggested programs and improvements, LHVA would act as coordinator, investor, and information broker but only rarely as developer. In addition, LHVA would provide assistance with fundraising, marketing, and would facilitate contacts between local, state, and federal agencies.

Physical improvements along the "Heritage Explorer Tour," such as new streetscapes, parks, orientation points, and walking tour signage, would be undertaken by local communities and cultural entities with support from LHVA. Interpretive panels and site improvements would be handled by LHVA, its partners, and local communities and property owners. Heritage Valley-wide driving signage systems, the map/brochure, CD audio tour, and a marketing program would be handled by LHVA and Lackawanna County. Guided tours would be developed by the County or a private entrepreneur with volunteer help from the PA Anthracite Heritage Museum, while the Scranton jitney would be developed by the County's transit authority, COLTS. LHVA

TABLE II-7: COMPARISON OF ALTERNATIVES

Management Action Plan Components	L	L	M
Natural Resource Stewardship	L	H	H
Historic, Cultural Resource Stewardship	L	L	H
Socioeconomic Resource Stewardship	L	M	H
Interpretation	L	L	H
Visitor Services	L	M	H
Education	L	L	H
Relationship to Other Regional Plans			
Core Commitments			
(as established in 2001 Update)			
Facilitate partnerships and strengthen local capacity	L	L	H
Tell the region's story	L	L	H
Preserve and enhance the physical character and	L	M	H
economic vitality of Heritage Valley communities	L	M	H
Improve the visitor experience	L	L	H
Reconnect communities to the river			
Relevant Planning Issues			
(see Part I of EIS)			
Natural Environment Issues			
Water Quality	L	L	L
Biological	L	L	L
Conservation areas, open space	L	L	L
Recreational resources	L	L	M
Cultural Resource Issues			
Preventing further resource loss	L	H	M
Preservation and rehabilitation	L	H	M
Interpretation Issues			
Limited and uncoordinated interpretation	L	L	H
Uninviting settings of interpretable places	L	M	H
Linkages between visitor attractions	L	L	H
Funding and implementing improvements	L	L	H
Education Issues			
Teaching regional history in local schools	L	H	H
Engaging students and teachers at site visits	L	H	H
Protecting "first person" stories	L	H	H
Tourism-based Economic Development Issues			
Flat visitation numbers	L	L	H
Tapping recreational visitation	L	L	M
Improving visitor destinations	L	M	H
Marketing sites and the region	L	L	H
Increasing and gauging economic impact	L	L	H

Degree of Emphasis: L = Low Increase, M = Medium Increase, H = High Increase

Note: This table represents the relative change in emphasis in addressing various subjects that would occur under the three alternatives. For specific levels of environmental impacts, see Part IV of the EIS.

would coordinate all of these activities and work to find funding.

Implementation

Much of alternative C could be implemented within the next four years, with some of the more ambitious projects taking longer due to the time needed for raising funds.

Years One to Four

- Complete ongoing activities described in Alternative

A Resource Stewardship

- Complete the inventory of cultural and historical resources.
- Acquire and begin restoration work of Archbald colliery remnants.

Interpretation

- Develop at least 50% of interpretive panels along "Heritage Explorer" Tours.
- Develop Pioneer Dime Bank Building as Carbondale's orientation facility.
- Develop Olyphant orientation facility at Queen City Station.
- Develop Scranton orientation facility in Electric City Trolley Station & Museum.

Visitor Services

- Create a design concept for all "Heritage Explorer Tour" materials.
- Complete tour brochure design.
- Complete signage system for auto route.
- Complete walking tour signage systems.
- Establish and market guided tours along "Heritage Explorer Tour."
- Complete Visitor Center - McDade - Scranton auto route signage system.
- Complete feasibility study for Scranton attractions jitney.
- Complete marketing study and begin marketing program.

Table II-6: Alternative C Costs

No Action Elements		
Heritage Interpretive Center		$3,000,000
Black Diamond Discovery Center		$5,500,000
Lackawanna River Trail Completion		$1,100,000
Areawide Interpretive Upgrades		
Promotional Campaign		$500,000
Interpretive Program - Message/Design		$300,000
Audio CD -DVD		$200,000
Heritage Explorer Map/Brochure		$150,000
Main Route Signage	35 @ 500	$17,500
Lease COLTS Bus		
Resource Stewardship		
Resource Inventory/Survey		$200,000
Carbondale		
Orientation Center		$500,000
Walking Tour Signage	20 @ 500	$10,000
Outdoor Interpretive Panels	5 @ 2000	$10,000
Streetscape Improvements		$395,000
Park Improvements		$100,000
Gateway Features	2 @ 20,000	$40,000
Archbald		
Colliery Acquis/Restoration		$500,000
Interpretive Panels	4 @ 2000	$8,000
Ground Improvements		$50,000
Gateway Features	3 @ 15,000	$45,000
Olyphant		
Orientation Center at Station		$50,000
Interpretive Panels	5 @ 2000	$10,000
Walking Tour Signage	18 @ 500	$9,000
Streetscape Improvements		$493,000
Public Square Improvements		$200,000
Creation of Wedding Photo Park		$100,000
Scranton		
Orientation Center		$500,000
Outdoor Interpretive Panels	6 @ 2000	$12,000
Streetscape Improvements		$640,000
Electric City Lighting Program	8 @ 10000	$10,000
Anthracite Museum Upgrade	20000 SF @ 300	$6,000,000
Jitney - Trolley	2 @ 65000	$130,000
Total Cost		$20,779,500
minus No Action Costs		$9,600,000
Additional Alternative C Costs		**$11,179,500**

- Implement Scranton architectural lighting program.
- Complete streetscape and park plans for Carbondale, Olyphant, Scranton.
- Begin fundraising for streetscape and park improvements.
- Complete plan for Pennsylvania Anthracite Heritage Museum improvements.

Years Five to Eight

Resource Stewardship
- Continue registration of important resources on state and federal lists.
- Complete restoration of Archbald colliery remnants.

Interpretation
- Complete development of interpretive panels along "Heritage Explorer" tours.

Visitor Services
- Continue and expand marketing program.
- Continue Scranton architectural lighting program.
- Develop streetscape and park improvements for Carbondale, Olyphant, Scranton.
- Seek funding and begin implementation of Anthracite Heritage Museum improvement plan.

Including the costs associated with the Alternative A activities, the cost of implementing Alternative C's capital development programs is estimated to be around $20.8 million - about $11.2 million would be needed above monies already estimated as planned spending in Alternative A: No Action/Continue Current Activities. See Table II-6 for details.

COMPARISON OF ALTERNATIVES

Each alternative presented has certain advantages and disadvantages. Alternative A, which only continues the existing projects and activities of the LHVA, would be the easiest and cheapest choice, but it hardly addresses the outstanding issues identified in Part I. Alternative B provides a remedy for one of the largest issues, the continuing loss of historic resources, but does not adequately provide a compelling visitor experience and will have a minimal economic impact. Though it is the most expensive choice, Alternative C has grown out of previous plans for the Lackawanna Heritage Valley and is congruent with other plans for the region. It addresses most of the outstanding issues, provides the best interpretation and visitor service, works best with the education plan, and will provide the largest economic benefit. ***Alternative C: Heritage Explorer is, therefore, the preferred alternative.*** Table II-7 charts a comparison of the alternatives, and the following section presents Alternative C: Heritage Explorer in the form of the Management Action Plan.

Management Action Plan

CONTENTS

- Introduction
- Compact
- Resource Stewardship Plan
- Interpretation Plan
- Visitor Services Plan
- Education Plan
- Management
- Implementation
- Costs

INTRODUCTION

The Management Action Plan for the Lackawanna Heritage Valley, required as a result of the federal designation, is intended to provide a list of actions for the Lackawanna Heritage Valley Authority to undertake in the next decade. It builds on the 1991 Plan for the Lackawanna Heritage Valley and its 2001 Management Plan Update, using the goals, core commitments, and interpretive framework developed in those plans to guide a series of plans. These include an interpretation plan, a physical development plan, an education plan, and guidance on implementation of these plans. The Management Action Plan is not intended to be solely a policy piece, but rather a guide for continuing the success of the Lackawanna Heritage Valley into a second decade.

Compact

The content of the Compact - an agreement between the Secretary of the Interior and the management entity, which is the existing Lackawanna Heritage Valley Authority - is to define the boundaries of the Lackawanna Heritage Valley and to determine its goals and objectives, or "core commitments," as they are labeled here.

Boundaries

The enabling legislation in 2000 for the "Lackawanna Valley National Heritage Area" identified its boundaries as "all or parts of Lackawanna County, Luzerne County, Wayne County, and Susquehanna County...". The 2001 Management Plan Update clearly stated the boundary of the Heritage Valley to be the watershed of the Lackawanna River, which encompasses a large portion of Lackawanna County and small areas in the adjacent counties of Luzerne to the south, Wayne to the east, and Susquehanna to the north. During the current study, various boundary alternatives were discussed and reviewed, but the watershed was reconfirmed as the clearest, most meaningful boundary. Consistent with the 1991 Plan, this new plan focuses on the towns along the Lackawanna River as a north-south axis between Carbondale and Scranton, with an east-west axis between the Visitors Center area and McDade Park. All of the significant interpretive sites for telling the Lackawanna Heritage Valley's story are within the watershed.

Goals

The Lackawanna Heritage Valley Authority's stated goals, determined in the 1991 *Plan for the Lackawanna Heritage Valley* and enthusiastically backed by the many community leaders who participated in the plan's development, are based on the following principles:

- Enhance cooperation between communities to develop recreational, preservation, and education opportunities in the Heritage Valley
- Develop preservation mechanisms to help Heritage Valley communities protect their historic, cultural, and folklife resources
- Interpret the resources and stories of the Lackawanna Heritage Valley for residents, visitors, and students of all ages, and integrate the Valley's heritage into local educational programs

Lackawanna Miners, 1904
NEPA Photo Collection

- Integrate the heritage area into the lives of the people who live in the Valley
- Develop a program for economic revitalization that uses the Valley's heritage to promote increased tourism and other private reinvestment in key buildings and districts
- Link major Heritage Valley resources physically and interpretively using cooperative strategies

Core Commitments

The 2001 *Management Plan Update* reiterated the Lackawanna Heritage Valley's commitment to the above goals. It went further and identified five key objectives to guide the next decade's planning efforts, including this EIS and Management Action Plan.

- *Facilitate partnerships and strengthen local capacity.* Envisioned as a web of partnerships, the Lackawanna Heritage Valley's success lies in the strength of its partners. This core commitment serves as an operational focus for LHVA, and directs them to foster collaboration between the many local governments, heritage organizations, and community groups active in the Heritage Valley. As such, LHVA takes on many roles, acting as a facilitatory, catalyst, broker, coach, or venture capital provider.

- *Tell the Heritage Valley's story.* The Heritage Valley's story must be told truthfully in a way that is compelling to a wide range of audiences. This can be quite a challenge in an era unfamiliar with the hardships of the past. LHVA's strategies to achieve this include developing an interpretive plan (part of this Management Action Plan), and continuing and expanding heritage education programs (also part of this Management Action Plan).

- *Preserve and enhance the physical character and economic vitality of Lackawanna Heritage Valley communities.* Having visible reminders of the past helps tell the story of the Heritage Valley, and a community's appearance directly affects its sense of pride. Historic preservation, adaptive reuse of older buildings, and reinvestment in neglected areas together help places retain their unique character. Moreover, investing in existing communities is economically efficient and helps to protect open space and natural areas from wasteful sprawl development. LHVA is committed to fostering these efforts and demonstrating their value.

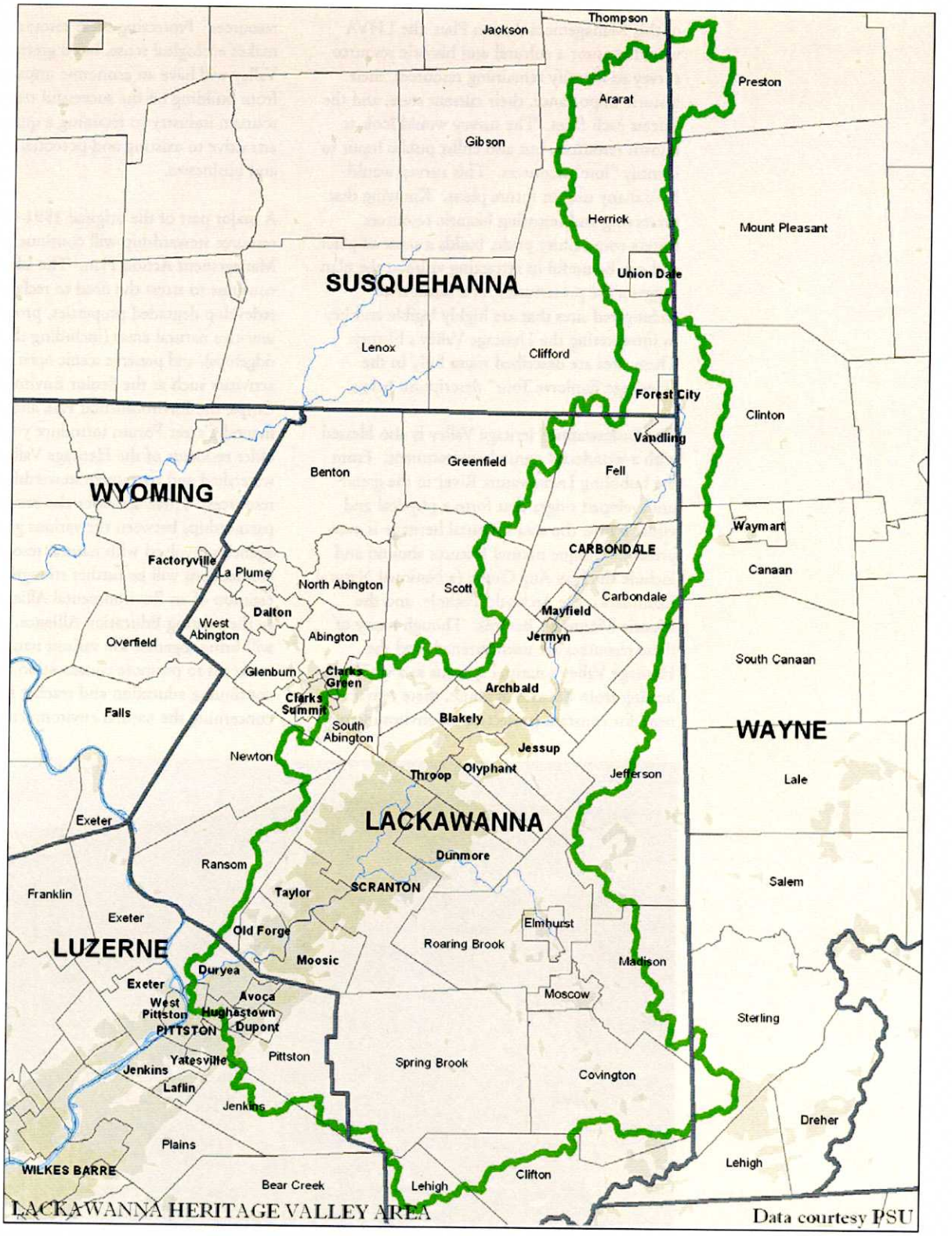
- *Improve the visitor experience.* Many aspects of heritage tourism development complements community development initiatives. Tourism is now an economic generator in the Lackawanna region, and its success impacts jobs, development, and the region's self image. LHVA is committed to supporting and strengthening existing attractions, marketing the region as a destination, and helping to provide visitors with a memorable experience.

- *Reconnect communities to the river.* Hurt by decades of neglect and industrial harm, the Lackawanna River is once again becoming a unique aesthetic, environmental, and recreational asset in the Lackawanna Heritage Valley. Improving community uses of the river is one means of giving fostering connections with the natural environment while also promoting redevelopment. LHVA is committed to encouraging the public rediscovery of this community treasure, that in many ways symbolizes the transformation of the entire region from its industrial past to its cleaner future.

RESOURCE STEWARDSHIP PLAN

The Lackawanna Heritage Valley is blessed with a rich collection of historic and cultural resources that easily illustrate its story. Colliery-related resources include conveyors, tipplers, breakers, retail pockets, power plants, hoist houses, fan houses, pump houses, machine shops, wash houses, lamp houses, powder houses, weigh houses and scales, warehouses, offices and administration buildings, culm banks, and the mines themselves. Other resource types include glass factories, lace and textile factories, railroads and stations, iron furnaces, labor history resources, ethnic public buildings, company offices, commercial buildings, schools, and housing. Though some of these resource types are plentiful, many others have become quite rare as their economic life recedes further into the past.

A continuing loss of these resources will affect the ability to interpret the past, particularly with the loss of so many colliery structures. As part



Map II-8: Lackawanna Heritage Valley Boundary

of this Management Action Plan, the LHVA would sponsor a cultural and historic resource survey to identify remaining resources, their historic importance, their current state, and the threats each faces. The survey would look at known resources, but also enlist public input to identify "lost" resources. This survey would have many uses in future plans. Knowing that preserving and restoring historic resources fosters community pride, builds a sense of place, and can be useful in attracting visitors, the plan suggests the preservation of a number of endangered sites that are highly legible and key to interpreting the Heritage Valley's history. These sites are described more fully in the "Heritage Explorer Tour" description below.

The Lackawanna Heritage Valley is also blessed with a wonderful natural environment. From the bubbling Lackawanna River to the green undeveloped ridges that form a physical and visual frame, the area's natural heritage is ever-present. Unique natural features abound and include the Nay Aug Gorge (a National Natural Landmark), the Archbald Pothole, and the Moosic Mountain Barrens. Though many of these resources are unthreatened, and the Heritage Valley's natural systems as a whole are healing from decades of abuse, there remains a need for constant protection of environmental resources. Protecting these resources not only makes ecological sense, but a greener Heritage Valley will have an economic impact as well - from building on the successful recreational tourism industry to retaining a quality of life attractive to existing and potential residents and businesses.

A major part of the original 1991 Plan, natural resource stewardship will continue under this Management Action Plan. The LHVA will continue to stress the need to reclaim and redevelop degraded properties, protect the many sensitive natural areas (including the green ridgetops), and preserve scenic open space. LHVA activities such as the Senior Environmental Corps, the Environmental Fair, and the Environmental Career Forum introduce young and older residents of the Heritage Valley to their watershed and encourage stewardship of natural resources. These activities also serve to reinforce partnerships between the various groups and agencies involved with natural resources. These connections will be further strengthened by the creation of an Environmental Alliance. Similar to the existing Education Alliance, this group will bring together the various natural resource concerns to promote conservation and develop continuing education and teacher materials concerning the natural environment.

Protecting ridgetops is important to preserving Lackawanna landscapes. Kise Straw & Kolodner photograph

INTERPRETATION PLAN

The Interpretation Plan, as part of the Management Action Plan, determines the themes and methods of interpretation for the Lackawanna Heritage Valley, and plays a central guide to developing the visitor infrastructure in the Visitor Services Plan. The Plan that appears here is the result of changes from stakeholder review and public comment. The original Interpretive Plan is valuable for its historical timeline, its discussion of assets and challenges to interpreting the Heritage Valley, and its descriptions of interpretable places. It appears unchanged in Appendix C.

Thematic Structure

A structure for LHVA's interpretive program revolves around several items: a *title* for the program; a *core message* each visitor would receive at an interpretive site; a *summary storyline* that conveys in quick sweep the broad elements of the Heritage Valley's history and significance; the *themes* that run through the presentation of each program and site interpretation; the *key stories* that will be developed through the cycle of interpretive programs; and the *themes* that guide the interpretation of places.

Title

A title, like a logo, instantly conveys the essence of the message that follows and is part of an identity visitors can easily perceive, and follow confidently from website to brochure to welcome center to interpreted site. The 1991 *Plan for the Lackawanna Heritage Valley* suggested that the phrase "the Lackawanna Heritage Valley in the Age of Anthracite" is the central "theme" linking the historically significant resources. With one important change, this phrase makes an effective title for the LHVA's cycle of interpretive programs:

"The Lackawanna Heritage Valley *and* the Age of Anthracite."

This title acknowledges that the Lackawanna Heritage Valley is significant today because of what happened here during the century when coal was king. The revision of the word "in" to "and" corrects the false suggestion that the interpretive program is limited to that single epoch. The title is catchy enough to be recognized and remembered, and it contains a "key word" - anthracite - that may be new to some vocabularies, but will be reinforced throughout the visitor's encounter with the Heritage Valley.

Core Message

The core message is the heart of the LHVA interpretive program. Every visitor who visits any Heritage Valley site or reads any LHVA literature will be exposed to the elements of this statement. The core message of LHVA's interpretive program is as follows:

> *The Lackawanna Heritage Valley was a great, integrated industrial system designed to extract, process and transport the anthracite coal that fueled the building of America. The mechanical elements of the system, the mines and works, the rails and mills, were abandoned piecemeal when their usefulness was done. But the organic element of the system, the people, rich in character, resilience and enterprise, survives. The people of the Heritage Valley today shape a new era of reclamation based on community, heritage and the natural environment.*

Summary Storyline

The Lackawanna Heritage Valley's history and significance is well articulated in the 1991 Plan for the Lackawanna Heritage Valley. This Summary Storyline narrates a timeline from prehistory to the present that touches upon key elements of the Heritage Valley's history. Orientation programming and site interpretation will be based on this storyline. The major eras are as follows - for more description, please consult Appendix C.

- Prehistory
- Early Settlement
- Anthracite Comes of Age
- Peak Years and Consolidation
- Decline
- Reclamation and Renewal

Themes

The 1991 Plan recommended as a theme structure a set of three key words in balance: LAND, INDUSTRY and PEOPLE. This theme structure is an equation integrating these three dynamic elements into forms that explain everything a visitor sees in the Heritage Valley today.

- LAND is the valley itself, the setting for the historical drama of the Lackawanna Heritage

George Inness 'Lackawanna Valley', 1855
National Gallery of Art

Valley. It reflects centuries of interplay between nature and human enterprise. The theme includes the geological processes that formed the valley's rich anthracite strata, and the coal-seam peculiarities that determined where mines were sunk, where towns were sited and where culm piles burgeoned. The subterranean city of coal. The theme invites consideration of the primeval landscape encountered by Native Americans, the network of early rivers and roads and water-power streams that brought westward-migrating New Englanders to settle this later-disputed valley. The land theme runs from prehistoric times through the present and into the future, encompassing geology and hydrology, patterns of settlement and mining, programs for repairing industrial damage and protecting sensitive natural lands and ecosystems. For the Heritage Valley, the land theme also includes opportunities for scenic vistas, and touring, hiking, canoeing, and other possibilities for outdoor recreation.

The DL&W yards in Scranton NEPA Photo Collection

- **INDUSTRY** is in the broadest sense human enterprise and work of every kind. In pursuing their lives, even the most primitive people shaped and altered primeval land. They trampled its surface into paths, they furrowed it for planting, they scored and delved and moved things from one place to another. For most sites in the Lackawanna Heritage Valley, the transforming industry was the anthracite complex which includes sites and facilities for mining, processing and moving coal, and the related industries that arose adjacent to anthracite. The theme links the Heritage Valley from end to end along the road and rail and trolley corridors that stitch the towns into linear patterns. The Industry theme encompasses the creative force of business leadership, and the labor of the newest and least skilled of immigrants. It encompasses the relationships between capital and labor, between corporation and community, between men and machines. In the development of this theme, the visitor will observe the beginning, the spectacular growth and eventual deterioration of one of the most transforming industries in American history.

- **PEOPLE** are the real dynamic element in the system that built and ran the Lackawanna Heritage Valley. They imagined, built, operated, dismantled and restored the scars left by anthracite mining and its ancillary industries. They built and used churches, houses, factories and businesses. Their lives at home and at work, the hallmarks of their distinct communities, the ways they cared for children and for one another comprise this theme. The theme also explores the relationships between people and work, adults and children, between between church and union. Under this theme, "they the people," teem all the groups and groupings, severalties, pluralities and majorities, the migrations in and out, siftings and driftings of large populations and single individuals.

Breaker Boys courtesy of LHVA

The "Heritage Explorer" Interpretive Program
Currently, interpretation largely occurs within the major attractions and institutions. Although visitors will receive a centralized comprehensive story at the new Heritage Interpretive Center, the attractions only cover parts of this story, and the visitor rarely experiences the actual places important to the story. The focus of this Interpretation Plan is on crafting a highly legible and compelling story within the historic places of the Lackawanna Heritage Valley that complements interpretation done by existing institutions. The story would unfold along a prescribed "Heritage Explorer Tour" - a signed route with stops and interpretation activities in four of the most legible places in the Heritage Valley: Carbondale, Archbald, Olyphant, and downtown Scranton.

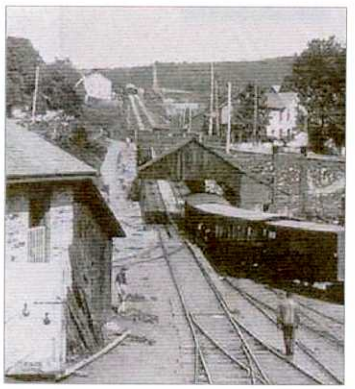
The "Heritage Explorer Tour"
The "Heritage Explorer Tour" described below will act as both an attraction and an introduction to the region, and will take visitors on an easily followed route through important places a casual visitor might never encounter. The tour route takes place along the spine of

Lackawanna Visitors Center
Kise Straw & Kolodner photograph

the Lackawanna Heritage Valley paralleling the Lackawanna River, and can be accessed in several ways, including private automobile, special tour buses, train, bicycle, and even canoe. These tour methods are described more fully in the Visitor Services Plan below.

Four distinct towns were selected to illustrate the themes of the Heritage Valley's story and give visitors a physical experience in the Heritage Valley. In each of the four towns, visitors would be directed to an orientation point with parking, restrooms, and interpretive panels that tell of the place's history and its importance to the established story and themes. The orientation point would also map out and prepare visitors for a local walking tour that connects a series of important resources and interpretive stations designed to elicit a more meaningful experience.

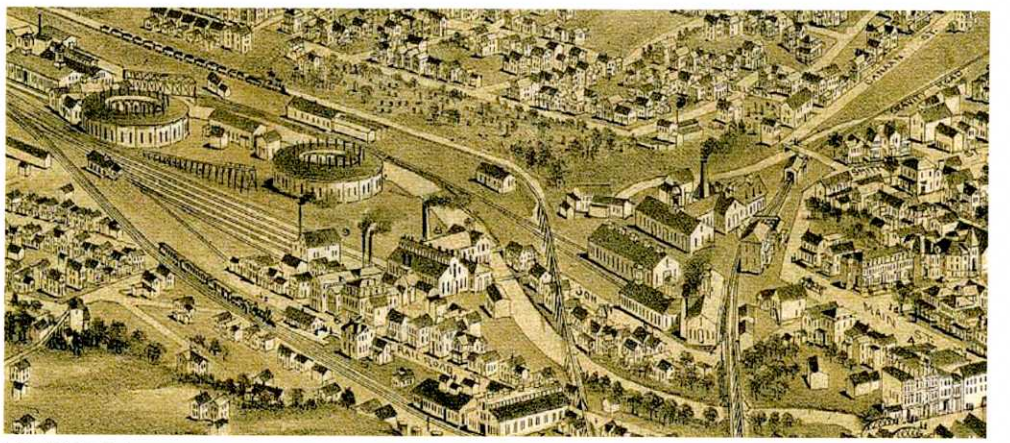
- *Lackawanna Visitors Center / Heritage Interpretive Center*
  Most visitors would start their interpretive experience of the Lackawanna Heritage Valley at the Lackawanna Visitors Center and Heritage Interpretive Center, off I-81, where they would learn a general history of the region focusing on three themes: The Land, The Industry, and The People. "Heritage Explorer Tour" information would also be provided. From here visitors following the tour would drive to Carbondale via the newly completed Lackawanna Valley Industrial Highway, which offers stunning views and thus reiterates the Land theme.



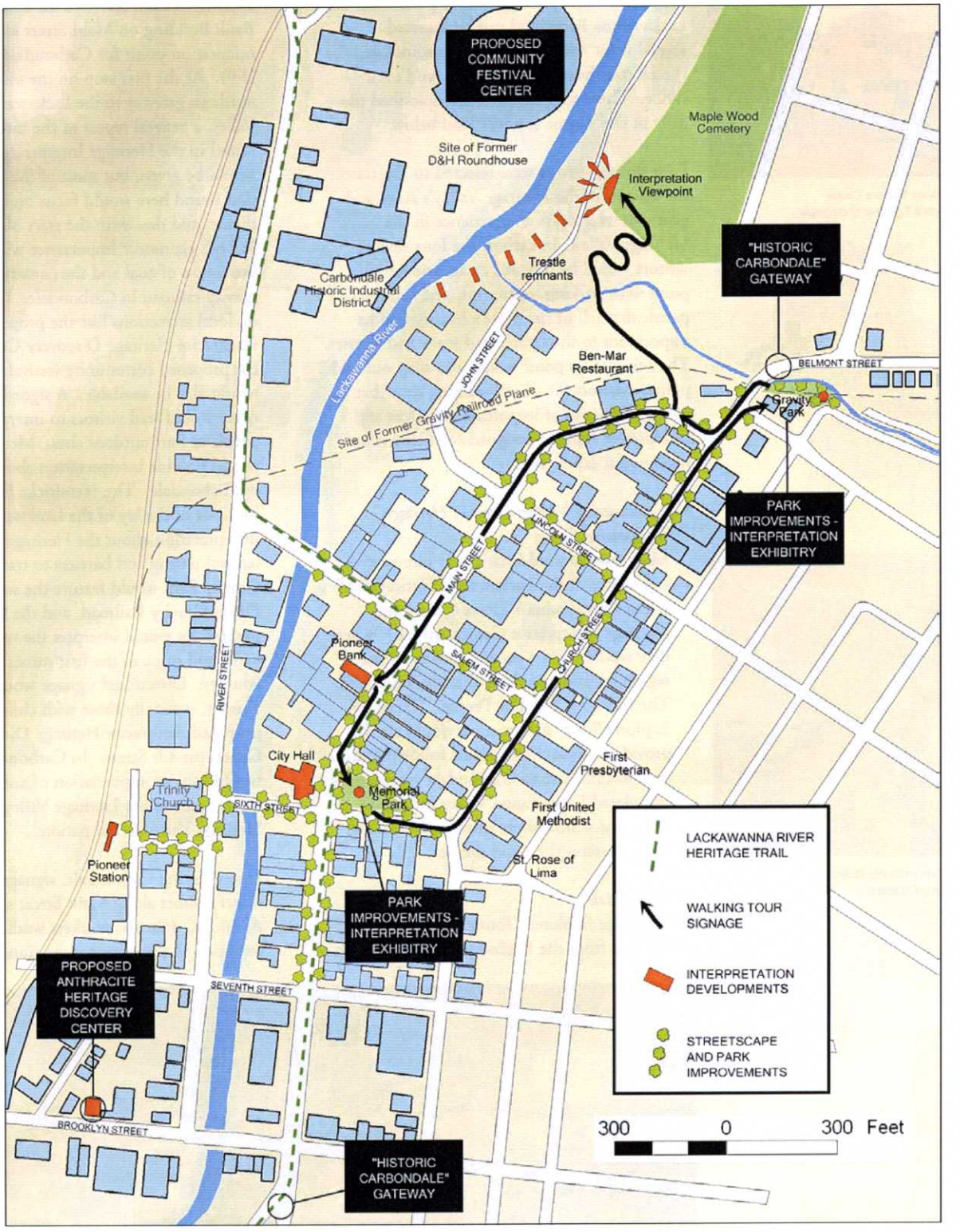
Carbondale's Gravity Railroad. Plane No. 1
NEPA Photo Collection

- *Carbondale*
  "Heritage Explorer" Tourists would be directed from the Highway into the historic area via Canaan Street to the Pioneer Dime Bank Building on Main Street as the orientation point for Carbondale (see Map II-9). As the first stop on the tour and the northern gateway to the Lackawanna Heritage Valley, a general repeat of the interpretation found in the Heritage Interpretive Center would be given, but most of the interpretation found here would focus on the Land theme, and deal with the start of the Heritage Valley's economic importance with the extraction of coal and the construction of the gravity railroad in Carbondale. Information on local attractions like the proposed Anthracite Heritage Discovery Center and the proposed community festival center would also be available. A signed walking route would lead visitors to interpretive panels at four outdoor sites. Memorial Park would provide interpretation about the town of Carbondale. The Hendricks Estate with its views of the lay of the land would feature interpretation about the Heritage Valley's natural setting and barriers to transportation. Gravity Park would feature the story of the D&H Gravity Railroad, and the Ben-Mar parking lot would interpret the nearby D&H yards and some of the first mines in the country. Directional signage would also alert visitors, especially those with children, to the proposed Anthracite Heritage Discovery Center on 8th Street. In Carbondale, visitors would gain an appreciation of anthracite, its importance to the Heritage Valley, and the Heritage Valley to the nation.

Upon leaving Carbondale, signage would direct visitors along Main Street south to Archbald. Historic markers would call attention to important place along the way,



Industrial District in Carbondale, 1890 Library of Congress



Map II-9: "Heritage Explorer Tour" – Carbondale walking Tour

Archbald's Gravity Slope colliery, 1931
NEPA Photo Collection

Gravity Slope shifting shanty Archbald
Kise Straw & Kolodner photograph

Olyphant's historic commercial center
Kise Straw & Kolodner photograph

such as the Windsor Inn in Jermyn, where the Red Cross was first started.

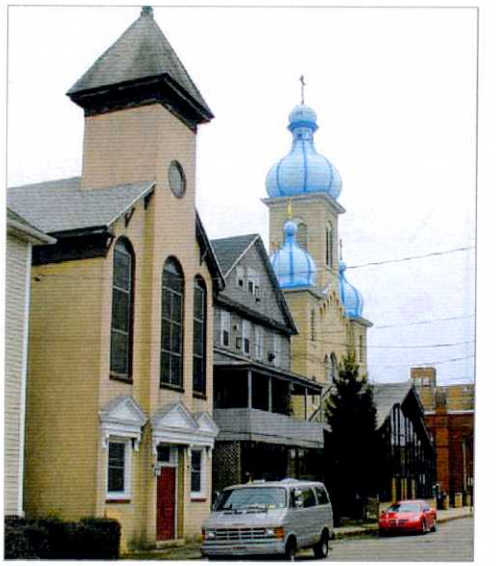
- *Archbald*
  Interpretation in Archbald would focus on the Industry theme (see Map II-10). By visiting the forgotten remnants of the Gravity Slope Colliery at the foot of Laurel Street, visitors would learn how the anthracite industry operated as a complex system, and how laborers within the system spent their days. Visitors would first be directed to the southernmost remnant (of unknown original use), refurbished as the site's orientation point. Here they would encounter a general interpretation of the Heritage Valley's and Archbald's past, repeated lessons from the Land theme learned in Carbondale, as well as orienting maps. The nearby oil house would be stabilized and given an interpretation panel that describes its former use. The refurbished electrical plant/fan house would interpret how a colliery functioned, with a working model of a colliery that could be operated by visitors. Finally, the refurbished shifting shanty would interpret the various jobs within a colliery and the daily working life of mine laborers. A special display, perhaps called "Accident at the face!," would feature a true-life story about an mine accident at the Gravity Slope Colliery from newspaper articles and first-hand accounts. Visitors would leave with an appreciation of the enormity of the anthracite industry as well as its dangers. Expanding on the Industry theme, special group tours would also include a walk-through of the nearby PEI Cogeneration Plant which until recently used remnant coal from the Gravity Slope's culm pile to generate electricity.

  Upon leaving the Archbald site, the "Heritage Explorer Tour" route winds by prominent historic sites and attractions such as St. Thomas Aquinas in Archbald, the planned Jessup Heritage Center and annual St. Ubaldo festival in Jessup, and the former Olyphant Silk Mill in Olyphant.

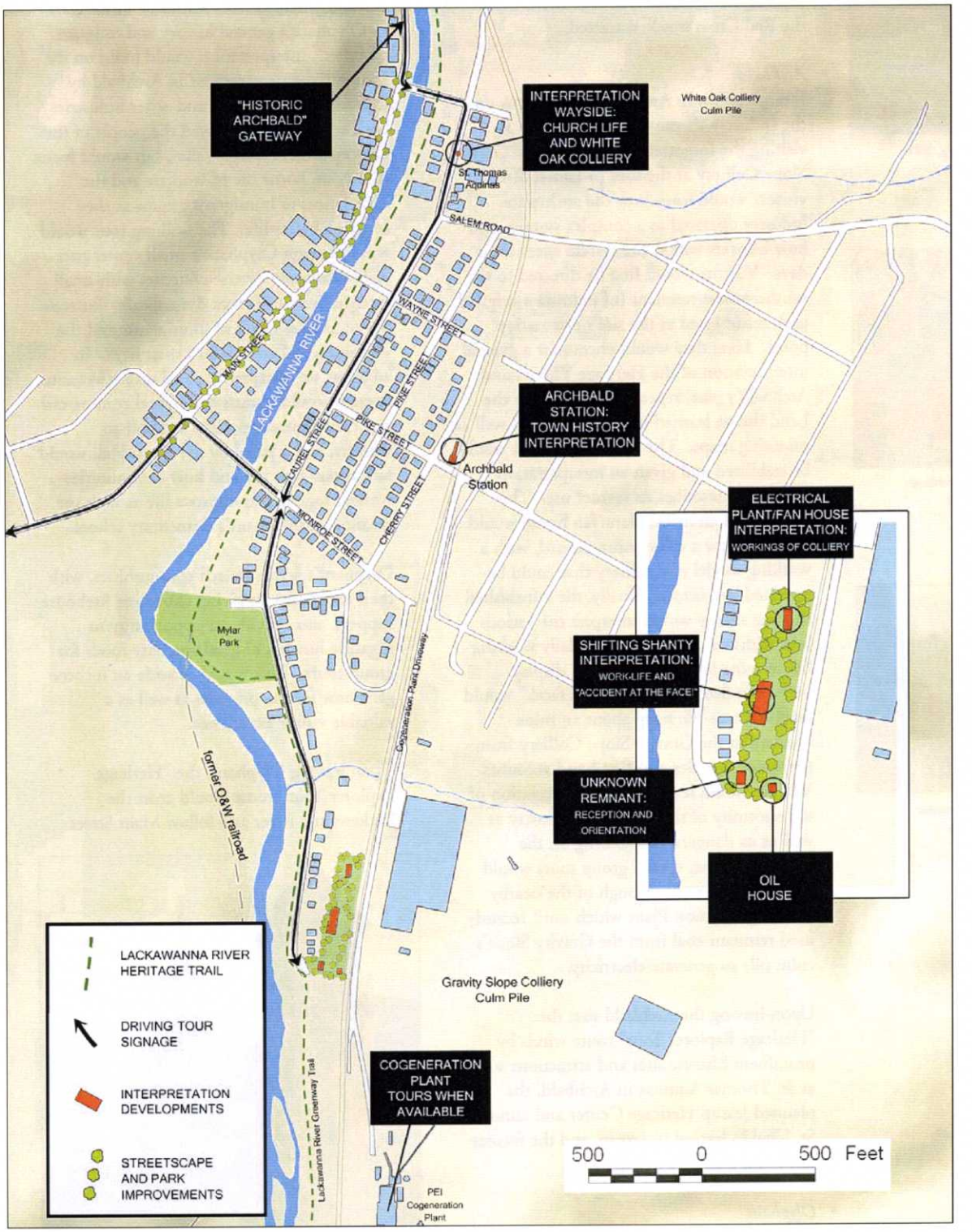
- *Olyphant*
  With its beautiful churches of every ethnicity, older housing, lively downtown and small size, the Borough of Olyphant would readily tell the People theme (see Map II-11). Orientation would be at the Queen City Station, where visitors would be introduced to Olyphant's general history and unique qualities. Interpretation would build on the Industry theme presented in Archbald by exploring the silk mills and other industries besides coal that employed the people of the Lackawanna Heritage Valley, but would focus mostly on home life of workers and the experiences of immigrant groups as they sought a better life. The walking tour would wind through Olyphant's small center past eight ethnically diverse churches with small interpretive panels that dynamically illustrate the successive waves of immigrants and the importance of churches to their lives. In addition, an interpretive panel on Lackawanna Avenue would discuss the typical commercial and entertainment options available to workers, and a panel by the Town Hall would talk about civic life and how communities worked together to improve life as with the creation of Olyphant's elementary school.

  Olyphant's active church communities, with their experience in giving church or firehouse suppers, also provide an opportunity to organize lunches of local specialty foods for group tours. This would provide an income generator for the provider as well as a valuable visitor experience.

  Upon leaving Olyphant, the "Heritage Explorer Tour" route would cross the Lackawanna River and follow Main Street



Former synagogue and All Saints Greek Orthodox Church, Olyphant Kise Straw & Kolodner photograph



Map II-10: "Heritage Explorer Tour" – Archbald Tour

south into the historic Providence neighborhood in Scranton, past prominent sites like the Silkman House that would feature interpretive signage about Scranton's early settlement by Connecticuters laying claim to northern Pennsylvania. The route turns on Market Street, re-crosses the Lackawanna River and connects with Electric Street, passing through the elegant houses of the Green Ridge section of Scranton with an interpretive panel describing the development of streetcar suburbs. The route then turns onto Wyoming Avenue and follows it downtown, passing the International Correspondence School, with a panel about its history.

- *Scranton*
  As the hub of the northeast Pennsylvania anthracite region, downtown Scranton, with its uniquely gorgeous commercial and civic architecture presents the fullest flowering of the anthracite age. Between the many attractions there that currently provide interpretation (Steamtown NHS, the Iron Furnaces, the Electric City Trolley Station & Museum, the Everhart, and the Lackawanna County Historical Society) and the uninterpreted sites such as the County Courthouse, John Mitchell Monument, two historic train stations, and the historic commercial streets, virtually every aspect of the Lackawanna Heritage Valley is told.

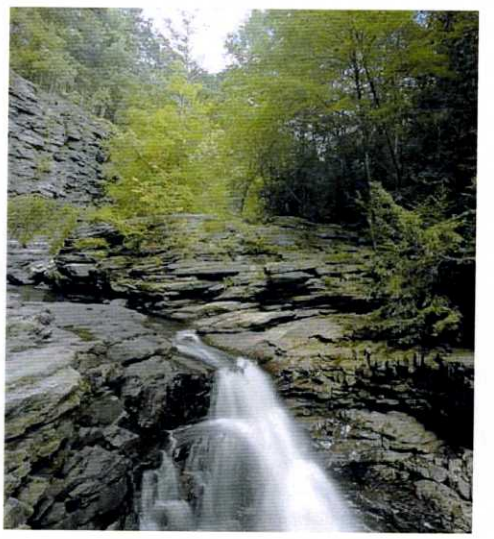
  Until the proposed Intermodal Transportation Center on Lackawanna Avenue is completed, orientation would occur at the Electric City Trolley Station & Museum. Large interpretive panels would repeat the general interpretation found at the Heritage Interpretive Center, as well as discuss the history of Scranton. As Scranton is too large to experience in a single walking tour, and its important sites cover a wide range of interests, activity panels here would tout the many nearby attractions and recommend to visitors several self-guided walking and driving interpretive tours, based on interest and themes. Suggested tours might include the following:

  - *"The Private Lives of Industrial Giants,"* interpreting the roles and lives of the wealthy industrialists who ran the companies that ran the Lackawanna Heritage Valley. It would feature a driving tour of the posh neighborhoods of Scranton and end with a tour of the Catlin House at the Lackawanna County Historical Society.

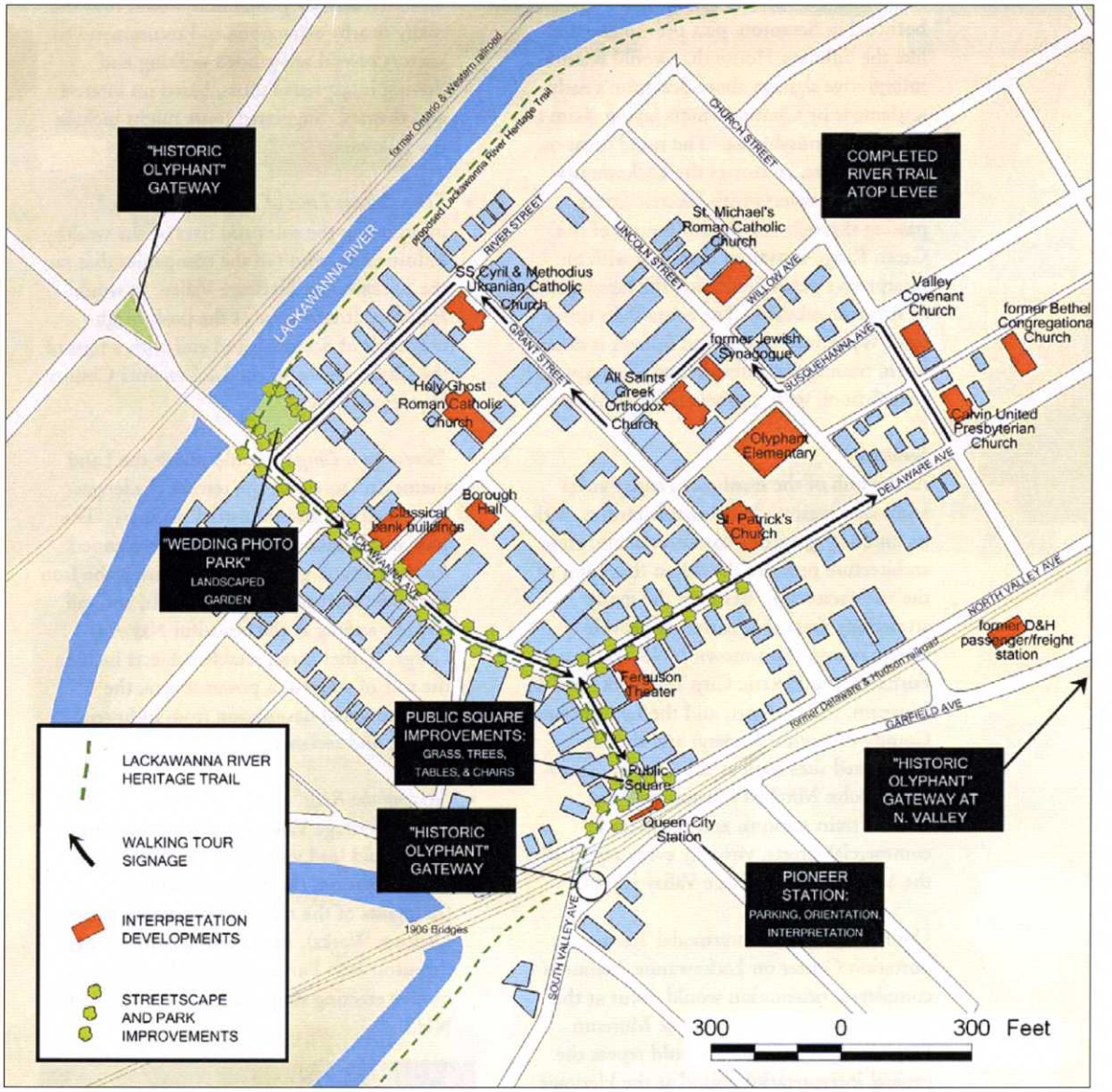
  - *"Scranton is Gorges"* would revisit the Land theme and interpret the terrain challenges that faced rail and industrial planners. The tour would take visitors along the planned Roaring Brook greenway, showcasing the Iron Furnaces, historic bridges, tunnels, and rail trestles, ending at the beautiful Nay Aug Gorge. Other interpretable subjects include the role of water as a power source, the environmental devastation from industrial abuses, and reclamation efforts.

  - *"Riding the Rails"* interpreting the role of rail in the Heritage Valley. A driving/walking tour would lead visitors by the NJ Central Freight Station, the Stacor Building (remnants of the mine car manufacturing Dickson Works), Lackawanna Station, the Scranton Iron Furnaces, the DL&W locomotive erecting shop, and end at Steamtown NHS.

Scranton Estate Kise Straw & Kolodner Photograph

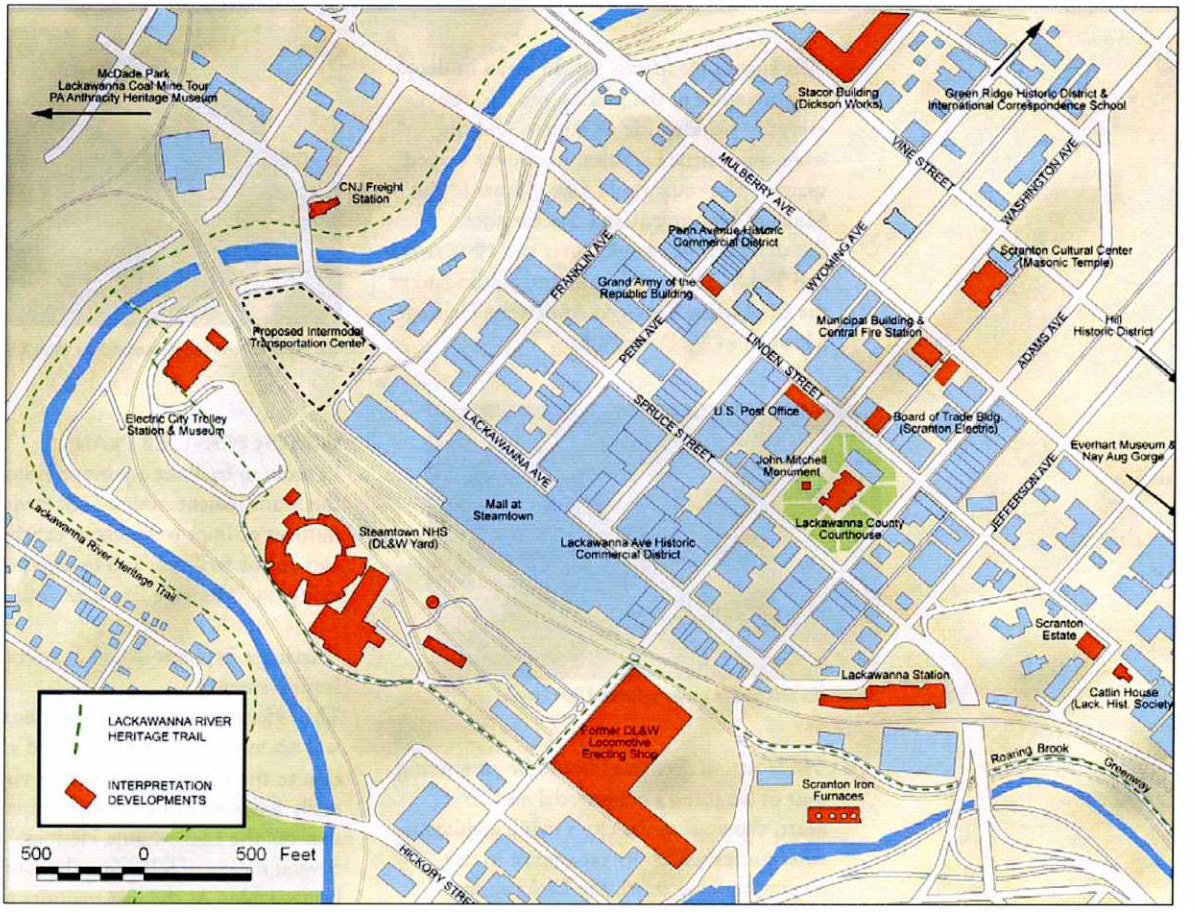


Nay Aug Gorge NEPA Convention Visitors Bureau

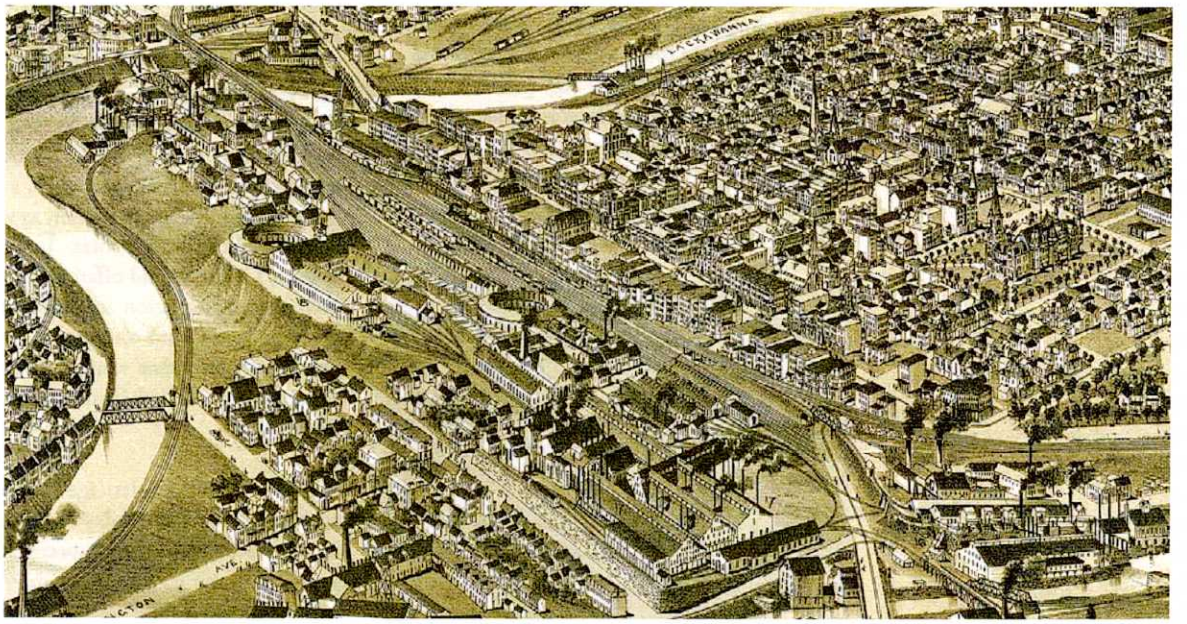


Map II-11: "Heritage Explorer Tour" – Olyphant Tour

Olyphant Skyline Kise Straw & Kolodner photograph



Map II-12: "Heritage Explorer Tour" – Scranton Interpretive Sites



Central Scranton in 1890 Library of Congress

- *"Working in the Mines"* would be an in-depth interpretation of the mining process, the everyday working life of miners, and the labor movement Lackawanna miners helped spawn. The tour would take visitors to the Mitchell Monument and the Terrance Powderly House, would cover the 1902 strike and Teddy Roosevelt's role, and would end at the Coal Mine Tour and Anthracite Heritage Museum in McDade Park.

Steamtown NHS yard in Scranton National Park Service

- *"Architectural Scranton"* would be an walking tour of Scranton's commercial and civic heart, showcasing the city's many architectural treasures. With its experience in developing walking tours, the Lackawanna County Historical Society would partner in developing the routes and brochures for these tours.

These suggested itineraries in Scranton allow visitors to cater tours to their own interests, while serving to promote and connect existing heritage attractions and place their interpretation in an overall context. At the same time, the tours serve to extend the time visitors spend in the Lackawanna Heritage Valley, reaping a greater economic benefit.

John Mitchell Monument Kise Straw & Kolodner Photograph

300 block of Penn Ave, Scranton Kise Straw & Kolodner Photograph

VISITOR SERVICES PLAN

In order to facilitate a positive visitor experience, the Management Action Plan envisions a number of improvements to existing attractions and visitor facilities, and to interpreted places along the "Heritage Explorer Tour."

"Heritage Explorer Tour" Services and Improvements

The "Heritage Explorer Tour" described above will act as both an attraction and an introduction to the region, and will take visitors on an easily followed route through important places that tell the Lackawanna Heritage Valley story. Several means of following the tour route would be available. As the vast majority of "Heritage Explorers" would want to tour via their automobile, a system of graphically uniform signs would direct drivers along the automobile route, while related signs direct the walking tours within each stop. A special brochure with map, photos, and text would detail the route to and between the interpreted towns, include information on nearby attractions, and detail the walking tours in each town. It would be the one brochure every visitor needs, available in every town's orientation point, as well as the Lackawanna Visitors Center. In addition, the Visitors Center would offer audio guide CDs with exciting narration and anecdotes that accompany the auto route tour. An attractive graphic design theme would unify all signs, brochures, maps, and other materials concerning the tour.

Also following the "Heritage Explorer Tour" auto route, special half-day bus tours on high tourist weekends aboard a specialized vehicle would give visitors the opportunity to take a more in-depth guided tour for a price. A volunteer historian guide would accompany the tour, which could be easily modified to fit

special events or interests. The tour would include a prepared lunch of local ethnic cuisine in one of the towns, perhaps provided by local churches or other organizations who would receive some compensation in return.

Several other options would exist for moving visitors between the stops on the tour. Steamtown NHS would be encouraged to expand on the several train excursions that currently run up to towns along the Lackawanna River, and include guided stops in all or some of the towns. Once completed, the Lackawanna Heritage Trail bike and hike path will wind its way through each of the interpreted places. Lastly, occasional water releases from an upstream dam enable the Lackawanna River to be canoed, providing an additional means of touring.

The orientation points at each stop - Carbondale's Pioneer Dime Bank Building, Archbald's unidentified colliery remnant, Olyphant's Queen City Station, and the Electric City Trolley Station & Museum or proposed Internodal Transportation Center in Scranton - would be outfitted with restrooms, "Heritage Explorer Tour" brochures, and information on local attractions, hotels, B&B's, eateries, and entertainment options.

To leave visitors with a positive impression, celebrate local history, and attract spin-off economic development, some aesthetic improvements to the four stops along the tour are needed. In Carbondale, simple streetscape improvements are needed to the commercial part of the downtown, including attractive pedestrian-scaled lighting, additional street trees, and refurbished sidewalks where necessary. Memorial Park and Gravity Park on the Carbondale walking tour need lighting, signage, and landscaping improvements. In addition, small gateway signs along Main Street and Canaan Street would announce the entrance into the historic area.

Similar gateway signs on Washington Avenue, Main Street and Salem Street would also announce an entrance into historic Archbald. The main physical improvement to the town would occur around the Gravity Slope colliery remnants, where a Romantic "ruins in a natural setting" landscaped park with walking trails to each remnant would be developed.

Existing directional signage, Scranton
LHVA Photograph

Olyphant's small commercial street would benefit from streetscape improvements, in addition to gateway signs on North and South Valley Streets and Lackawanna Avenue. Also in Olyphant, Public Square near the station would be given landscaping and lighting improvements to create an attractive anchor to the shopping district. Finally, vacant land along the Lackawanna River to the east of the Lackawanna Ave bridge and views of the spires of the town would make a fitting "Wedding Photo Park" to enhance Olyphant's reputation as a great wedding location.

In Scranton, streetscape improvements would occur along the main shopping district of Lackawanna Avenue. A lighting program to architecturally light the prominent buildings of downtown and re-light older building signage like the "Electric City" sign on the Scranton Electric Building, would help attract visitors downtown at night while showing off the city's architectural treasures.

Improvements to Existing Attractions
Several improvements under Alternative C: Heritage Explorer would help facilitate the tour extensions from Scranton at the end of the "Heritage Explorer Tour," while bringing visitors to the more remote attractions and improving their experience once there.

As most visitors would visit attractions via automobile, a system of signage would be in place to guide them. This signage, a related but different appearance to the "Heritage Explorer Tour" signs, would guide visitors between the Lackawanna Visitors Center and McDade Park, between downtown Scranton and McDade Park, between the Lackawanna Visitors Center and downtown Scranton, and between downtown Scranton and Nay Aug Park. To facilitate non-drivers, an attractive jitney vehicle would operate on weekends through the peak tourism months around summer, connecting the Everhart Museum in Nay Aug Park with Steamtown Plaza and the McDade Park attractions. Stops along the way would include the University of Scranton / Lackawanna County Historical Society, the Mall at Steamtown, and the downtown hotels on Lackawanna Avenue. Along with the planned "Black Diamond Discovery Center" at the Lackawanna Coal Mine, a major upgrade of the displays and exhibits in the Pennsylvania Anthracite Heritage Museum

Carbondale's Dime Bank Building
Kise Straw & Kolodner Photograph

Steamtown NHS excursion stopping in Olyphant National Park Services

would occur. Since many of the visitors to the museum are children, the exhibits would cater to all ages with more entertaining and engaging explorations of anthracite heritage.

In addition to physical improvements, a major marketing push to brand and advertise the Lackawanna Heritage Valley to nearby markets would occur, in conjunction with the Northeast PA Convention and Visitors Bureau. The marketing program would be best aimed at the weekend traveler markets in New York, Southeast Pennsylvania, and New Jersey, and would "talk up" the variety of activities and attractions available in the Scranton region. Heritage tourism would be only one aspect of the "image" - outdoor recreation, family activities at the museums or the ballpark, nightlife and live entertainment, shopping, great hotels, beautiful rural environments, quaint towns, and exciting cityscapes would all work together to create an image of an exciting and active Valley that every member of the family would enjoy. The campaign should encourage visitors to spend a whole weekend in the area in order to see it all. Special campaigns for fall foliage, ski season, and holidays would also be developed.

EDUCATION PLAN

Through its Educational Alliance of area teachers, community leaders, universities and colleges, and heritage site education specialists, the LHVA has undertaken a number of educational programs in the past ten-years and is successfully teaching upcoming generations of the importance of the Lackawanna Heritage Valley's past. Programs such as "Living Legacies," where students research, write and perform their own radio and stage programs, and "Traveling Trunks," where classes dissect steamer trunks filled with artifacts from area museums, bring heritage education into the classroom. Meanwhile the "Heritage Express," "Environmental Fair," and "Environmental Career Forum" programs bring students out into the Heritage Valley for special tours, hands-on activities, and connections with jobs and colleges. The Educational Alliance also instructs teachers on the importance of the past and its use in the classroom through its curriculum guides, the "Museums as Classrooms" training course, and special academic conferences.

A number of changes and additions to these programs are planned and are detailed in the Education Plan (Appendix D). Efforts to collect oral histories from those people who directly experienced the past are paramount as these generations are disappearing. These histories will be useful in learning situations, both with students in the classroom, and visitors to the Heritage Interpretive Center. Other planned programs focus on ways of teaching adult population about the importance of Heritage Valley's past, installing pride in a region that too often wallows in its "rust belt" image. LHVA also plans an Environmental Alliance of partner agencies and communities, similar to the Educational Alliance, that will promote conservation and develop continuing education and teacher materials concerning the natural environment. Finally, the LHVA has plans to forge partnerships with community theatre groups to write scripts and develop "living history" characters that interact with the public in schools and on-location sites, and plans to update its website to share educational materials and curriculum guides.

MANAGEMENT

This Management Action plan finds that the current form of management, where the Lackawanna Heritage Valley Authority coordinates partnerships with existing entities, has served the Heritage Valley well and recommends it to continue. In creating and implementing the suggested programs and improvements, LHVA would act as coordinator, investor, and information broker and would minimize its role as developer. In addition, LHVA would provide assistance with fundraising, marketing, and would facilitate contacts between local, state, and federal agencies. It is likely that an additional staff person would be needed to oversee the implementation of this Management Action Plan.

LHVA's Environmental Career Fair LHVA photograph

Physical improvements of interpreted places along the "Heritage Explorer Tour" would mostly be undertaken by the local communities and cultural entities, as partners to the LHVA. Streetscape improvements and park improvements would be undertaken by local governments, with funding coming from a variety of local, state, and federal sources. Auto route signage systems, marketing, and brochure/map production would be managed by LHVA and Lackawanna County with funding from federal, state, and county funds. Interpretive panels would be developed by LHVA, with assistance from interpreting partners. The Pioneer Dime Bank orientation point development in Carbondale could be undertaken by the Carbondale Chamber of Commerce, who owns the building. Likewise, acquisition and rehabilitation of the colliery remnants in Archbald would be handled by Archbald Borough, who is already raising funds for this, though the expertise of the Pennsylvania Anthracite Heritage Museum and Lackawanna Coal Mine would undoubtedly be of assistance. The riverside "Wedding Photo Park" in Olyphant would be developed by the Borough of Olyphant and the Lackawanna River Corridor Association. The architectural lighting program in Scranton should be managed by the City of Scranton, and funded mostly by landowners with assistance from the City and LHVA. The special Heritage Valley tours via bus would be run by either a private entrepreneur or Lackawanna County with volunteer guides from the Anthracite Heritage Museum.

The Scranton jitney that runs between tourist attractions would be developed by COLTS, with funding from a variety of sources, including the City of Scranton, LHVA, and Lackawanna County. The detailed inventory of cultural and historical resources would be done by a consultant hired by LHVA. The improvements to the Anthracite Heritage Museum could be financed with mostly state funds and assistance from local donors. The LHVA would work closely with the NEPA Convention and Visitors Bureau to create and carry out the marketing program for the region.

IMPLEMENTATION

With drive and proper funding, much of alternative C could be implemented within the next four years, with some of the more ambitious projects taking longer due to the time needed for fundraising.

Years One to Four

Existing Plans

- Help Electric City Trolley Station & Museum complete and open trolley link between museum and Lackawanna Visitors Center.
- Complete acquisition and construction of Lackawanna River Heritage Trail with LRCA.
- Complete construction of the Heritage Interpretive Center.
- Complete planning and construction of Black Diamond Discovery Center with Lackawanna County.
- Implement programs from Education Plan.
- Provide guidance and assistance for other heritage developments, including Carbondale's Anthracite Heritage Discovery Center, Jessup's heritage project, and LRCA's proposed developments.

Resource Stewardship

- Hire a historic resources consultant to complete inventory of cultural and historical resources.
- Assist Borough of Archbald in acquiring and beginning restoration work of Archbald colliery remnants. Anthracite Heritage Museum could also provide expertise.

Interpretation

- Partnering with Lackawanna County, develop at least 50% of interpretive panels along "Heritage Explorer Tour" route. Anthracite Heritage Museum could also provide expertise
- Assist City of Carbondale in developing Pioneer Dime Bank Building as an orientation facility.
- Assist Borough of Olyphant in developing an orientation point at Queen City Station.
- Assist City of Scranton in developing an orientation facility for Scranton. Could be housed in Electric City Trolley Station & Museum or the proposed Internodal Transportation Center downtown.

Visitor Services

- Hire a graphics consultant to create a design concept for all "Heritage Explorer Tour" materials.
- Hire a consultant to complete "Heritage Explorer Tour" brochure design. Expertise from a local historian/interpreter would be needed.
- Assist Lackawanna County in completing "Heritage Explorer Tour" signage system for auto route.
- Assist individual boroughs and cities in completing walking tour signage systems.

- Locate a partner to help establish and market guided tours along "Heritage Explorer Tour."
- Assist Lackawanna County in completing Visitor Center - McDade - Scranton auto route signage system.
- With COLTS, City of Scranton, and NEPA Convention & Visitors Bureau, hire a consultant to conduct a feasibility study for Scranton attractions jitney.
- With NEPA Convention & Visitors Bureau, hire a consultant to complete a tourism marketing study and begin marketing program.
- Assist City of Scranton in implementing an architectural lighting program.
- Hire a planning consultant to complete streetscape and park plans for Carbondale, Olyphant, Scranton.
- Begin fundraising for streetscape and park improvements.
- Hire a museum consultant to complete plan for Pennsylvania Anthracite Heritage Museum improvements.

Years Five to Eight

Resource Stewardship
- Continue registration of important historic resources on state and federal lists.
- Assist Borough of Archbald in completing restoration of Archbald colliery remnants.

Interpretation
- Assist Lackawanna County in completing development of interpretive panels along "Heritage Explorer Tour" route.

Visitor Services
- With NEPA Convention & Visitors Bureau, continue and expand tourism marketing program.
- Assist City of Scranton in continuing architectural lighting program.
- Assist Carbondale, Olyphant, Scranton in constructing streetscape and park improvements.
- Assist Anthracite Heritage Museum in seeking funds and beginning implementation of the museum improvement plan.

COSTS

Including the costs associated with the Alternative A activities, the total cost of implementing the Management Action Plan's capital development program is estimated to be around $20.8 million, including previously planned developments like the Heritage Interpretive Center and completion of the Lackawanna River Heritage Trail. Table II-8 provides details.

The vast majority of these costs would not be borne by LHVA, but by its many partners. LHVA's primary monetary role for many of these projects will be in using their staffing resources to shepard and manage projects, lobby alternative funding sources, and assist in writing grant applications. In order to control the quality and appearance of interpretive and marketing materials, LHVA would take a prime role in hiring consultants for interpretive panel, brochure, and streetscape designs.

No Action Elements (Previous Planned Projects)		
Heritage Interpretive Center		$3,000,000
Black Diamond Discovery Center		$5,500,000
Lackawanna River Trail Completion		$1,100,000
Areawide Interpretive Upgrades		
Promotional Campaign		$500,000
Interpretive Program - Message/Design		$300,000
Audio CD -DVD		$200,000
Heritage Explorer Map/Brochure		$150,000
Main Route Signage	35 @ 500	$17,500
Lease COLTS Bus		
Resource Stewardship		
Resource Inventory/Survey		$200,000
Carbondale		
Orientation Center		$500,000
Walking Tour Signage	20 @ 500	$10,000
Outdoor Interpretive Panels	5 @ 2000	$10,000
Streetscape Improvements		$395,000
Park Improvements		$100,000
Gateway Features	2 @ 20,000	$40,000
Archbald		
Colliery Acquis/Restoration		$500,000
Interpretive Panels	4 @ 2000	$8,000
Ground Improvements		$50,000
Gateway Features	3 @ 15,000	$45,000
Olyphant		
Orientation Center at Station		$50,000
Interpretive Panels	5 @ 2000	$10,000
Walking Tour Signage	18 @ 500	$9,000
Streetscape Improvements		$493,000
Public Square Improvements		$200,000
Creation of Wedding Photo Park		$100,000
Scranton		
Orientation Center		$500,000
Outdoor Interpretive Panels	6 @ 2000	$12,000
Streetscape Improvements		$640,000
Electric City Lighting Program	8 @ 10000	$10,000
Anthracite Museum Upgrade	20000 SF @ 300	$6,000,000
Jitney - Trolley	2 @ 65000	$130,000
Total Cost		$20,779,500
minus No Action Costs		$9,600,000
Additional Management Action Plan Costs		**$11,179,500**

Part III:

Description of the Affected Environment

CONTENTS

- Introduction
- Overview of the Lackawanna Heritage Valley
  - Regional Geographic and Topographic Profile
  - Political Jurisdictions
  - Demographic and Socioeconomic Profile
- Cultural Resources
  - Cultural Landscape
  - Historic and Architectural Resources
  - Archaeological Resources
- Natural Resources
  - Watershed Setting
  - Mineral Resources
  - Water Resources
  - Biotic Communities
  - Threatened and Endangered Areas and Species
- Socioeconomic Resources and Human Induced Development
  - Land Use and Cover
  - Utilities and Public Services
  - Exiting Transportation Systems
  - Air Quality
  - Solid and Hazardous Waste Sites
  - Recreation and Tourism
- Potential Future Actions

INTRODUCTION

Part III provides an overview of the region in which the Lackawanna Heritage Valley is located and the historic resources under study. The description includes the location and general character of the Heritage Valley; its demographic profile; special features, including its diverse cultural and natural resources; and the socioeconomic and human-induced aspects of the area. Future contemplated actions that could potentially affect the quality and integrity of any resources have also been identified.

OVERVIEW OF THE LACKAWANNA HERITAGE VALLEY

As established in 1991, the Lackawanna Heritage Valley essentially comprises the water-shed area of the Lackawanna River, a tributary of the Susquehanna River located in the heart of Northeast Pennsylvania. Most of the watershed lies within Lackawanna County, but portions of it are within Luzerne, Wayne, and Susquehanna Counties.

Regional Geographic and Topographic Profile The Lackawanna Heritage Valley lies approximately 100 miles west/northwest of New York City and 110 miles north of Philadelphia. Major automobile routes through the Heritage Valley include I-476 (Pennsylvania Turnpike Northeast Extension), connecting to the Lehigh Valley and Philadelphia; I-81 connecting to Binghamton, NY and Harrisburg, PA; I-84 connecting to the Hudson Valley and Connecticut; and I-380 connecting to I-80 and the Stroudsburg / Delaware Water Gap area.

The Lackawanna River watershed, which defines the Lackawanna Heritage Valley, is approximately 40 miles long, but its main course lies in a 25-mile valley defined by 2200-feet ridges (Moosic Mountain to the southeast and Bald, West, and Lackawanna Mountains to the northwest). This valley is the northern half of a 70-mile long, 5-mile wide canoe-shaped geosynclinal feature that also includes the Wyoming Valley to the southwest.

This syncline holds the Northern Anthracite Coal Field in the Llewellyn geologic formation, which also includes anthracite fields in three other areas to the south. Together, these fields comprise the largest concentration of anthracite or hard coal on the planet. Anthracite has a higher concentration of carbon than Bituminous or soft coal, is less friable, and produces

Table III-1: Lackawanna Rivershed Municipalities

Municipality	Type	County
ARCHBALD	Borough	Lackawanna
BLAKELY	Borough	Lackawanna
CARBONDALE	Township	Lackawanna
CARBONDALE	City	Lackawanna
CLARKS GREEN	Borough	Lackawanna
CLARKS SUMMIT	Borough	Lackawanna
CLIFTON	Township	Lackawanna
COVINGTON	Township	Lackawanna
DICKSON CITY	Borough	Lackawanna
DUNMORE	Borough	Lackawanna
ELMHURST	Township	Lackawanna
FELL	Township	Lackawanna
GREENFIELD	Township	Lackawanna
JEFFERSON	Township	Lackawanna
JERMYN	Borough	Lackawanna
JESSUP	Borough	Lackawanna
LEHIGH	Township	Lackawanna
MADISON	Township	Lackawanna
MAYFIELD	Borough	Lackawanna
MOOSIC	Borough	Lackawanna
MOSCOW	Borough	Lackawanna
NEWTON	Township	Lackawanna
OLD FORGE	Borough	Lackawanna
OLYPHANT	Borough	Lackawanna
RANSOM	Township	Lackawanna
ROARING BROOK	Township	Lackawanna
SCOTT	Township	Lackawanna
SCRANTON	City	Lackawanna
SOUTH ABINGTON	Township	Lackawanna
SPRING BROOK	Township	Lackawanna
TAYLOR	Borough	Lackawanna
THROOP	Borough	Lackawanna
VANDLING	Borough	Lackawanna
AVOCA	Borough	Luzerne
DUPONT	Borough	Luzerne
DURYEA	Borough	Luzerne
HUGHESTOWN	Borough	Luzerne
JENKINS	Township	Luzerne
PITTSTON	Township	Luzerne
PITTSTON	City	Luzerne
ARARAT	Township	Susquehanna
CLIFFORD	Township	Susquehanna
FOREST CITY	Borough	Susquehanna
HERRICK	Township	Susquehanna
UNION DALE	Borough	Susquehanna
CANAAN	Township	Wayne
CLINTON	Township	Wayne
MOUNT PLEASANT	Township	Wayne
PRESTON	Township	Wayne
STERLING	Township	Wayne

less dust. These properties helped to make it a popular source of energy for domestic, industrial, and metallurgic needs in the 19th and 20th Centuries.

Because of the proximity of mountains, the Lackawanna Heritage Valley's climate is relatively cool in the summer with average highs around 80 degrees. Autumn offers spectacular foliage displays and winters are not severe, with infrequent sub-zero temperatures and severe snowstorm events.

Political Jurisdictions

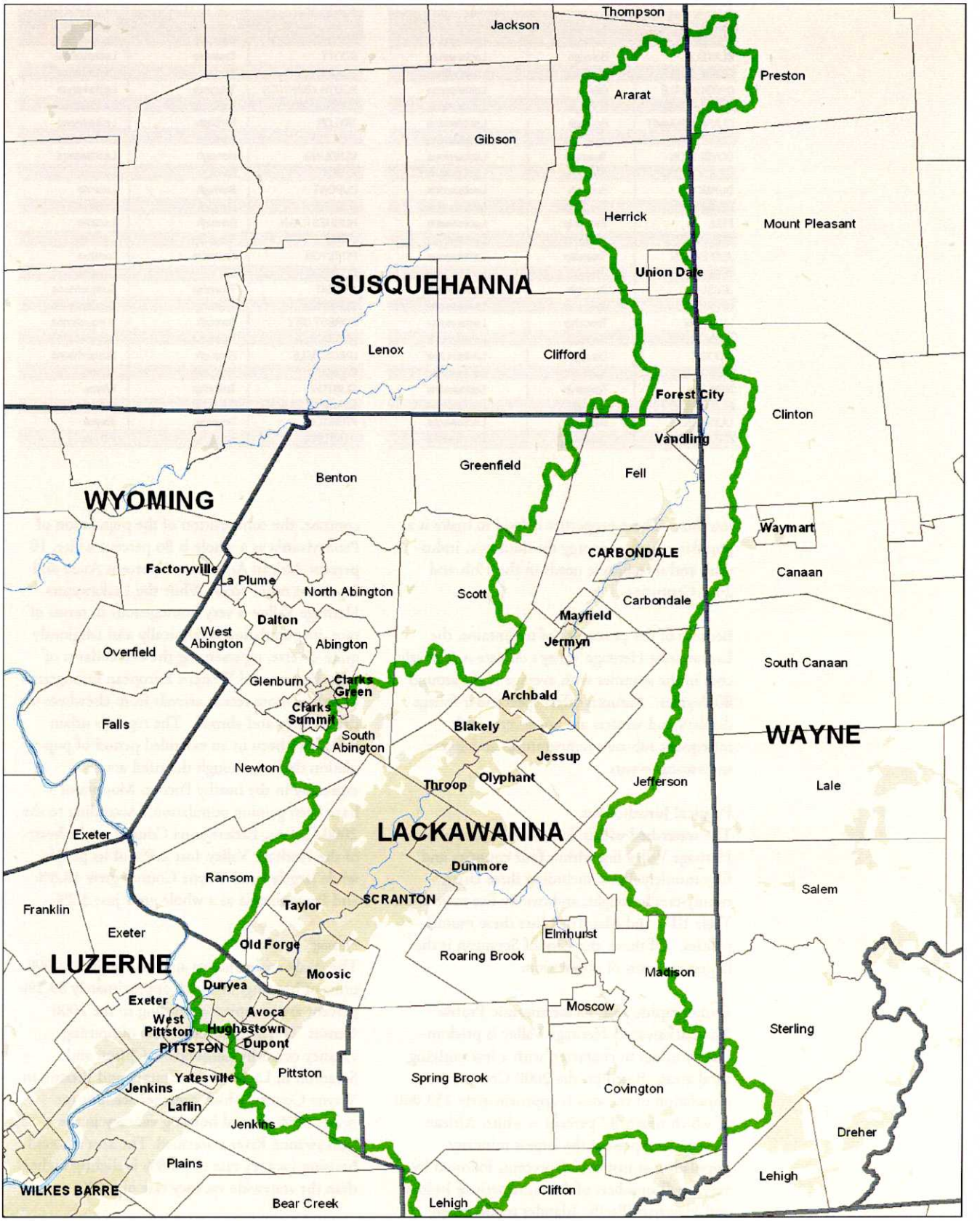
The watershed which defines the Lackawanna Heritage Valley lies within four counties and fifty municipalities, including three cities, twenty-two boroughs, and twenty-five townships. Table III-1 and Map III-2 lists these municipalities. Of these, the City of Scranton is the largest in terms of population.

Demographic and Socioeconomic Profile

The Lackawanna Heritage Valley is predominately urban in character, with a few outlying rural areas. Based on the 2000 Census, the population of the area is approximately 253,000 of which nearly 97 percent is white. African Americans represent the largest minority population at just over 1 percent, followed by very small numbers of Asian, American Indian and Hawaiian/Pacific Islander residents. In contrast, the composition of the population of Pennsylvania as a whole is 86 percent white, 10 percent African American, 2 percent Asian and 2 percent other races. While the Lackawanna Heritage Valley is very homogenous in terms of race, its population is ethnically and religiously quite diverse, representing the descendants of early Eastern and Western European immigrants as well as more recent arrivals from elsewhere in the country and abroad. The region's urban areas have been in an extended period of population decline, though the rural areas - especially in the nearby Pocono Mountains - have been gaining population. According to the 2000 Census, Lackawanna County, at the heart of the Heritage Valley, lost 2.6% of its people while largely rural Wayne County grew 18.8% and Pennsylvania as a whole grew just 3.2%.

Housing

The study area contains approximately 114,000 units of housing, of which approximately 89.2% percent are occupied, according to the 2000 Census. The highest incidences of housing vacancy occur in Carbondale, Clifton and Scranton in Lackawanna County and Preston in Wayne County, which together account for nearly 50% of total housing vacancy in the Lackawanna River watershed. The area's overall housing vacancy rate of 10.8% is slightly higher than the statewide vacancy rate of 9.0%.



Map III-2: Political Jurisdictions, LHVA Boundary

The 2000 Census reports a homeownership rate within the study area of 68.7%, compared to a statewide homeownership rate of 71.3% Most jurisdictions within the study area far exceed the state homeownership rate - several have homeownership rates above 90%. However, Carbondale, Dickson City, Dunmore, Olyphant, Scranton and Taylor in Lackawanna County; Pittston City in Luzerne County and Forest City in Susquehanna County have homeownership rates under 70%, which significantly lowers the area's overall homeownership rate.

Median housing values in the Lackawanna River watershed average $95,500 across the study area, with median values as high as $211,000 in South Abington, Lackawanna County and as low as $59,500 in Forest City, Susquehanna County. This median home value is slightly below the statewide median, which was reported at $97,000 in the 2000 Census. Median rents average $367, again varying by location, from a high of $675 in Abington, Lackawanna County to the high $200s in Carbondale, Lackawanna County and Union Dale, Susquehanna County. Statewide, the median contract rent was $438.

Income/Poverty

The median household income reported for the Lackawanna River watershed area in the 2000 Census was $34,670 (in 1999 dollars). In comparison, the statewide median household income was $40,106, indicating that this region is somewhat less affluent than the state as a whole. Per capita income was $18,379, compared to a statewide per capita income of $20,880. Overall, 10.8% of the study area population was reported to live in poverty as of the 2000 Census; almost exactly mirroring the statewide poverty rate of 10.9%.

Scranton landscape at the height of anthracite mining.
NEPA Photo Collection

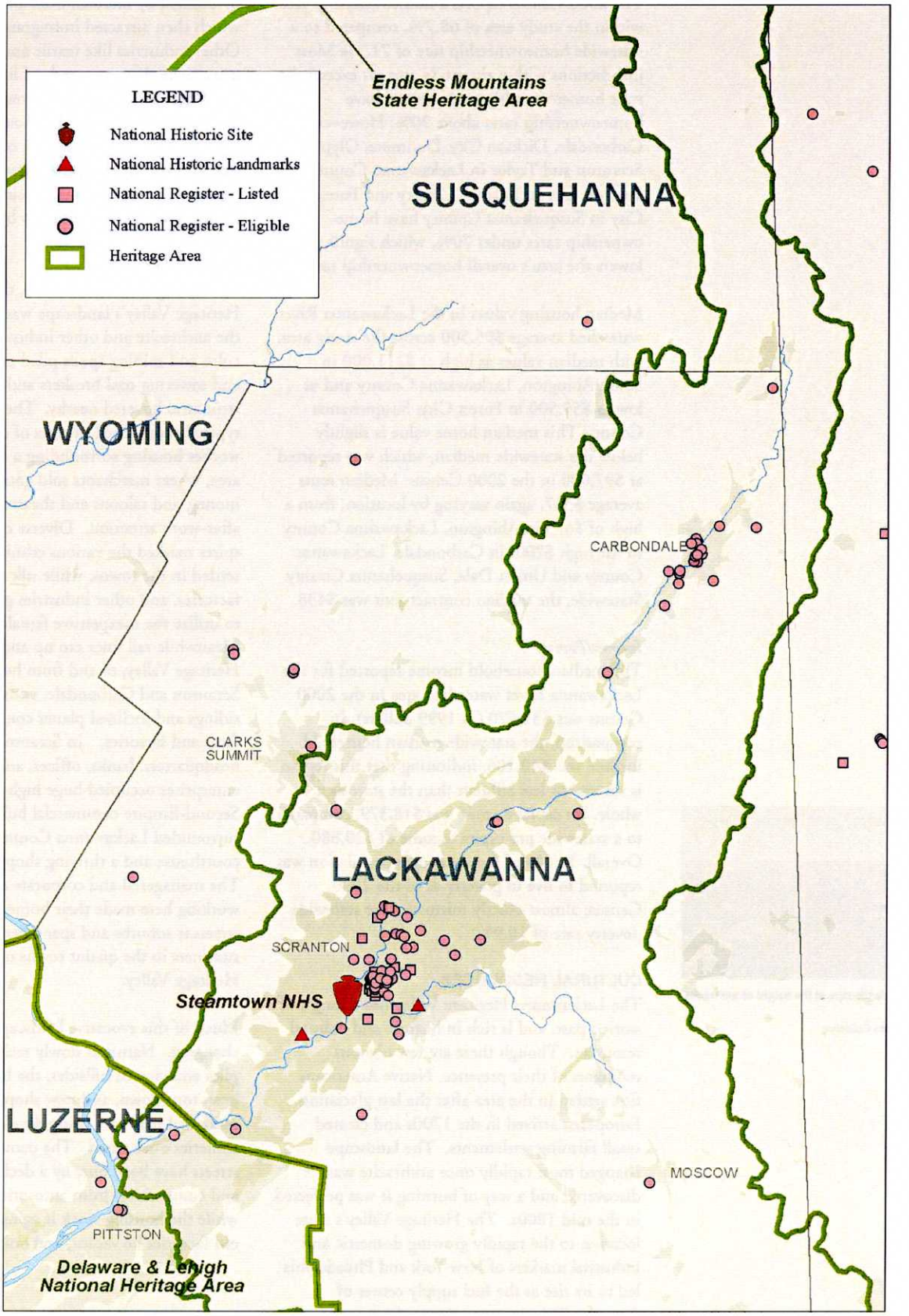
CULTURAL RESOURCES

The Lackawanna Heritage Valley has a long and storied past, and is rich in historic and cultural resources. Though there are few obvious remnants of their presence, Native Americans first settled in the area after the last glaciation. Europeans arrived in the 1700s and created small farming settlements. The landscape changed most rapidly once anthracite was discovered and a way of burning it was perfected in the mid 1800s. The Heritage Valley's close location to the rapidly growing domestic and industrial markets of New York and Philadelphia led to its rise as the fuel supply center of America. This, in turn, attracted tremendous investment by railroad, iron, and other industries, which then attracted immigrant populations. Other industries like textile and glass manufacturing were then attracted, while commercial, banking, and government growth allowed Scranton to emerge as the showplace of the region. After the Depression of the 1930s and development of cheaper energy sources, the region went into decline, loosing the majority of its once-vast mining industry by 1960.

Cultural Landscape

At the height of its influence, the Lackawanna Heritage Valley's landscape was dominated by the anthracite and other industries. Hills of culm and mining spoils piled around every town and towering coal breakers and other colliery structures hovered nearby. The towns were typically comprised of rows of quickly built worker housing surrounding a main commercial area, where merchants sold goods, banks stored money, and saloons and theatres competed for after-work attention. Diverse church towers and spires marked the various ethnic groups that settled in the towns, while silk mills, glass factories, and other industries gathered nearby to utilize the inexpensive female labor pool. Meanwhile rail lines ran up and down the Heritage Valley, to and from huge yards in Scranton and Carbondale, with dozens of sidings and inclined planes connecting mine faces and factories. In Scranton, company headquarters, banks, offices, and white-collar enterprises occupied huge high-Victorian and Second-Empire commercial buildings that surrounded Lackawanna County's prominent courthouse and a thriving shopping district. The managerial and corporate executive classes working here made their homes in elegant streetcar suburbs and spent weekends and summers in the quaint towns outside the Heritage Valley.

Much of this evocative landscape remains, but is changing. Nature is slowly reclaiming the culm piles and cleared hillsides, the breakers have all been torn down, and new shopping centers and industrial parks are being developed where collieries once stood. The commercial main streets have been hurt by a declining population and competition from auto-oriented shopping while the housing stock is aging. Many of the old factories lie vacant, and only a handful of



Map III-3: Historic Resources

the rail lines remain active. Still, the past is quite visible at every turn, core cultural sites like churches and schools remain active, and a sense of pride is quite evident.

Historic and Architectural Resources

Significant historic and architectural resources dating from the period of significance, 1840 to 1930, remain to tell the story of the Lackawanna Heritage Valley (see Map III-3). A review of the cultural resource files located at the Pennsylvania Historic and Museum Commission (PHMC) for the Heritage Valley and surrounding localities reveals that there are 29 properties listed on the National Register of Historic Places and 108 eligible for listing. (See Appendix B for the complete list) As no historic resources survey has been done for the Lackawanna Heritage Valley there are presumably many more potentially eligible properties.

Two resources are important enough to receive federal protection: the Terrance Powderly House, home of the Knights of Labor leader, has been designated a National Historic Landmark, while the former Delaware, Lackawanna & Western rail yard, roundhouse, and engine shop in Scranton have been preserved as Steamtown National Historic Site. Many other resources have been protected as part of heritage attractions: The Slope 190 Mine now houses the Lackawanna Coal Mine tour attraction, the Catlin House is home to the Lackawanna Historical Society, the Scranton Iron Furnace remnants are owned by the Pennsylvania Historical and Museum Commission, and the Laurel Avenue Tunnel has been refurbished for use by the Electric City Trolley Station & Museum. Other resources are in public hands and enjoy active use, such as the Lackawanna County Courthouse, the U.S. Post Office in Scranton, and the borough halls of Carbondale and Olyphant. There are also great examples of restoration, reuse, and upkeep by private owners, including the DL&W Lackawanna Station, the Scranton Estate, many area churches, and many contributing residential and commercial structures in area Historic Districts.

Only a few colliery structures remain, such as this electrical plant in Archbald Kise Straw & Kolodner photograph

It is important to note, however, that this list does not represent a balanced view of historic resources since a complete survey of the Lackawanna Heritage Valley has not been undertaken. The concentration of resources in Scranton, for example, results from strong historic advocacy there and the City of Scranton Landmark Registry. By contrast, only two properties in Olyphant are listed and some of the region's last colliery resources in Archbald are not included on the list. The list of resources in Carbondale is more thorough, but has not stopped important sites like the D&H roundhouse and a large theatre on Main Street from being demolished in the past ten years.

Thus, resource protection is a continuing concern in the Lackawanna Heritage Valley. Every year historic structures are torn down to make room for other development or simply because they are dilapidated to the point of becoming dangerous. The current list of resources (see Appendix B) reflects most of the types of properties identified in "Anthracite Coal in Pennsylvania: An Industry and a Region," published in 1997 by the Pennsylvania Historical and Museum Commission. The study identifies the major types of anthracite-related resources found in the Lackawanna Heritage Valley: collieries, railroads, anthracite iron furnaces, resources associated with labor history, ethnic public buildings, company offices, ancillary industries/services, and housing. Canals, miners hospitals, and patch towns are also anthracite-related type of resources, but were never prominent in the Heritage Valley. Collieries as a resource group are further subdivided to reflect the range of activities associated with the industry: conveyors, tipples, breakers, retail pockets, power plants, hoist houses, fan houses, pump houses, machine shops, wash houses, lamp houses, powder houses, weigh houses and scales, warehouses, office and administration buildings, and culm banks. Because mining has ceased, preserving many of these resources has been difficult without their economic raison d'ètre: no breakers remain in the Heritage Valley, many

rail lines have been removed, and most mine heads have been filled in.

Archaeological Resources

There is only one archaeological site currently being investigated in the Lackawanna Heritage Valley. It is the Dolph-Sunnyside Colliery Site, the site of an abandoned patch town - a rare find in this area of Pennsylvania - uncovered during the construction of the Lackawanna Industrial Highway. While significant for its uniqueness, it is not typical of the historical development in this region.

NATURAL RESOURCES

Watershed Setting

The Lackawanna River flows for nearly 60 miles through four counties in northeastern Pennsylvania, terminating at its confluence with the Susquehanna at Pittston. The 350 square mile watershed, which forms the Lackawanna Heritage Valley boundaries, is located in the glaciated plateau province of the Appalachian Mountains, the northern most portion of the Appalachian Ridge and Valley province. The River is borne out of a series of glacial ponds and bogs, forming both a West and East Branch which merge at Stillwater Dam and Old Stillwater Lake, a water supply reservoir.

Periodic glaciations occurred during the last 500,000 years which have had a major impact on the land surface and overall hydrology of the Watershed. The last major glacial advance (Wisconsinian) occurred about 20,000 years ago and extended down to approximately Interstate 80, covering the Watershed. The advance and retreat of the glaciers created till deposits and a variety of other features (e.g., striations, glacial terraces, etc.), which dramatically altered the overall hydrology of the Watershed, including

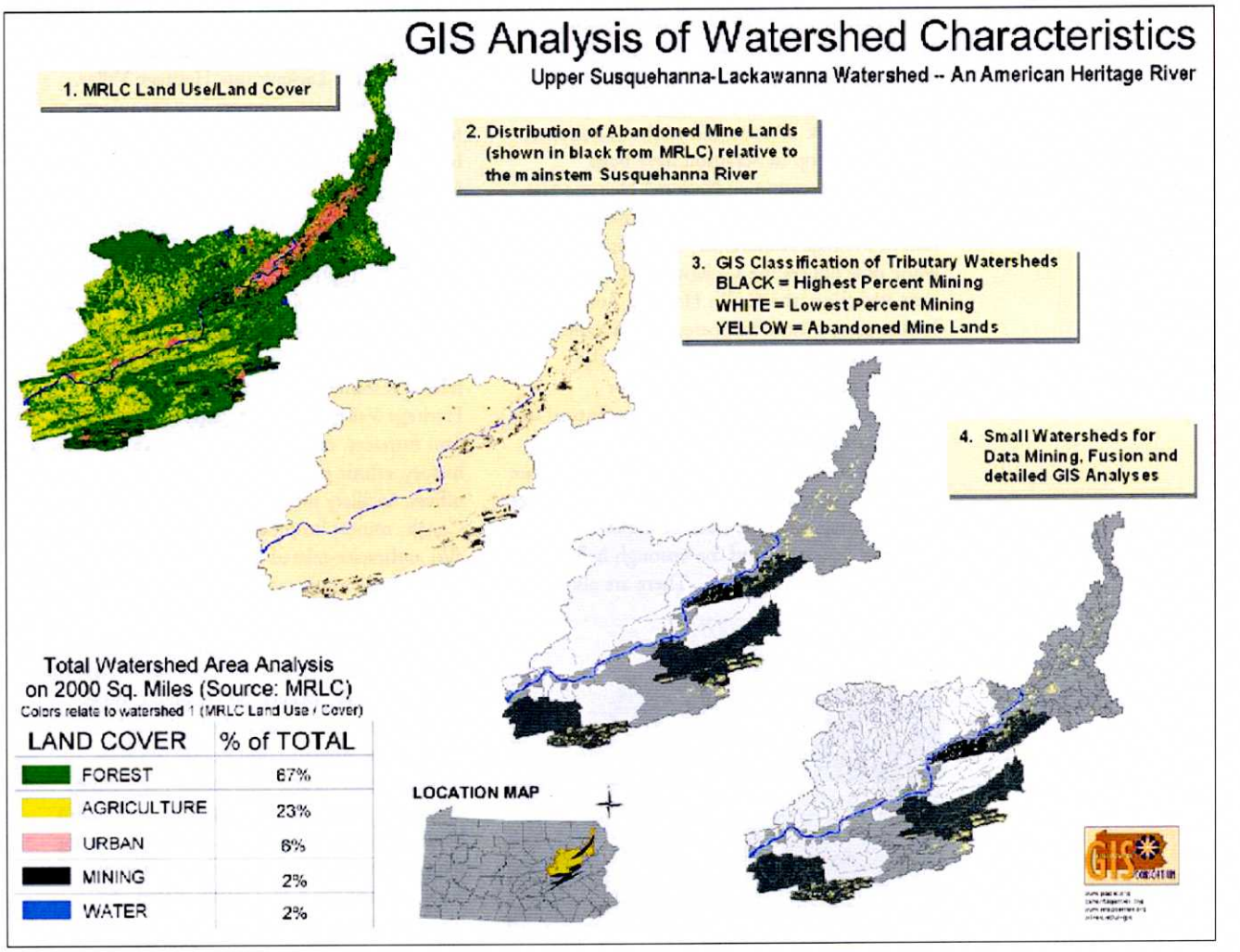


Figure III-4: Watershed Characteristics from PA GIS Consortium

the very definition of the Watershed itself. As part of the Appalachian Mountain Section of the Ridge and Valley physiographic province, the topography of much of the Lackawanna River Watershed (Lackawanna Heritage Valley) is quite hilly with frequent steeply sloping zones; more technically, this valley is comprised of a long syncline trough with the outer rim made up of hard sandstone and conglomerate (Pocono Formation) and the inner rim made up of Pottsville Formation bedrock. Physiography is defined by characteristic landscapes and distinctive geologic formations that comprise these landscapes, in turn relating to soils and to vegetative communities.

Overall physiographic and geologic constraints have limited agricultural activity in the Watershed over the years. Few areas in the Lackawanna River Watershed can be characterized as prime farmland; over the years, agricultural has not emerged as a major industry, although scattered farming obviously does exist in the Watershed. The historic zones of alluvium deposited in floodplains offer some limited agricultural potential, although these areas have also been subject to damaging floods over the years. Figure III-4 (from the 2001 USACE Section 206 Ecosystem Restoration Report) provides GIS mapping of land cover and land uses, including Agricultural land use. Although the GIS mapping includes the much larger Upper Susquehanna basin as well as the Lackawanna Watershed, tabular statistical analysis indicates that only 23 percent of the total 2000 sq mi basin can be classified as Agricultural. Although statistics have not been disaggregated for the Lackawanna River Watershed specifically, the mapping in the figure clearly indicates that the vast majority of the Agricultural use occurs outside of the Lackawanna River Watershed. Of the small scatterings of Agricultural use which do exist, Agricultural use appears to be focused in the extreme northern portion of the Watershed, well north of Carbondale, as well as in the extreme southern portions of the Watershed, well beyond the urbanized spine of the Lackawanna Heritage Valley. Agriculture is not a significant enterprise in the area.

Mineral Resources

Mineral Resources, including geology and soils, have had a profound influence on the development of the Watershed. The Lackawanna flows through Devonian, Pennsylvanian, and Mississippian-aged sedimentary bedrock formations, including sandstones, siltstones, shales, and conglomerates, as well as the notable Anthracite Uplands in the Anthracite Valley in the center of the Watershed. According to the Upper Susquehanna-Lackawanna River Watershed Section 206 Ecosystem Restoration Report (2001), the main channel of the Lackawanna flows through alluvial deposits, some of which are hundreds of feet thick. Specifically, the more resistant rock formations (such as the Pennsylvanian age Pottsville formation), created ridges along the Anthracite Valley rim, with the more erodible Mississippian age Mauch Chunk and Pennsylvania age Llewellyn formations lying within the syncline.

As set forth in the Lackawanna River Watershed Conservation Plan, of utmost importance is the story of anthracite coal, which dates back more than 300 million years to the Paleozoic Era, Carboniferous Period. At that time, continental drift and plate tectonics began a process of compressing shallow seabeds that covered the Watershed into repetitive mountain ridge lines and swamp-filled valleys. The vegetation in these valleys built up layers of decaying organic matter (peat), which was then buried by fine-grained sediments as seas rose and then ebbed. After 200 million years of these processes, further plate compression served to tremendously compress these deposits even more, promoting carbonization and creating hard anthracite coal which has so influenced the development of the Lackawanna River Watershed. Development of anthracite mining is discussed in other parts of this EIS.

Soils are variable, including areas of peat and poorly draining bog-like conditions often in headwaters of tributaries in the higher elevations (Hydrologic Soil Groups C and D). Soils are more eroded on hillside slopes and tend to become thin, though with better drainage quality (Hydrologic Soil Group B). Alluvial deposits in floodplains areas adjacent to waterways can also have reasonable drainage characteristics. Soils relate to a variety of factors, such as underlying geological formations and overall topography, and have major bearing on existing natural communities, including rare species. Soils and their characteristics have substantially affected uses occurring on the land, although in

some cases such as Udorthents-Mine dumps, the very significant effects of anthracite mining have been the primary determinant on and of the soils, rather than the native soils determining the land uses which have arisen. Major soil associations in Lackawanna County are described briefly below (from Lackawanna County Natural Areas Inventory, 1997); each association includes a variety of more specific soil series or types:

Wellsboro-Morris-Oquaga: Nearly level to steep, deep and moderately deep soils that are moderately well drained, somewhat poorly drained, and somewhat excessively drained. This is the most extensive association in Lackawanna County and consists of soils on broad rolling uplands. Dairy farming has been a principal land use, and some areas have been use for truck farming. Areas near small towns and along main roads are being used increasingly for building sites and other urban uses.

Mardin-Lordstown-Volusia: Nearly level to moderately steep, deep and moderately deep soils that are moderately well drained, well drained and somewhat poorly drained. These soils occur in small patches on rolling uplands throughout Lackawanna County, often use for dairy and truck farming. Much of this area remains wooded due to soil limitations such as stoniness, steep slopes, restricted permeability, shallow depth to bedrock, and seasonal high water table.

Wyoming-Pope: Nearly level to steep, deep soils that are somewhat excessively drained and well drained on terraces and floodplains, occurring in small areas usually along rivers and their tributaries. Dairy farming is a major enterprise, as well as truck farming, and these soils have been used by the sand and gravel industry.

Rock outcrop-Arnot-Dystrochrepts: Rock outcrop nearly level to steep, shall to deep, non-stony and extremely stony soils that are dwell drained and somewhat excessively drained. These soils are fairly extensive in central Lackawanna County on mountaintops and mountainsides. About half of these soils has little or no vegetation due to lack of soil material, with the remainder supporting woodland and scrub vegetation.

Udorthents-Mine dumps: Nearly level to steep, deep to shallow, well drained to poorly drained soils in the upland areas that have been strip mined, or used as mine dumps; these soils are located in a band extending from Carbondale to the southwestern end of Lackawanna county and consist of soil, rock material, and areas of exposed bedrock that have been disturbed during coal mining. Although some of the land is being use for building sites, landfill sites and fill material, most of this association is idle due to erosion and steep slopes.

Urban land: Nearly level to moderately steep, deep to shallow soils that are well drained to somewhat poorly drained, in residential and industrial areas on uplands. These soils can be found in small patches in central Lackawanna County around Scranton and Dunmore. Most soils have been disturbed or altered with urban structures often covering more than 85 percent of the land.

Also, the Oquaga-Lackawanna-Arnot and Mardin-Bath-Volusia soil associations as well as other minor associations also can be found, although are not prominent.

Water Resources

Water obviously is an enormously important resource, influencing so many different aspects of Watershed life. We now realize that water quantity and quality have a dramatic impact on development, and vice versa. In the Lackawanna, development has certainly taken its toll on water. Urbanization itself up and down the spine of the Heritage Valley has often fallen victim to problems of combined sewer overflows where sanitary sewers and stormwater sewers flow together. Additionally, mining has contributed to a host of water resources impacts, including acid mine drainage (AMD) and water quality impacts relating to abandoned mine lands (AML). Quantitatively, flooding has been a serious problem in the Watershed, resulting in a significant program of levee construction by the US Army Corps of Engineers, as well as a variety of other hydrologic impacts related to human disturbance and alteration of the Watershed. Although many of the causal factors which have given rise to these problem, such as mining, have come and gone, resolving many if not most of these water resource impacts

remains a major challenge for the Watershed, typically requiring substantial resource outlay. There is evidence of improvement, but, as the Watershed Conservation Plan points out, much work remains to be done.

The data indicate broad variation in flows from dry years to wet years, typically for many watersheds with characteristics similar to the Lackawanna. The data are generally taken from the 1960 to 2000 period and include major storms and hurricanes as discussed below (Floodplains); the statistics for Highest Daily Mean indicate the effects of short-term flooding with the daily peaks often being an order of magnitude greater than the Annual Mean flows. Conversely, low flows can be equally significant. Although Stillwater Dam releases offer the potential to manage dry weather flows through low flow releases in the Mainstem of the Lackawanna, the Watershed Conservation Plan makes the point that the "...complete loss of stream flow on several second order tributaries causes a total degradation of these watersheds and exacerbates negative urban storm drainage impacts." (Watershed Conservation Plan, Appendix B, Section B.2.2, unpaged) These low flows are worsened by the effects of human interference in the Watershed (discussed below).

Human influences from urban land development and town-building on the floodplains to agricultural activities and clearing of natural woodlands for cultivation to both deep mining and strip mining have altered the natural surface hydrology in the Lackawanna. Natural vegetative cover, the native woodlands of the Watershed, provide maximum water cycle balance, minimizing runoff and flooding and maximizing infiltration and groundwater recharge to support the water table. Stream baseflows, so critical to aquatic biota, are maximized as well. Historically, all types of land development have served to increase stormwater runoff and worsen downstream flooding; infiltration and groundwater recharge have been reduced. Agriculture, especially where practiced on Watershed hillsides, has had an impact as well, although the Watershed does not have extensive agricultural development.

Mining, both deep mining and surface strip-mining, has also had a major impact on Watershed hydrology. Over the years, mining technology evolved significantly, as did mining regulations. In any case, the end result has been the creation of a complex system of abandoned mines. Fractures, failures, cave-ins, and other problems have developed near rivers and streams, sometimes redirecting surface flows into failed areas and with dramatic disruptions of groundwater flows as well. Coal processing, including development of breakers, generation of culm and formation of culm banks or piles, development of the wet process technology, and other aspects of the coal mining process all served to impact surface hydrology in significant ways, and even affected groundwater flows in many cases. In virtually every case, both water flows (hydrology) as well as water quality were impacted. With time, expensive deep mining technology gave way to surface strip mining with its own set of impacts:

> Strip mines would often disrupt the flow of tributary streams. Many watercourses had been diverted around the workings or run through flumes. Subsequent to abandonment of the strippings, the temporary watercourses and flumes would fail and stream flow would enter the strippings and infiltrate into the underground workings.
>
> By 1950 the flanks of the Lackawanna Heritage Valley were extensively and rudely corrugated by strip mines, the water sources of many tributary streams were interrupted

The USACE Section 206 Ecosystem Restoration Report provides summaries of stream gage data for the Lackawanna as follows:

Chart III-5: Surface and Groundwater Flows in the Watershed

Lack. River Forest City	38.8	73	112	36.3	1,160
Lack. River Archbald	108	202	313	101	3,250
Lack. River Old Forge	332	448	712	194	10,700

> by pits and overburden piles, coal breakers and their associated culm banks and rock dumps blossomed along the Lackawanna River and its tributary streams like bad apples on a long abused tree. (Watershed Conservation Plan, Appendix B Section B.1.4)

The impacts of mining on water resources and other important aspects of Watershed life culminated in the Knox Mine Disaster of 1959 (out of the Lackawanna River Watershed per se but not by much), where illegal mining activity beneath the Susquehanna River near Pittston suddenly broke into the myriad mined voids, killing many miners and causing substantial property damage. The water resource impacts, quantity and quality, were tremendous.

A discussion of mine-related reclamation and restoration efforts undertaken, underway, and planned for the Watershed becomes a major work unto itself at this point. Substantial federal and state and county reclamation actions have been taken, although many mine-related water resource problems remain in the Watershed, requiring a substantial commitment of resources to fully resolve.

Floodplains

Historically, flooding has been a serious problem in the Watershed. These flooding problems have resulted both because of the hilly topography of the Watershed which accelerates runoff, as well as because this same topography has promoted intensive development in natural floodplain areas of rivers and streams which increase impacts to bodily injury and property and at the same time exacerbate the flooding problems themselves. Much of the anthracite industry and the communities that developed around it were developed on the floor of the Heritage Valley. Many neighborhoods in Carbondale, Dickson City, Mayfield, Scranton, Archbald, Peckville, Olyphant, Duryea, and Moosic encroach directly in the floodplain, and even in the floodway itself. According to the Watershed Conservation Plan, serious floods occurred in 1902, 1922, 1936, 1942, 1954 and 1955. Although the 1972 Hurricane Agnes flooding caused record flooding on the Susquehanna, the storm did not cause appreciable flooding in the Lackawanna, although Hurricane Gloria in 1985 and a winter rainstorm-snowmelt event in 1996 were both more damaging flooding events in Olyphant, Moosic, Old Forge, and selected neighborhoods in Scranton.

Given the significance of flooding in the Watershed, flood control and management have become issues of major importance. Historical flooding events have triggered a variety of state and federal projects to dredge, construct berms, levees and flood walls, as well as install the two flood control dams at Stillwater (confluence of East and West Branches) and on Aylesworth Creek. Additionally, the 1985 Gloria flooding prompted Congress to direct the USACE to construct additional levees at the Albright Avenue Weston Field neighborhood in Scranton and Olyphant levee. More recent action has resulted in USACE continuing levee construction in two additional Scranton neighborhoods, the Plot and Green Ridge, with a levee analysis also proceeding at Dickson City as well.

Additionally, a variety of other flood-related projects have been undertaken over the years, precipitated by flood control, including multiple miles of federally and state-funded flood channelization projects and culvertization of many smaller streams; these projects have encroached on floodplains in a variety of ways and would probably not be undertaken at present given our more comprehensive knowledge of floodplain management. Historically, coal mining itself destroyed many streams and watercourses; streams were rerouted or placed in flumes or other constructed channels by the mining operations. As mines were abandoned, these watercourse "modifications" fell into disrepair, typically failed, and then created a variety of problems, with the streams "often choked with coal wastes, sediments and urban debris." (Watershed Conservation Plan, Section 6-1, unpaged).

Floodplains (100-year) for Lackawanna and Luzerne Counties as developed by the Federal Emergency Management Agency (FEMA) have been mapped in the recently drafted Lackawanna and Luzerne Counties Open Space, Green ways, and Outdoor Recreation Master Plan.

Water Quality Issues

Over the last several hundred years, water quality clearly has evolved through several cycles in the Lackawanna. Pre-colonization, extensive

and typically uninterrupted wooded cover most certainly was accompanied by an excellent ambient water quality that supported an equally impressive aquatic biota. In the ensuing periods, the Lackawanna is likely to have been spared some of the rapid agricultural clearing and timber harvesting and water quality degradation that beset so many other Pennsylvania watersheds, but certainly development-related impacts would take their toll as the mining industry proliferated and urbanization was stimulated with its often inadequate sewage treatment. Over the years, most of the sewage treatment plants have been improved, and pollutant discharges have certainly been substantially reduced. There are exceptions. Also, many of the older urban areas still have combined sanitary and storm sewers, where untreated sanitary wastes are directly discharged into receiving streams during periods of stormwater runoff. These impacts are discussed in more detail below. In sum, though mining-relate impacts have been a very important part of the water quality reality in the Watershed, water quality problems involve far more than just mining.

Recent trends in water quality are generally positive though less than straightforward. The upper portion of the Watershed (above Scranton) has generally experienced a gradual improvement, with both the fishery and macroinvertebrate data reflecting this improvement. Impacts from sewage treatment plants such as the Clinton Forest City Treatment Plant lower water quality.

Temperature is an important issue in the Lackawanna, given the importance of the recreational fishery and sensitivities of cold water species. Areas downstream of the Stillwater impoundments are warmed by releases form these shallow impoundments, with effective decreases in critical dissolved oxygen levels; on the other hand, farther downstream a variety of mine releases serve to add cooler water to the River, serving to improve dissolved oxygen levels.

Abandoned Mine Lands (AML)

The total impacts associated with anthracite mining are defined as abandoned mine land (AML) impacts. These impacts include acid mine drainage, as discussed below, but include numerous other impacts which affect surface topography, subsurface integrity, and the overall geohydrology of the Watershed. On the surface, there are impacts relating to changes in topography, slope, soil, and surface drainage, vegetation, natural habitat values, suitability for construction and further development, public health and safety, community socioeconomics, and aesthetics. Below the surface are impacts relating to stream flow, groundwater flow, AMD, and overall stability and subsidence issues. Active and potential mine fires are potential problems as well. The Lackawanna River Watershed Conservation Plan indicates that there currently exist in the Watershed "...upwards of 25- to 30-thousand acres of unvegetated soils, culm banks, stripping overburden piles, silt basins and impacted water courses. There are numerous large culm banks and coal silt deposits in/on and adjacent to watercourses. Erosive drainage swales and sheet flow cross upland areas of these sites. These abandoned coal lands are also common sites for unregulated "clean fill" activities, auto junkyards, illegal dumping and off-road vehicle activity. These activities and the ambient condition of these lands are significant contributors to the erosive suspended and mobilized bed load of the Lackawanna."

Acid Mine Drainage (AMD)

Acid mine drainage or AMD has been and continues to be a serious water quality problem in the Watershed. The USACE 206 Ecosystem Restoration Report provides an in-depth discussion and GIS-based analysis of the AMD problem, providing a mapping of Hydrogen Ion Loading (Figure III-6; a proxy for acidity), as well as Iron Loading (Figure III-6; aluminum loadings also tend to be associated with iron loadings but are not presented in this analysis). Both of these maps indicate an intermediate level of AMD problem (given the methodology used here, it should be pointed out that the Lackawanna's more serious levels of AMD problem in the central part of the Heritage Valley, between Scranton and Carbondale, can be assumed to be averaged out or balanced statistically by the large upper portions of the Watershed where no mining activity has occurred). Total number of mine discharges is also mapped (Figure III-6), again indicating an intermediate level of potential pollutant problem in the Lackawanna.

Combined Sewer Overflows

Figure III-7 indicates the heavy loading of combined sewer overflows (CSO's), which are

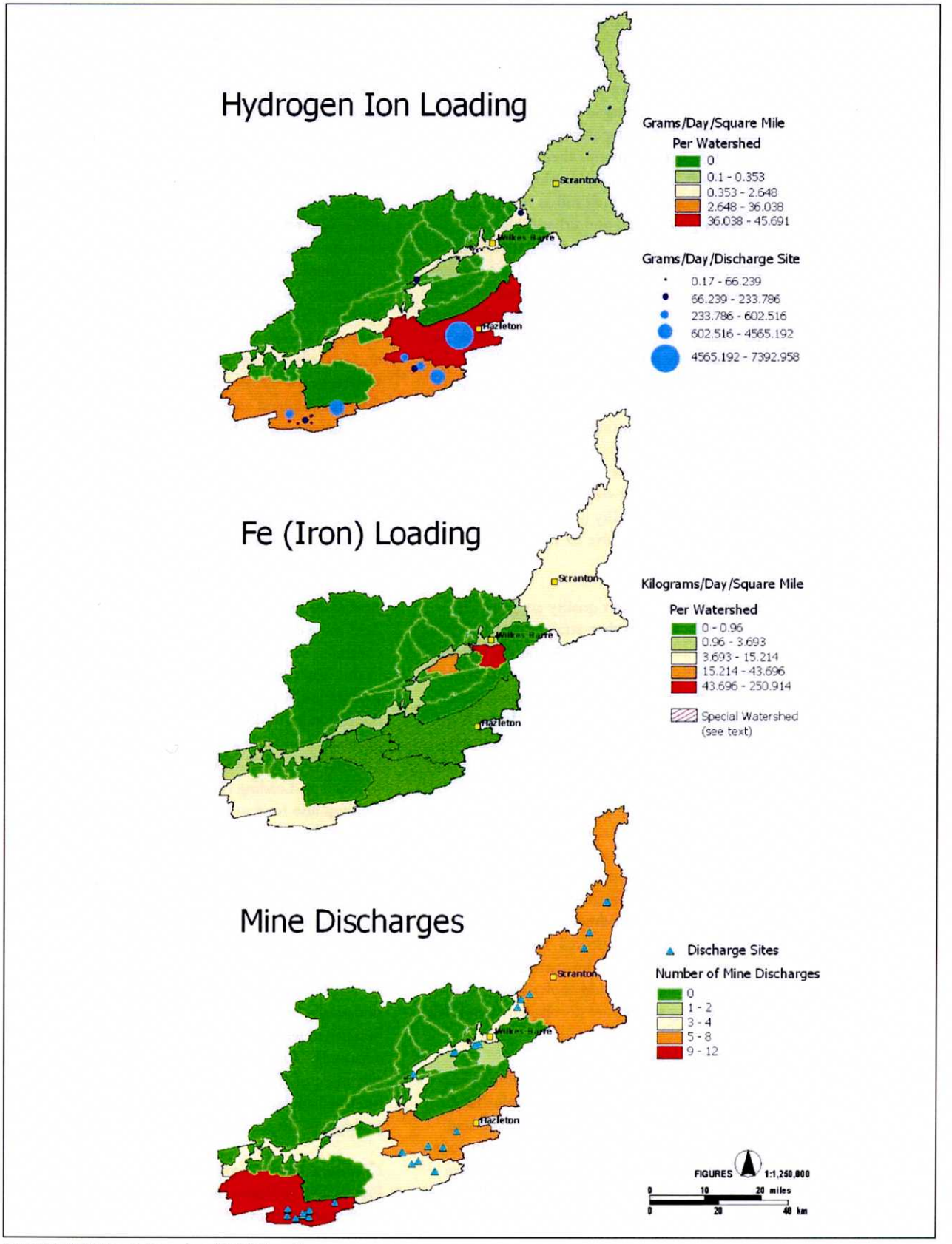


Figure III-6: Acid Mine Drainage from PA GIS Consortium

located within the Lackawanna River Watershed. CSO's are one of the most serious water quality problems in the Watershed, contributing substantial flows of untreated human waste and any other pollutants emptied into the sanitary sewer system (bacterial contaminants and other pathogens, nutrients, and a variety of other pollutants), as well as stormwater-linked nonpoint source pollutant loadings from these typically high density urban areas. CSO's tend to be associated with older urban areas and have been identified and counted as follows:

Lower Lackawanna Valley Sewer Authority	45
Scranton Sewer Authority	68
Lackawanna River Basin Sewer Authority	45
Total	158

The Watershed Conservation Plan indicates that previous studies by the US Army corps of Engineers and the Lackawanna River corridor Association have identified CSO's as a major water quality problem in the Watershed. Studies such as the 1993 Lackawanna River Greenway Reconnaissance Study offered several different recommendations for reducing and eliminating the CSO problem, with complete remediation estimated to cost between 300 to 400 million dollars. Although some funding is available through USEPA and the Lackawanna County Lackawanna Watershed 2000 program, this funding is not nearly adequate. Full remediation of the CSO problem poses an enormous obstacle for most of the jurisdictions involved here. PADEP has established a goal of a 50 percent reduction in the CSO problem in the Lackawanna during the next 10 years; however, lacking some substantial infusion of additional funds, funding of this very significant goal can be expected to be a major challenge.

Biotic Communities

The Lackawanna Watershed supports diverse biological communities, from the Moosic Mountain ecosystem to the valley floor environment. These natural communities have been fragmented over time due to industrial activity, human development, and natural disturbance. Despite the industrial residue and environmental hardships left behind by the coal mining culture, the natural ecology of the Lackawanna Heritage Valley is striving to comeback, thriving in remnant spaces, surfacing to life yet again. Despite the massive dislocation caused by mining, pockets of wetland, natural areas and relatively intact natural habitats remain along the river's edge and valley floor, along the upland, and along the ridgelines and mountaintops.

Habitat

The variation in topography, physiography, soils, geology, climate and human impacts in the Lackawanna Heritage Valley region has created a prominent diversity of biotic habitats. After surfacing in an array of mountain lakes, glacial ponds, and wetland bogs, the Lackawanna River and headwaters' habitat consists of fairly large, intact second to third generation successional growth forests. Large property owners include Pennsylvania Bureau of Forestry and Pennsylvania Game Commission who manage large tracts of land for game and hunting; and the Theta Corporation, a private business who harvest timber and also manage these forestlands for game and hunting activities. Along the Lackawanna River where urban settlement has historically been concentrated, a majority of the riparian forest cover is intact or is recovering from previous damages.

Regionally, the Lackawanna Watershed is located within two major forest types - Appalachian Oak Forest and Northern Hardwood Forest. Watershed headwaters are comprised of the Northern Hardwood Forest species, including sugar maple, red maple, American beech, yellow birch, eastern hemlock, and white pine as dominate species. The Appalachian Oak Forest is common in the valley and ridge portion of the watershed, including the Lackawanna Heritage Valley and adjacent mountain areas. This mixed-oak forest contains black oak, red oak, white oak and chestnut oak as dominant species, with red maple, white pine, pitch pine, gray birch and black birch found in less frequency.

Wildlife

The Lackawanna Watershed has abundant wildlife, particularly with the mountainous forested areas, numerous streams, ponds, bogs and lakes in the less-developed areas of the Heritage Valley. The region is well known for fishing and hunting, and has extensive gamelands as described above. About 60 species of mammals are known to inhabit the watershed, the most well known are the black bear and white-tailed deer game animals.

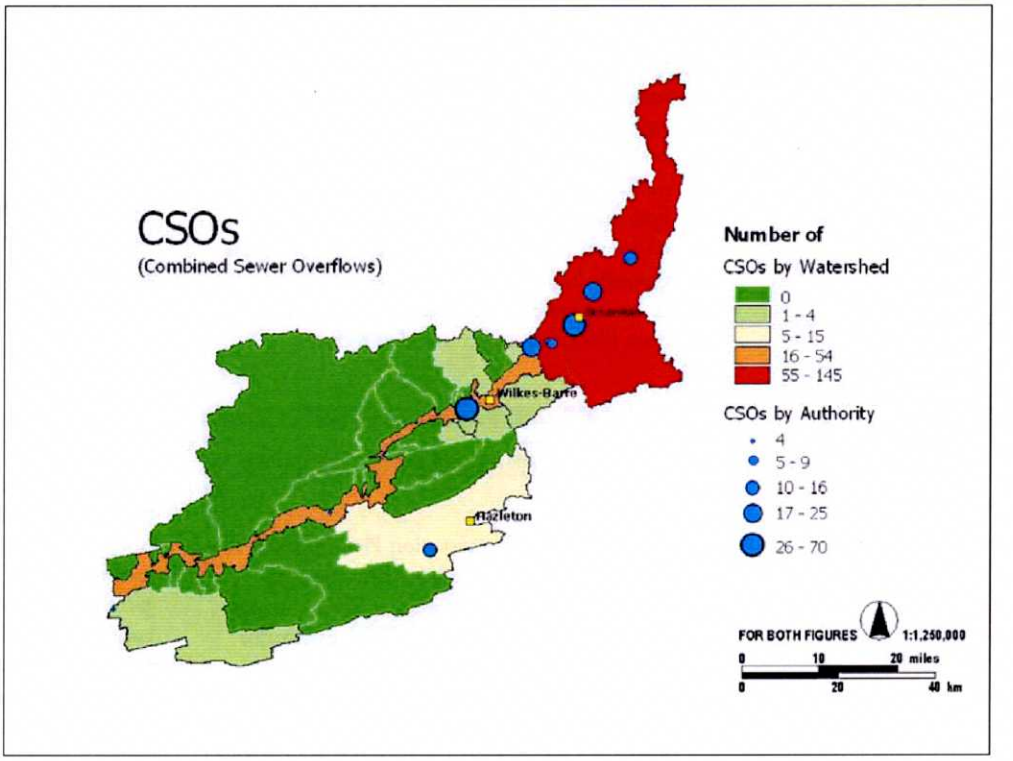


Figure III-7: Combined Sewer Overflows from PA GIS Consortium

Common to the developed regions are squirrel, raccoon, woodchuck, skunk, and opossum. Mink, beaver, and muskrat are common furbearers found in the Heritage Valley.

Aquatic habitat in the upper reaches of the Watershed is quite diverse, with improvements to water quality supporting both brown, brook, and rainbow trout, as well as smallmouth bass, yellow perch and brown bullhead. Trout fishing is vital to the regional recreational appeal of the area, and steps to improve water quality will only serve to improve fisheries in the watershed.

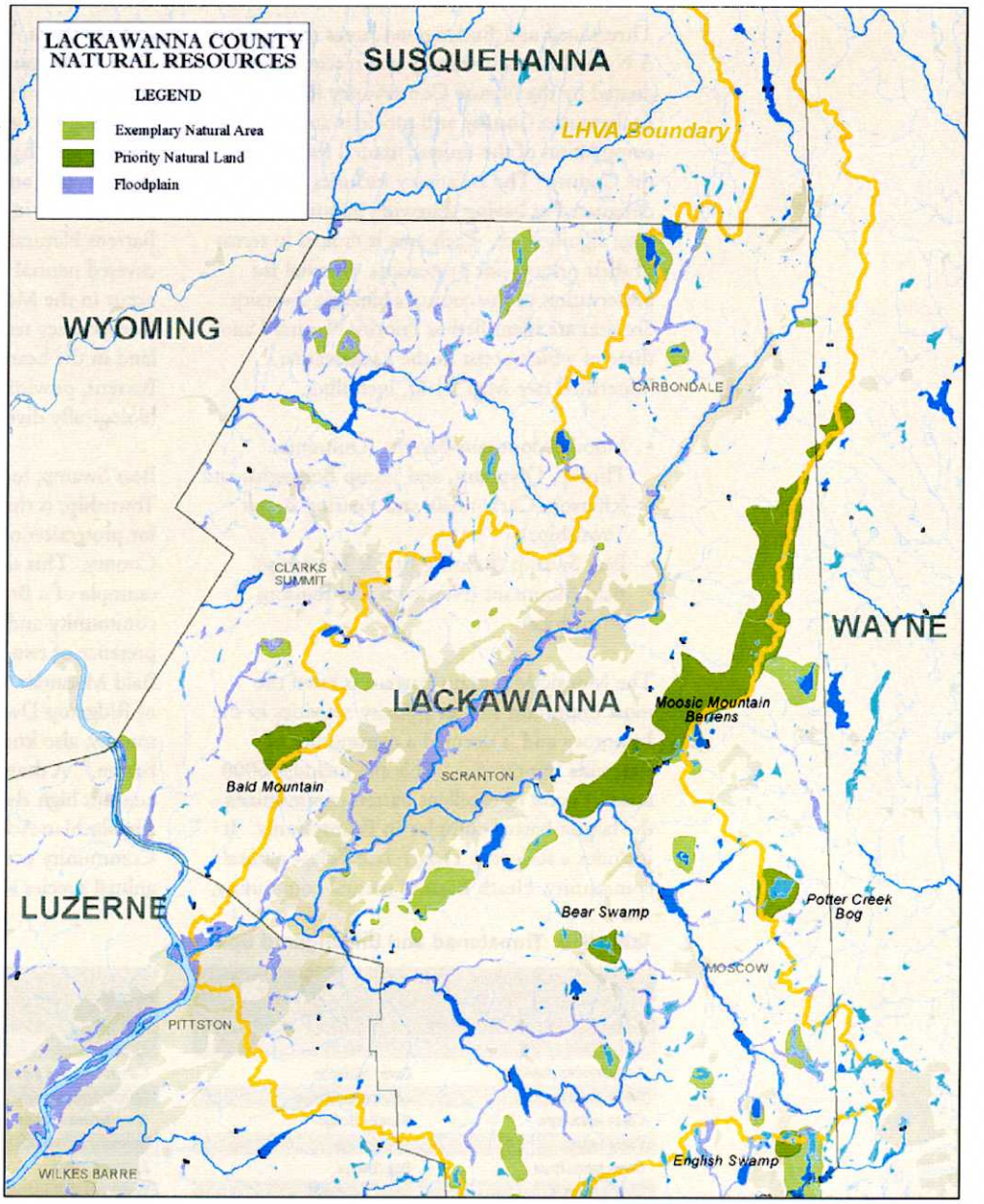
Over 170 species of bird inhabit the Watershed as either permanent residents or migratory species. Many species of ducks, along with the Canadian goose, stop over along the

Lackawanna River and tributaries during seasonal migration. Ospreys are familiar residents, as well as Great Blue Herons, redtail hawks, Cooper's hawk, and the great horned owl. As reported in the Atlas of Breeding Birds in Pennsylvania there are 125 species of breeding birds in the Heritage Valley, including 32 possible, 28 probable, and 65 confirmed species.

Wetlands

Wetlands are unique environments that provide critical ecologic functions and are deserving of protection because of their water quality, scenic values and habitat functions. Executive Order 11990 requires federal agencies to consider practicable alternatives to avoiding impacts to wetlands. The Chesapeake Bay Agreement of 2000, an agreement that guides the Bay partnership's efforts through the year 2010, recognizes the importance of wetlands as areas vital to the survival and diversity of the living resources of the Bay and its rivers. The goal for protecting wetlands in the Chesapeake Bay watershed is to achieve a no-net loss of existing wetland acreage by restoring 2,500 acres of tidal and non-tidal wetlands per year basin wide and providing assistance to local governments for the development and implementation of wetlands preservation plans.

The Lackawanna drains to the Susquehanna River and is a critical headwaters element in the Chesapeake Bay ecosystem. These headwater wetlands were formed in depressions from glacial scouring during the past 500,000 years. All of the Lackawanna's smaller tributaries have their sources on glacial terraces found along the



Map III-8: Lackawanna County Natural Areas

Moosic and West Mountains. These wetlands serve as collectors for springs from ridgetop aquifers and are crucial to the maintenance of good water quality and perennial flows in the Watershed.

In addition to upland forested wetlands, many riparian wetlands occur along the main corridor of the Lackawanna River. The Lackawanna Watershed currently contains over 20,000 acres of wetlands, excluding the almost 15,000 lost to mining activities and urban development. Strip mining has created many isolated pocket wetlands - hydrologic systems that are currently in a gradual succession process. Some of the regionally important wetland complexes found in the Watershed include:

- Freytown and Hollister swamps at the headwaters of Roaring Brook
- Bear Swamp, Simerson Marsh and Little Virginia along Strafford Meadow Brook
- Yostville marshes, headwaters of Spring Brook and its tributaries
- Dunns Pond, Orson Glade, Mud Pond complex on the East Branch of the Lackawanna
- Lake Romobe, Ball Pond complex, West Branch headwaters of the Lackawanna
- Panther Bluff tract

Threatened and Endangered Areas and Species

A Natural Areas Inventory was recently conducted by the Nature Conservancy for Lackawanna County and provides an excellent compilation of the unique natural features in the County. The Inventory includes areas designated as having statewide importance and local significance. Each area is ranked in terms of their priority for protection, essential for preservation of the county's biologic diversity. Six sites are identified as Priority Natural Lands, three of which occur in the Lackawanna Watershed (see Map III-8), including:

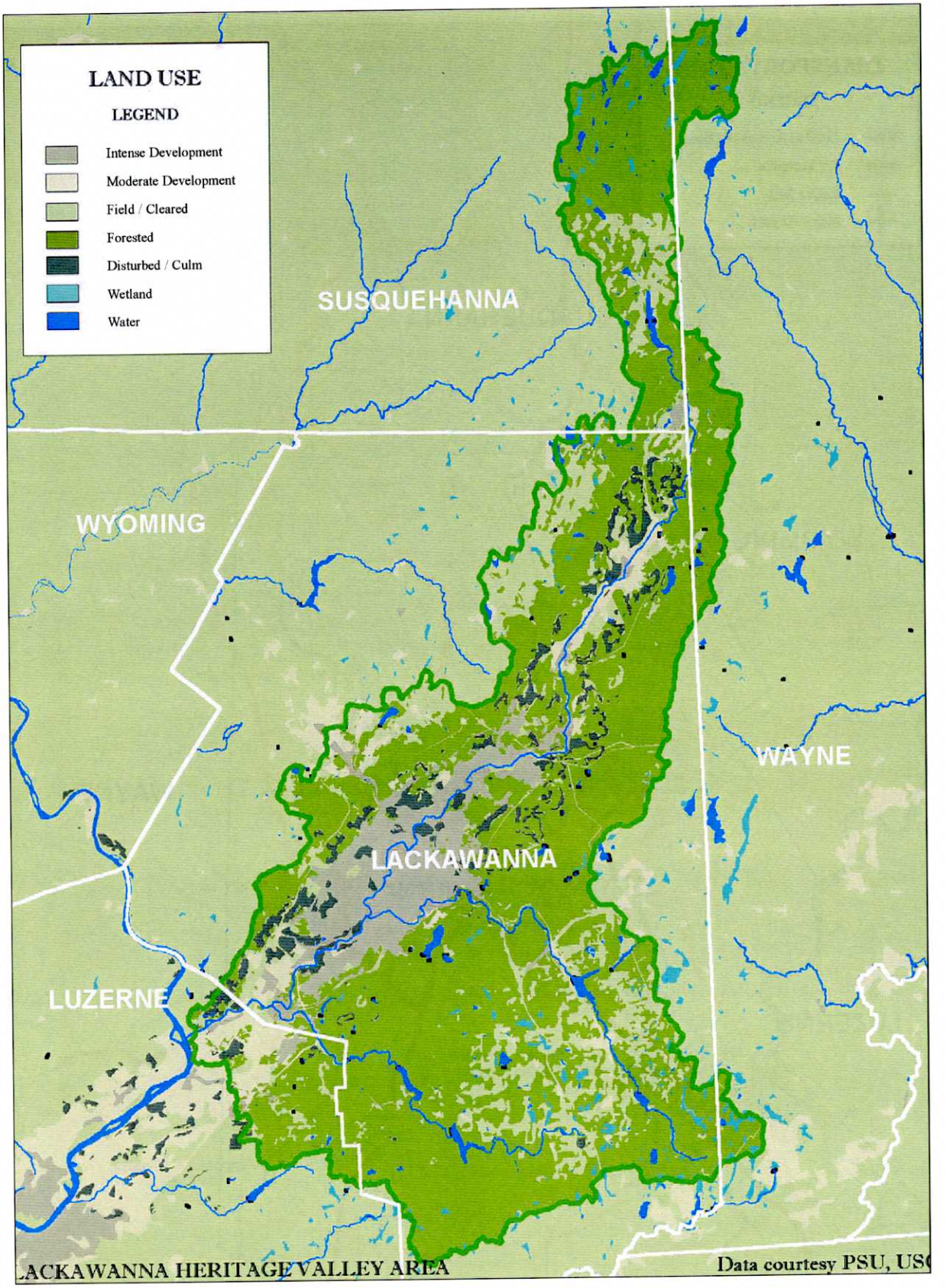
- Moosic Mountain Barrens (Dunmore, Throop, Olyphant, and Jessup Boroughs, and Jefferson, Carbondale and Roaring Brook Townships)
- Bear Swamp (Roaring Brook Township)
- Bald Mountain (Newtown and Ransom Townships)

The Moosic Mountain Barrens is rated the most important site for priority activities in the Inventory and is deemed a community of statewide importance. This site includes 6000 acres of good to excellent barren communities - the largest barren complex in Pennsylvania. It includes a Ridgetop Dwarf-Tree Forest natural community, Heath Barrens natural community, and Northern Appalachian Rocky Summit natural community. Surveys of the site discovered six animal species of special concern, including two globally rare species. One of these species has not been sited elsewhere in Pennsylvania and another has not been sited in Pennsylvania in over twenty years. The Heath Barrens Natural Community is a newly discovered natural community only known to occur in the Moosic Mountains. The Nature Conservancy recently purchased 1,200 acres of land in the heart of the Moosic Mountain Barrens, providing further protection of this biologically diverse habitat.

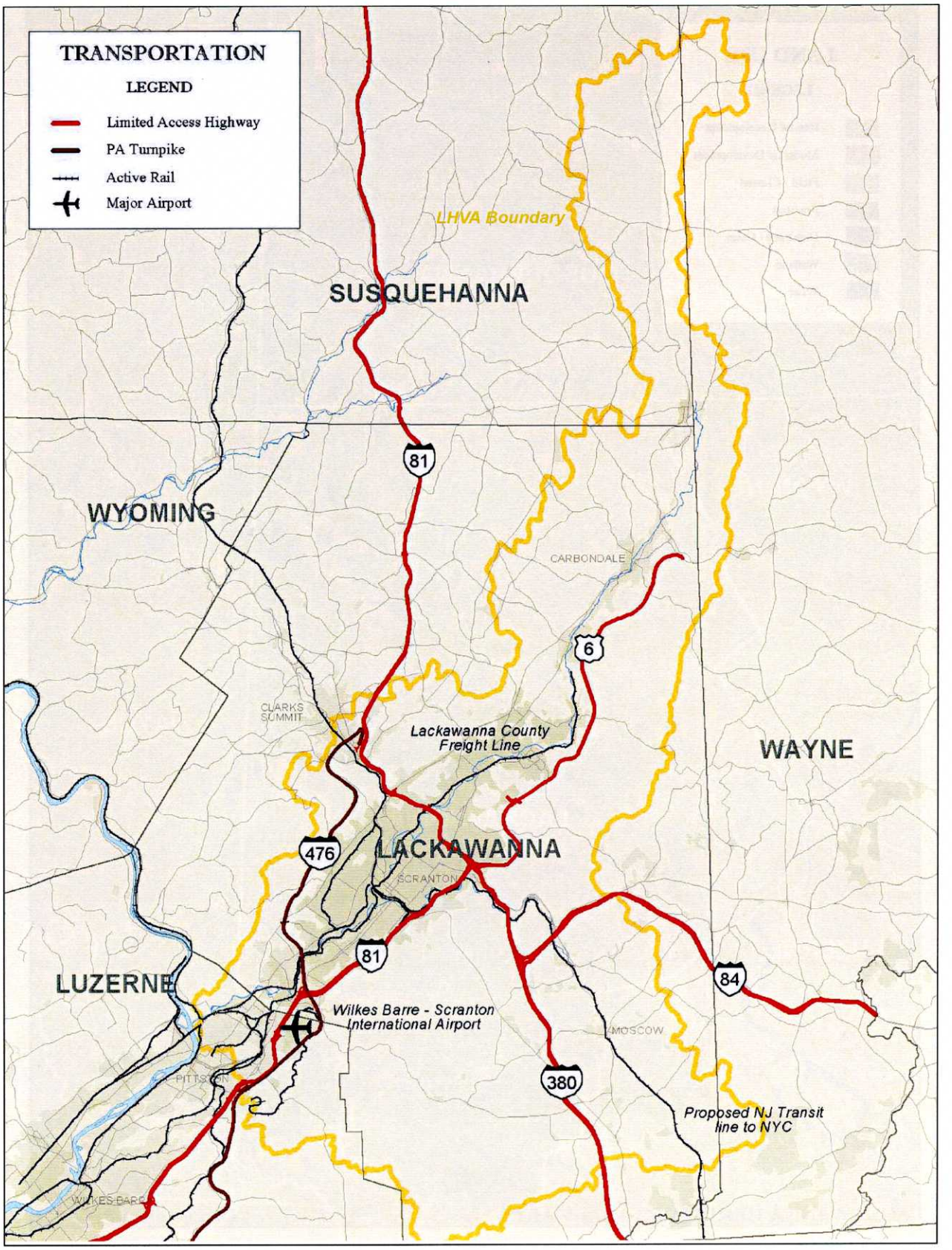
Bear Swamp, located in Roaring Brook Township, is the third-most important priority for protection of biological diversity in the County. This site includes a good quality example of a Broadleaf-Conifer Swamp natural community and surveys of the site revealed the presence of two Pennsylvania rare plant species. Bald Mountain includes a good quality example of Ridgetop Dwarf-Tree Forest natural community, also known as a "Pitch pine-Scrub oak barren." A dramatic vertical rock ledge terminates this high elevation ridge, where the Northern Appalachian Acidic Rocky Summit Natural Community occurs. Several rare plant and animal species are associated with Pitch pine-

Table III-9: Threatened and Endangered Species

Andromeda polifolia	Bog-rosemary
Arceuthobium pusillum	Dwarf Mistletoe
Carex disperma	Soft-leaved Sedge
Carex lasiocarpa	Slender Sedge
Carex limosa	Mud Sludge
Carex paupercula	Bog Sledge
Elatine minima	Small Waterwort
Eleocharis olivacea	Capitate Spike-rush
Eleocharis robbinsii	Robbin's Spike-rush
Epilobium palustre	Marsh Willow-herb
Gaultheria hispidula	Creeping Snoberry
Glyceria borealis	Small-floating Manna-grass
Helianthemum bicknelli	Bicknell's Hoary Rockrose
Juncus filiformis	Thread Rush
Ledum groenlandicum	Common Labrador-tea
Lupinus perennis	Lupine
Lygodium palmatum	Hartford Fern
Minuartia glabra	Appalacian Sandwort
Myrica gale	Sweet Bayberry
Najas gracillima	Bushy Naiad
Orontium aquaticum	Golden Club
Oryzopsis pungens	Slender Mountain-ricegrass
Potamogeton perfoliatus	Clasping-stemmed Pondweed
Potamogeton robinsii	Flat-leaved Pondweed
Potentilla tridentata	Three-toothed Cinquefoil
Prunus pumila	Sand Cherry
Scripus ancistrochaetus	Northeastern Bulrush
Ultricularia purpura	Purple Bladderwort
Xyris montana	Northern Yellow-eyed Grass
Ardea herodias	Great Blue Heron
Carterocephalus palaemon	Arctic Skipper
Chaetaglaea cerata	A Sallow Moth
Chaetaglaea tremula	Barrens Chaetaglaea
Dorocordulia lepida	Elegant Skimmer
Epiglaea apiata	Pointed Swallow
Erynnis persius persius	Persius Duskywing
Gallinula chloropus	Common Gallinule
Hemiluca maia maia	Buckmoth
Incisalia irus	Frosted Elfin
Lutra canadensis	River Otter
Myotis leibii	Eastern Small-footed Bat
Myotis septentrionalis	Northern Long-eared Bat
Podilymbus podiceps	Pied-billed Grebe
Psectraglaea carnosa	Pink Sallow
Rhizedra lutosa	Large wainscot
Tachopteryx thoreyi	Thorey's Grayback Dragonfly



Map III-10: Land Use



Map III-11: Transportation

Scrub oak barrens and acidic rocky summit communities, and surveys of the site discovered one Pennsylvania Endangered plant species and one Pennsylvania Rare plant species.

The Natural Areas Inventory contains a listing of threatened and endangered species found in the County. Fourteen animals and 29 plants are listed in Lackawanna County, as seen in Table III-9.

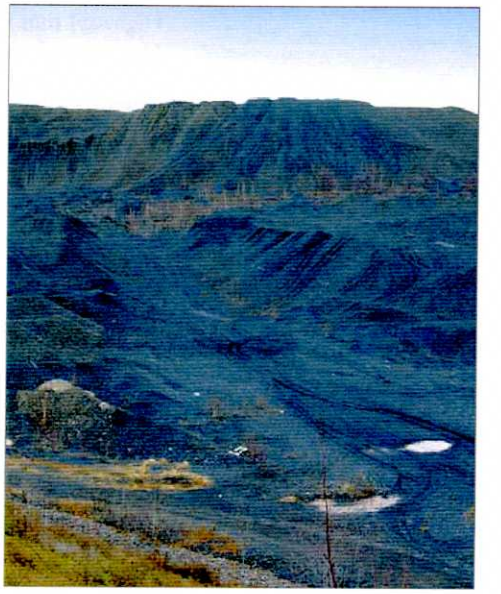
SOCIOECONOMIC RESOURCES AND HUMAN-INDUCED DEVELOPMENT

Land Use and Cover

The watershed that defines the Lackawanna Heritage Valley is comprised of a variety of land uses, the most prominent being forested lands (see Map III-10). This is especially true of the southern part around Moscow, and the northern part above Simpson where limited agricultural uses occur also. The central Heritage Valley, between Carbondale and Pittston, is largely developed with a fairly dense mixture of urban, mining refuse and scattered patches of forest. Limited active strip mining occurs in this area as well. There are also a number of wetlands scattered throughout the watershed. Within the developed area, the land use pattern is fairly typical of older urban areas in Pennsylvania, with small towns blending into one another, commercial uses in the older downtowns and along main through-routes, and older industrial areas near rail lines and highway access points. Unique to the region are the mining refuse lands scattered between the towns.

This overall land use pattern is fairly stable, except for some new development of forested areas. Over the past fifty years, there has been considerable abandonment of older industrial, commercial and residential areas as mining and other industries declined. There has been some redevelopment of older areas for commercial and industrial purposes - some of the more prominent examples of this include the construction of Steamtown Mall in downtown Scranton, and the leveling of the Marvin Colliery mine wastes for new industrial park development. The recently completed Lackawanna Valley Industrial Highway has also spurred some industrial development near the interchanges. Scranton's downtown has seen some revival over the past decade, with new commercial and residential uses moving into older buildings. Perhaps the largest new development in the Heritage Valley is occurring near the Montage Mountain ski resort, where new uses include residential and office developments, a golf course, a large Cineplex, an outdoor amphitheater, and a minor league baseball stadium.

Land use planning and control is left to the individual municipalities, with some county support. Lackawanna and Luzerne Counties are currently completing an open space plan which will recommend measures to preserve the region's remaining open space and link communities with greenways. Of particular concern are the ridgetops which frame the Heritage Valley with highly-visible open space and



Abandoned mine lands in the Heritage Valley
Kise Straw & Kolodner photograph

contain some of the most environmentally sensitive lands in the state. These areas are under continual threat of development for housing and commercial uses.

Mixed urban development is a primary land cover within the central portion of the Heritage Valley. The increasing forest cover on the edges and within this area is sign of a recovering natural environment and adds natural beauty to the region, though it obscures the historic mining landscape that helps define the Heritage Valley's past.

Utilities and Public Services

The Lackawanna Heritage Valley communities

are all served by public sewer and water services. PPL and UGI Utilities, Inc. service electricity needs, PG Energy provides natural gas, and Verizon operates the telecommunications system.

Transportation Systems

The Lackawanna Heritage Valley is served by a variety of transportation systems (see Map III-11). Major automobile routes through the Heritage Valley include I-476 (Pennsylvania Turnpike Northeast Extension), which connects to the Lehigh Valley and Philadelphia, I-81 connecting to Binghamton, NY and Harrisburg, PA, I-84 which connects to the Hudson Valley and Connecticut, I-380 which connects to I-80 and the Stroudsburg / Delaware Water Gap area, and Route 6 (Lackawanna Industrial Highway) runs from Scranton to Carbondale. Most of the local roads in the area generally accommodate current need, though traffic may build at commute times and during other delays typical of urban areas.

The Wilkes-Barre Scranton International Airport is located on the southern end of the Heritage Valley. Greyhound and Martz Trailways provide long-distance bus service to downtown Scranton, while the County of Lackawanna Transportation System (COLTS) operates a local bus-based transit service.

Freight rail is transported through the Heritage Valley via several rail lines, now owned by Canadian pacific, Norfolk Southern, and the Lackawanna County Rail Authority. There is an ongoing effort to restore passenger rail service to Hoboken, NJ - see the Potential Future Actions section below.

Air Quality

The Federal government, through the US Environmental Protection Agency (USEPA), regulates air quality under the Clean Air Act, originally passed in 1970, amended in 1990 and thereafter. Although the Clean Air Act encompasses the entire nation, it is largely administered and implemented by the individual states. The main responsibilities of USEPA are to set standards for pollutant levels and to ensure that these air quality standards are met nationwide.

USEPA has outlined six criteria pollutants, called National Ambient Air Quality Standards (NAAQS), to monitor and regulate: carbon monoxide (CO), ozone (O3), nitrogen dioxide (NO2), particulate matter (PM10), sulfur dioxide (SO2) and lead (Pb). Table III-12 lists the standards established for the NAAQS.

Table III-12: National Ambient Air Quality Standards (NAAQS)

http://www.dep.state.pa.us/dep/deputate/airwaste/aq/standards/standards.htm

Pollutant	Average	Concentration
Carbon Monoxide	8-Hour 1-Hour	9 ppm 35 ppm
Lead	Max Quarterly	1.5 ug/m3
Nitrogen Dioxide	Annual	0.053 ppm
Ozone	Max Daily 1-Hour Max Daily 8-Hour	0.125 ppm 0.085 ppm
Particulate Matter ≤ 10 microns	Annual 24-Hour	50 ug/m3 150 ug/m3
Particulate Matter ≤ 2.5microns	Annual 24-Hour	15 ug/m3 65 ug/m3
Sulfur Dioxide	Annual 24-hour	0.03 ppm 0.14 ppm

At the state level, PADEP has been delegated multiple authorities and responsibilities under the Federal Clean Air Act. PADEP's Bureau of Air Quality regulates emissions from thousands of point sources statewide and works with companies to ensure compliance, while enforcing penalties against those in violation. In addition, PADEP monitors ambient air quality to determine regional compliance, to gather data and trends and to provide information to the public. PADEP also works jointly with the Pennsylvania Department of Transportation in management of transportation-related mobile source emissions. PADEP publishes annual reports summarizing ambient air quality; the 2000 report is available on line at http://www.dep.state.pa.us/dep/deputate/airwaste/aq/aqm/aqreport.htm

Carbon Monoxide (CO): Carbon monoxide is a by-product of burning gasoline, natural gas, coal, oil and wood. Automobiles are a major source of CO. CO enters the bloodstream through the lungs and decreases the amount of oxygen delivered to the body. Low levels of CO are a threat to people with cardiovascular disease. In healthy people, higher levels of CO cause visual impairment, reduced work capacity, reduced dexterity, and reduced brain function

Ozone: Ozone is derived from chemical reactions of pollutants, volatile organic compounds (VOC), and oxides of nitrogen (NOx). Ozone is the principle component of smog. Exposures (1-3 hours) to ozone are linked to increased respiratory cases in hospitals. Repeated exposures increase the likelihood of respirtory infection, lung inflammation, decrease lung function and aggravate asthma.

Nitrogen Dioxide: Nitrogen dioxide is derived from burning gasoline, natural gas, coal, oil, and wood. Cars are a major source of NO2. Exposure to NO2 causes lung damage and respiratory infections. In addition, NO2 leads to ozone and acid rain problems.

Particulate Matter: Particulate matter (PM) is derived from burning wood, diesel, gasoline, industrial plants, agriculture, construction and unpaved roads. PM can cause respiratory infections and diseases, decreased lung function and premature death. The elderly and those with cardiopulmonary disease are particularly susceptible. PM also causes reduced visibility and upon settling it damages materials. A controversy continues regarding the size of particles that should be regulated, with recent research suggesting that USEPA standards are not sufficiently "fine grained" (literally).

Sulfur Dioxide: Sulfur dioxide is derived from industrial processing of paper and metals, burning coal and oil, especially high-sulfur coal typically in the eastern United States. The health effects include respiratory problems and infections, cardiovascular problems; permanently damage to lungs may result.

Lead: Lead is derived from leaded gasoline, paints, smelters, and manufacturing of lead batteries. Lead enters the body through inhalation and ingestion of food, water, soil or dust particles. Once in the body, lead tends to be accumulated and not readily excreted. Health effects of lead exposure include problems with the kidneys, liver, nervous system, seizures, mental retardation, and/or behavioral disorders. Even at low doses, children and fetuses suffer central nervous system damage. Lead is also linked to high blood pressure and heart disease.

Unfortunately, air quality sampling is costly and complex, and therefore is undertaken in relatively few locations (see Map III-13). The air quality for the Lackawanna River Watershed is monitored officially at Scranton; there also are

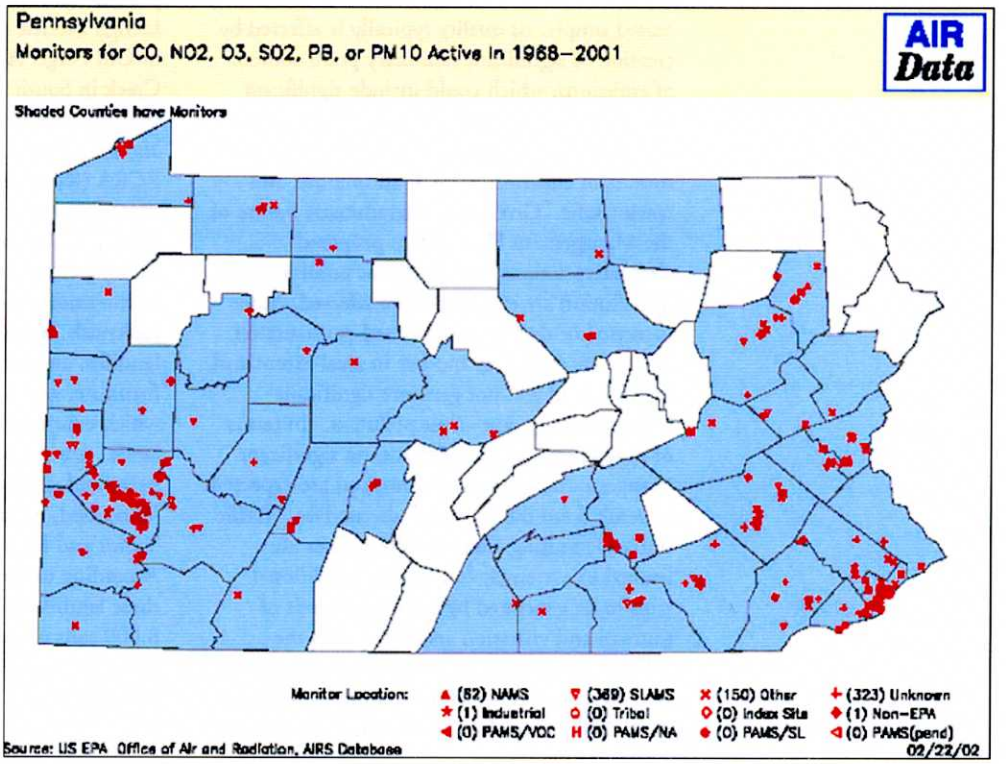


Figure III-12: Locations of Air Quality Monitoring Sites in Pennsylvania

monitoring stations at Wilkes Barre and Peckville. Recent air quality data generally indicate attainment of National Ambient Air Quality Standards, as well as overall improvement in air quality for the Watershed:

Particulate matter--The Scranton reading in 2001 for the arithmetic annual mean was 20 micrograms per cubic meter, a modest reduction from the 1995 level at 23 micrograms.
Sulfur dioxide-Sulfur dioxide at Scranton was 0.005 ppm, compared to the NAAQS at 0.03 ppm. The 1995 reading was also 0.005 ppm.
Ozone-The daily 1-hr NAAQS for ozone is 0.12 ppm; the Scranton reading in 2001 was 0.101 ppm. In 1995, ozone registered 0.105 ppm.
Nitrogen dioxide-The NAAQS for nitrogen dioxide is 0.053 ppm versus the Scranton measured level at 0.015 ppm in 2001, a decrease from 0.018 in 1995.
Carbon monoxide-The NAAQS 1-hr mean for carbon monoxide is 35 ppm, compared to the Scranton measured level at 3.0 ppm in 2001. Trends are reported for the 2nd maximum 1-hr average, which declined from 5.2 ppm in 1995 to 2.9 pp, in 2001.

Stated simply, air quality typically is affected by creation of significant stationary point sources of emissions, which could include significant power plant and industrial plant smokestacks and major construction sites, as well as mobile sources of emissions such as automobile and truck traffic. Given the programmatic nature of the Management Plan and its proposed alternative actions, no significant point sources of pollution are expected to be affected, either increased or decreased; proposed construction actions are extremely modest in areal extent and duration and will not generate significant loadings of any type of air pollutant. In terms of mobile sources of emissions, no significant changes in mobile source emissions are expected to result from the proposed alternatives. Traffic impacts resulting from the alternatives are limited to extremely low levels of additional trips to be generated by additional levels of tourism and visitation associated with the different alternatives(25,000 additional visitors for Alternative A, 45,000 additional visitors for B, 91,500 visitors for C). Keeping in mind that additional visitation must be downwardly adjusted for car trips (multiple visitors per car trip, assuming typical family or household size) and will be distributed throughout the year, incremental air quality emissions are marginal in an absolute sense and do vary among the alternatives in any case. Given the general improvement in air quality in the area together with the substantial margin between current air quality levels and NAAQS limits, there will be no significant impacts on air quality as the result of the proposed alternative actions.

Solid and Hazardous Waste Sites

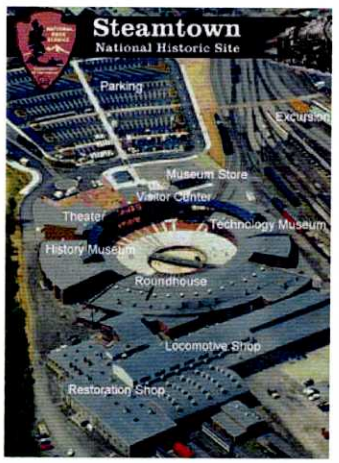
As stated in the Lackawanna River Watershed Conservation Plan (2001), contamination from waste sites has been a major problem in the Watershed. The Conservation Plan indicates that nearly 50,000 acres of abandoned mine lands require reclamation, in addition to the more "conventionally" defined contaminated sites, which range in seriousness from the Marjol Battery site in Throop to electric power pole sites under Pennsylvania Act 2 remediation. Federally, numerous sites in the Watershed have been placed on the federally-maintained CERCLIS List, for evaluation prior to an official designation as a "superfund" site, several of which have undergone an official clean up process (Iacavazzi Dump in Old Forge, the Lehigh Electric site along the Lackawanna River in Old Forge, Aladdin Plating near Leggetts Creek in South Abington, and Lavelle Bore Hole in Scranton). In addition to abandoned and inactive CERCLIS sites, there are also active RCRA (Resource Conservation & Recovery Act) sites, as well as sites on the Pennsylvania State list (both Underground Storage Tank's and Leaking Underground Storage Tanks). Furthermore, there are numerous automotive junkyards, scrap metal yards, municipal waste landfills, and illegal dumps of household wastes, furniture, appliances, and construction debris which exist scattered about abandoned mine lands. On the other hand, there are major permitted solid waste disposal facilities in the Watershed, including the Alliance Landfill in Taylor and Keystone Landfill in Dunmore. According to the Watershed Conservation Plan, these landfills recently received approximately 8,000 tons of waste per day, only a small portion of which is generated from within the Watershed.

None of the Management Plan's proposed alternative programs of action has bearing, directly or indirectly, on solid and hazardous waste sites or issues pertaining to solid and hazardous waste sites in the Watershed, and no impacts are anticipated.

Recreation and Tourism

The majority of the visitor attractions and tourism infrastructure in the Lackawanna Heritage Valley are located in or near its most populous centers - Scranton, Carbondale and Olyphant. Heritage offerings elsewhere in the area are relatively limited. Scranton is the focal point for visitor activities within the Heritage Area, with major attractions including Steamtown National Historic Site, the Electric City Trolley Station & Museum, the Pennsylvania Anthracite Heritage Museum, the Lackawanna County Coal Mine Tour, the Scranton Cultural Center, and Montage Mountain recreational and entertainment attractions.

LHVA's heritage partners were asked to provide visitor attendance information as part of this EIS effort. Institutions provided the following attendance data for the last reported year:



Steamtown National Historic Site
National Park Service

Steamtown NHS:	
Museum Attendance (paid)	48,130
Excursion Attendance	29,869
Site Attendance (unpaid)	49,767
Electric City Trolley Station & Museum	
Museum and Excursion Attendance	26,445
Pennsylvania Anthracite Heritage Museum	
Museum Attendance	25,000
Lackawanna County Coal Mine Tour	
Tour Attendance	40,000
Everhart Museum	
Museum Attendance	40,000

Overall, partner institutions have not historically placed a great deal of emphasis on tracking characteristics of their visitors. Many were able to provide general information about the origin of their visitors (local area residents, day tripers, overnight visitors, etc.) and the number of school groups they accommodate each year. Several institutions commented that they believed their visitors also made trips to other heritage or leisure attractions during the same visit, but no data has been gathered in this area. For example, the Steamtown National Historic Site reports visitation in terms of its museum complex, excursion rail trips and outdoor/unpaid exploration of the train yards. This visitation totals 127,766, but as a portion of the museum goers and outdoor explorers also likely purchase tickets for the rail excursion, the actual number of individuals visiting the site is somewhat lower. As a result, it is possible to tally the total number of annual ticket sales at Lackawanna Heritage Valley attractions on an annual basis, but not the number of visitor days spent in the area.

Additionally, there are other key partner institutions for which attendance information is not available, including the Scranton Iron Furnaces, the Lackawanna Historical Society Catlin House Museum, churches involved in the Olyphant walking tour and others. Similarly, there are numerous special events, such as programming at the Scranton Cultural Center and the St. Ubaldo Festival that involve local and out-of-area participants in the celebration of heritage.

For purposes of analysis -- to resolve the double counting of visitors attending multiple attractions and the absence of visitor counts at other institutions and special events -- it is assumed the total number of visitor trips to the Lackawanna Heritage Valley's heritage attractions currently equals approximately 200,000 per year.

Heritage-oriented programming in the Lackawanna Heritage Valley is complemented by a wide range of recreational and entertainment programming. Most notably, the County-owned Montage Mountain ski area, concert facility and stadium attract a reported 3 million visitors each year. Encouraging visitors attracted to the region for its recreational and entertainment offerings to explore the Lackawanna Heritage Valley's vast heritage resources will be critical to the success and expansion of the Lackawanna Heritage Valley Authority's mission.

Visitor Potential

In order to identify a reasonable "target" attendance figure for Lackawanna Heritage Valley institutions, comparable industrial heritage sites around the country were analyzed. Data was collected for five facilities, including the Lowell National Heritage Park, Old Sturbridge Village, the Henry Ford Museum/

Greenfield Village, the Allegheny Ridge Heritage Area and the Hagley Museum and Library/Wintethur. This sample includes both single institutions and cooperating institutions providing interpretive programming of their area's heritage. The institutions identified face strong regional competition for visitor share and have seasonal climates similar to that of the Lackawanna Heritage Valley. Information was collected regarding annual attendance, ticket pricing and population residing within a 150- and 300-mile radius of each site, as shown on Table III-14.

In general, the regression analysis of these factors determined that attendance at comparable institutions is highest in areas with larger populations within the immediate 150-mile radius. However, some loss in attendance appears to occur in areas with sizable populations in the 150-300-mile radius, perhaps because of the presence of larger numbers of competitive attractions, although this was not analyzed. Furthermore, attendance is directly related to overall pricing, with institutions having relatively high ticket prices attracting relatively fewer visitors each year.

Based on this analysis, the population base of the surrounding region and the current ticket pricing policies, Lackawanna Heritage Valley partner institutions should be capable of achieving total attendance of approximately 370,000 each year. The inability of the area to achieve this attendance to date is likely a result of the lack of sufficient connections - physically and interpretively - between existing institutions, the lack of a coordinated marketing and promotions approach for the area, and the lack of a compelling year-round heritage visitor experience.

Achieving sustained increased in visitation will require significant effort on the part of the Lackawanna Heritage Valley Authority, its partner institutions and area governmental agencies, including: 1.) the provision of a substantial program of attractions with changing exhibits to encourage new and repeat visits; 2.) the creation of a well-articulated interpretive experience projecting a clear theme through conveniently-situated interpretive centers, tour routes, audio/visual supports and integrated interpretive signage; 3.) the provision of an attractive environment within which visitors to the area can travel; 4.) the development of a substantial marketing effort effectively targeted to key population centers in the vicinity and the attractive packaging of heritage attractions for promotion by the tourism industry; 5.) the continuation and expansion of a strong mix of participatory activities -- such as train excursions, trolley rides and coal mine tours - in the telling of the Heritage Valley's story and 6.) the provision of engaging heritage program offerings to the large and captive base of recreational visitors drawn to Montage Mountain each winter -- the season when the Heritage Valley's existing participatory activities are all currently closed.

POTENTIAL FUTURE ACTIONS

Potential future activities are those actions, whether proposed or under implementation by other groups, that would affect the Lackawanna

Table III-14: Annual Attendance at Comparable Heritage Attractions

Venue	Ticket Price	Annual Attendance	Population within 150 miles	Population within 300 miles
Lowell National Heritage Park	10	731,000	11,950,094	31,820,907
Old Sturbridge Village	20	450,000	13,248,498	41,541,173
Henry Ford Museum/Greenfield Village	24	500,000	9,106,930	27,140,443
Allegheny Ridge Heritage Area	17	200,000	6,439,545	44,894,483
Hagley Museum/Winterthur	31	280,000	33,499,551	42,938,126
Lackawanna Heritage Valley *	21	200,000	22,294,822	41,690,990

* for purpose of analysis, price includes adult admission to Steamtown, Trolley Museum and Coal Mine Tour

Heritage Valley. Although often beyond purview or authority of the National Park Service or the LHVA, proposed projects are important to understand in gauging the overall effects of the alternatives on the resources under consideration.

Proposed passenger rail connection to Hoboken, NJ and New York City

Probably the largest potential future action is the proposed restoration of passenger rail from downtown Scranton to Hoboken, NJ, with PATH train connections to Manhattan. This effort is being led by NJ Transit, who would likely manage and operate the service, and the states of New Jersey and Pennsylvania. Much of the project depends on the restoration of the Lackawanna Cutoff, a 60-mile abandoned rail right-of-way from Roxbury, NJ to the Delaware River. The State of New Jersey has purchased the right-of-way and preliminary engineering designs and an Environmental Assessment of the entire project are currently underway. Proposed stations would serve Blairstown and Andover in New Jersey and Scranton, Mount Pocono, Analomink and East Stroudsburg in Pennsylvania. The line is expected to carry as many as 684,000 passengers a year. The entire project is likely to cost more than $230 million and would not likely be completed until 2007 at the earliest.

PART IV:

ENVIRONMENTAL IMPACTS

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INTRODUCTION

Part IV evaluates the potential environmental consequences of implementing the three alternatives described in Part II. This assessment has been conducted on a broad, programmatic basis and does not address site-specific development activities in great detail. Implementation of any future actions that affect federal property or involve federal laws, funds, or permits will require project-specific environmental compliance, as required by the National Environmental Policy Act of 1969. Any state-funded actions will also require environmental compliance pursuant to the applicable Pennsylvania statutes.

The three alternatives under consideration are as follows:

- *Alternative A: No Action / Continue Current Activities.* This alternative is required in an Environmental Impact Statement and provides a baseline of environmental impacts - those likely to continue under existing and previously-planned activities as described in Part II. This analysis also examines potential impacts from not taking any further action.

- *Alternative B: Heritage Preservation.* Many of the most important remaining resources are scattered throughout the Lackawanna Heritage Valley. Under this alternative, a large historic preservation program would work to stabilize and preserve most of the remaining resources throughout Lackawanna County. Interpretation would be decentralized with only the Lackawanna Visitors Center (and existing partners) providing structured interpretation. Visitors would create their own personalized visitation agendas, using resource databases and guidebooks available at the Visitors Center. LHVA would be encouraged to partner with private owners of important resources.

- *Alternative C: Heritage Explorer.* This alternative envisions a much more structured interpretation and visitor service experience. Preservation, interpretation, and visitor service efforts would be focused along a delineated tour of the Valley that would act as introduction to the Valley's story as well as an activity itself. Visitors would be strongly encouraged to visit partner attractions in conjunction with the tour. LHVA would develop partnerships with local communities to implement the alternative.

ENVIRONMENTAL FACTORS

Potential effects from these three alternatives on the natural, cultural, and social resources of the Lackawanna Heritage Valley will be considered in this analysis, along with recommendations to avoid, minimize, or compensate for any unavoidable adverse effects. The analysis is organized by principal environmental resource categories: natural, cultural, and social or human-induced.

Natural Resources
- wetlands and floodplains
- prime and unique farmland
- biotic communities
- federally and state-listed endangered or threatened species
- ecologically critical areas, National Natural Landmarks, or other unique natural resources
- water resources

Cultural Resources
- historic, archaeological, architectural, landscape, and cultural resources
- Indian Trust resources

Social or Human-Induced Resources
- land use
- design of the built environment
- social or economically disadvantaged populations
- public health and safety
- construction impacts (if necessary)
- socioeconomic impacts, including any induced or secondary development
- air quality
- direct social impacts, excluding any proposed land acquisition or protection
- transportation impacts
- solid and hazardous waste impacts
- energy use and conservation potential
- visual and aesthetic impacts
- recreation and tourism impacts

Finally, cumulative impacts will be evaluated to determine the overall impacts on the resources in the Lackawanna Heritage Valley over time.

NATURAL RESOURCES

This evaluation does not address site-specific development activities in specific detail; the Management Action Plan for the Lackawanna Heritage Valley is more of a programmatic planning enterprise. Alternatives take the form of alternative programs of action, and although these programs have some physical manifestations such as display panels and streetscape improvements and the like, the bulk of these specific actions which comprise the alternatives are extremely "micro" in nature. These actions will have very limited implications on the physical environment, especially given the fact that they occur in already developed and disturbed areas in the Watershed. Alternatives, therefore, can be expected to have minimal negative effect on natural resource values, taken individually and taken together. Baseline conditions of the natural resources have been discussed in Part III and will not be repeated here, though trends may be revisited as necessary to articulate the measures need to avoid or minimize unavoidable adverse impacts of each alternative.

Methodology

The methodology used to determine the impacts of the three alternatives on natural resources of the Heritage Area involved substantial review of existing data, including:

- Lackawanna & Luzerne Counties Open Space, Greenways & Outdoor Recreation Master Plan. Draft 2003
- Upper Lackawanna Watershed Conservation Management Plan, 2003
- Lackawanna Watershed River Conservation Plan, 2001
- Upper Susquehanna-Lackawanna River Watershed Section 206 Ecosystem Restoration Report, 2001
- Lackawanna County Natural Areas Inventory Report, 1997
- Lackawanna River Greenway River Park and Trail Plan, 1993

Resource data was obtained from federal, state, and local land management and regulatory agencies on wetlands, floodplains, water quality, biotic communities, protected species, ecologically critical areas, and agricultural land. This resource data was mapped in relation to both the Lackawanna Watershed and the key interpretable sites discussed in each alternative. As mentioned, the majority of the specific actions which have been delineated as part of the alternatives are quite limited in scope and can be expected to have minimal impact on natural resources in the Watershed. The direct physical impacts resulting from these site-specific "micro" actions (signage, periodic jitney

and bus tours, self-guided auto tours, interpretative panels and orientation centers, park and streetscape improvements, and so forth) must be further interpreted in the context of an existing urbanized and often seriously disturbed setting, as described in Part III. Adverse effects on undisturbed natural resources are virtually nonexistent for any of the alternatives. In some cases, the cumulative effects of the total alternative program of actions can be expected to result in moderately positive impact, as the direct result of cumulative resource enhancement occurring in multiple locations (marginal at any individual location but more meaningful when assessed across multiple locations). Possibly even more important, the indirect effects of Management Action Plan actions can be expected to positively reinforce a variety of important natural resource planning actions which are underway and/or planned in the Watershed, such as the very ambitious recommendations contained within the new Watershed Conservation Plan, implementation of the Lackawanna River Watershed 2000 program and the newly released Open Space, Greenways, and Outdoor Recreation Master Plan for Lackawanna and Luzerne Counties, completion of the Lackawanna River Heritage Trail, and other program recommendations contained with the Citizens Master Plan and developed by the Lackawanna River Partnership.

Wetlands and Floodplains

In terms of flooding and floodplain management, Executive Order 11988 Floodplain Management stipulates that federal actions must avoid adverse impacts associated with occupying and modifying floodplains and to restore and preserve these floodplain values. Municipalities individually enact floodplain management programs in Pennsylvania, which typically are compatible with minimum requirements of the Federal Emergency Management Agency (FEMA), as is the case here. Because of the physically limited nature of the alternative programs of action, there can be expected to be very few, if any floodplain impacts triggered by proposed actions included in the various alternatives. Some flooding-linked municipal code requirements such as flood-proofing may have bearing on specific actions. For example, the further development and completion of the Lackawanna River Heritage Trail must be compatible with a program of levee construction and floodplain management considerations which are of paramount importance; a variety of factors must be considered as the Trail and related greenway development is integrated into overall floodplain management planning, including levee engineering and construction.

- *Alternative A: No Action / Continue Current Activities*

  As discussed in Part III, substantial portions of floodplains, even floodways, have been impacted by historical development in the Watershed. Other problems throughout the Watershed, ranging from the complete absence of any stormwater management to seriously inadequate stormwater management, have also exacerbated the flooding problem. Mining-related developments have done their share as well. This combination of floodplain encroachment and problematic development practices has both worsened flooding itself and certainly dramatically worsened the impacts when flooding has occurred, from substantially increased loss of property to threats to human life.

  Mitigation

  Because of the serious problems that have occurred in the Watershed, a variety of major programs have been undertaken and are underway to deal with the flooding problems in the Watersheds. Many of these programs have been and continue to be structural in nature, typically taking the form of levee construction to protect the large number of residential and non-residential uses which have been developed in the path of flooding. Obviously, these programs are extraordinarily expensive, with costs usually too great to be borne by local municipalities and/or the stakeholders themselves. Usually some sort of federal subsidy is required. In some other areas, government-supported buy out programs have been developed where it has been deemed cost effective to fully or partially compensate owners of structures and rebuild these structures elsewhere, clearing and re-vegetating the floodplain.

  Nonstructural management programs are an alternative to structural solutions; non-structural programs could include enactment of more rigorous floodplain management regulatory programs, more rigorous stormwater management regulations, and other initiatives that don't try to physically hold back flooding in some manner. Nonstructural programs tend to be preventive in nature, rather than mitigative.

Given the seriousness of the flooding problems in this Watershed, it would seem obvious that under any alternative scenario, Watershed municipalities should immediately work to improve their management of stormwater, so that any new development actions, either at undeveloped sites or at already developed sites, employ more effective stormwater Best Management Practices to achieve more rigorous stormwater management standards. This is an important recommendation contained within the new Watershed Conservation Plan. Existing disturbance and problems notwithstanding, every effort should be made to make sure that additional volumes of runoff are not released from new development sites, making a bad situation even worse.

- *Alternative B: Heritage Preservation*
  As discussed in Part III, substantial portions of floodplains, even floodways, have been impacted by historical development in the Watershed. Other problems throughout the Watershed, ranging from the complete absence of any stormwater management to seriously inadequate stormwater management, have also exacerbated the flooding problem. Mining-related developments have done their share as well. This combination of floodplain encroachment and problematic development practices has both worsened flooding itself and certainly dramatically worsened the impacts when flooding has occurred, from substantially increased loss of property to threats to human life.

  Mitigation
  See Alternative A discussion.

- *Alternative C: Heritage Explorer*
  As discussed in Part III, substantial portions of floodplains, even floodways, have been impacted by historical development in the Watershed. Other problems throughout the Watershed, ranging from the complete absence of any stormwater management to seriously inadequate stormwater management, have also exacerbated the flooding problem. Mining-related developments have done their share as well. This combination of floodplain encroachment and problematic development practices has both worsened flooding itself and certainly dramatically worsened the impacts when flooding has occurred, from substantially increased loss of property to threats to human life.

  Additionally, because this alternative program of actions involves several sets of actions in Carbondale, Archbald, Olyphant, and Scranton where streetscapes will be improved with upgraded landscaping, new sidewalks, and other improvements, there is some limited opportunity for incorporating some improved stormwater management in these designs. This potential beneficial impact is addressed in more detail below in Water Resources and is likely to offer more in terms of water quality than hydrologic effects and flooding reduction.

  Mitigation
  See Alternative A discussion.

Agricultural Land

As indicated in Part III, although agriculture has been the major industry in Pennsylvania for many years, farming is not a major land use now and has not been a major industry in the Lackawanna Heritage Valley for some time. This is primarily because of the limitations imposed by the physiography, including sloping land with shallow and rocky soils in so many portions of the Watershed, and use of land for underground and surface mine activity as well as urban development. Prime and unique farmland classifications in the Watershed specific to the federal Farmland Protection and Policy /Act (FPPA) are minimal. Generally, Pennsylvania has enacted very effective state level programs that assist county governments in the purchase of development rights for active agricultural lands, as well as more indirect programs such as creation of local Agricultural Security Districts that support agricultural enterprises in farming communities. Pennsylvania considers its agricultural preservation programs at or near the top of the list nationally; federal programs such as the Farmland Protection Policy Act (7 U.S.C. 4201-4209) reinforce these agricultural land conservation efforts.

It should be noted here that although there is relatively little agricultural activity occurring in the Watershed and although agriculture is generally viewed as a positive value to be preserved, agriculture can in fact contribute to a variety of environmental problems such as

nonpoint source pollution and water quality degradation. In fact, the USACE Section 206 Ecosystem Restoration Report (2001) defines in its Regional Landscape Analysis (p. 3-16) a watershed indicator, Crops on Steep Slopes (greater than 3 percent slope) where there is an increased risk for soil erosion and, therefore, nonpoint source pollutant loading. An analysis using GIS indicates that 10 percent of all the agricultural lands counted in the Upper Susquehanna-Lackawanna River Watershed exceeded this slope limit and therefore could be assumed to generate increased nonpoint source loads (total suspended solids, nutrients, and other agricultural linked pollutants).

- *Alternative A:*
  No Action / Continue Current Activities
  Given the lack of agricultural activity in the Watershed taken together with the lack of physical ramifications of the proposed alternative programs of action, impacts on agriculture lands of any type, including any type of encroachment on agricultural activities in the Watershed, can be expected to be minimal. There would be no conversion of farmland, directly or indirectly.

  Mitigation
  Agricultural enterprises, though limited, are confronted by a variety of forces in the Watershed, as is the case throughout Pennsylvania. These will continue in the Lackawanna River Watershed as well. Farmland is being sold to developers as agricultural profitability declines and development pressures increase. To some extent, because so much of the land area in the Watershed is hilly and development-constrained, competition for the little land that is in agriculture is that much more severe. These agricultural issues relate in no particular way to this Management Plan and its proposed alternative programs of action. Watershed counties have a variety of mitigative tools available, including intensification of county level purchase of development rights programs, utilizing state support, as well as private voluntary land conservation techniques such as conservation easements through private conservancies and land trusts. Some agricultural communities are using community supported agriculture (CSA) techniques to revitalize their agricultural profitability and support their farms.

- *Alternative B: Heritage Preservation*
  Given the lack of agricultural activity in the Watershed taken together with the lack of physical ramifications of the proposed alternative programs of action, impacts on agriculture lands of any type, including any type of encroachment on agricultural activities in the Watershed, can be expected to be minimal. There would be no conversion of farmland, directly or indirectly.

  Mitigation
  See Alternative A discussion.

- *Alternative C: Heritage Explorer*
  Given the lack of agricultural activity in the Watershed taken together with the lack of physical ramifications of the proposed alternative programs of action, impacts on agriculture lands of any type, including any type of encroachment on agricultural activities in the Watershed, can be expected to be minimal. There would be no conversion of farmland, directly or indirectly.

  Mitigation
  See Alternative A discussion.

Biotic Communities

Biodiversity is the variety of species, their genetic make-up, and the natural communities in which they occur. It includes all of the native plants and animals in Pennsylvania and the processes that sustain life on Earth. The Lackawanna Heritage Area is a biologically diverse area composed of a variety of landscapes, communities, ecosystems, and microclimates. The biodiversity of the region is threatened by habitat fragmentation, land use alteration, acid mine drainage, abandoned mine lands, and human-caused disturbances including, but not limited to, the introduction of exotic plants and diseases, and pollution. Increasing awareness among various public and private entities has resulted in partnerships that contribute to the restoration, protection, and preservation of the habitat that supports biodiversity.

- *Alternative A:*
  No Action / Continue Current Activities
  Selection of the No Action Alternative would most likely result in a low impact to the biotic communities. The No Action Alternative will not ensure protection or preservation of local and regional biologic

diversity, but the stewardship which has already begun will likely continue, if not expand.

Mitigation
The existing institutions - museums, furnaces, historical sites, and others - and the existing excursions will not directly affect existing biotic resources in the Lackawanna Valley in a negative way. Care should be taken to avoid sensitive habitats and ecologically important species for any proposed construction. Protection of ecological communities can best be achieved through reinforcement of existing partnerships and implementation of recommended actions identified by community members during the Lackawanna County Open Space Master Planning process, the River Conservation Plan, and other important studies.

Any programmed new development should be designed and constructed with minimal effects to the local and surrounding biological diversity. In addition, appropriate plant and animal surveys should be undertaken to confirm the absence of special biologic resources.

- *Alternative B:*
  Heritage Preservation
  Selection of the Heritage Preservation Alternative would most likely result in a low impact to the biotic communities. It will not ensure protection or preservation of local and regional biologic diversity, but the stewardship which has already begun will likely continue, if not expand.

  Mitigation
  See Alternative A discussion.

- *Alternative C: Heritage Explorer*
  If Alternative C - Heritage Explore is implemented, impacts to the biotic communities at each heritage node will depend on where facilities are located, their size, and their dimension. The majority of negative impacts have already occurred, and this Alternative is expected to simply upgrade existing cultural and historic facilities and structures that already occupy physical space. Because of the existing presence of these structures, the biologic communities found in each node will not be affected in a negative manner.

  Mitigation
  Land use alteration of most types generally result in increased impervious surfaces which in turn directly influence and negatively impact surface water resources which in turn negatively impact biotic resources of an area. For the Heritage Explorer Alternative, most alteration of the landscape involves interpretive panels, signage for walking tours, property acquisition, gateway creations, kiosk orientation centers, and street improvements including the addition of trees and lighting. These micro actions have limited manifestations in the physical environment, especially as they relate to existing biodiversity.

  Damage to biotic resources in the urban areas of Archbald, Olyphant, Scranton and Carbondale has already occurred, and one very critical remnant of biodiversity is the Lackawanna River and stream corridor itself. The river corridor is perhaps the best existing biotic asset within these communities - a remaining representation of biodiversity in the urban concrete environment. As discussed above, the indirect effects of Alternative actions are expected to positively reinforce biotic resource planning actions, including implementation of the Lackawanna River Heritage Trail.

  Any and all of the micro actions proposed under this alternative should and could certainly be undertaken to minimize negative impacts. Improvements made to any existing parks or open space areas should incorporate the removal of invasive flora followed by installation of native plant species only. Creation of parks should utilize existing site features, minimize creation of impervious

The Moosic Mountain Barrens are home to one of Pennsylvania's few alpine scrub habitats The National Conservancy

surfaces, and minimize disturbance any sensitive resources. Construction of any impervious surfaces (parking lots, paved areas, buildings, etc.) should be planned away from any important biotic or ecologic resource and utilize innovative stormwater management measures to minimize any potential downstream effects.

Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS), the Pennsylvania Department of Game and Fisheries (PADGF) and the Pennsylvania Department of Conservation and Natural Resources (PADCNR) have designated certain declining plant and animal species as threatened or endangered, i.e. listed. Depending on listing status, these species receive varying levels of protection. Prior to any land development activity, consultation with the USFWS and state agencies must occur to determine presence any federal or state-listed species or species of concern. Species of concern is an informal term that refers to those species believed to be declining or in need of concentrated conservation actions to prevent decline. These species are generally referred to as "rare." Species of concern have no legal protection, but their status could change to listed and thus are important considerations for any Alternatives impact analysis.

In 1997, the Lackawanna Heritage Valley Authority, with assistance from The Nature Conservancy, prepared a Natural Areas Inventory for Lackawanna County. The report contains information and locations of rare, threatened, and endangered species and of the highest quality natural areas in the county. Accompanying each description are general management recommendations to ensure the protection and continued existence of these rare resources. Maps are presented in the inventory detailing the location and drainage area containing the surveyed threatened and endangered plants and animals.

- *Alternative A: No Action / Continue Current Activities*
  Under this alternative, no impacts would result to species habitat as a direct result of the proposed action. Of course, the potential for modification of habitat or even complete destruction is greater under this alternative with development pressures continuing to occur.

  Mitigation
  Coordination and consultation with the federal and state agencies managing listed animal and plant species is required. Implementation of Priority Conservation Areas from the County's Open Space Master Plan is recommended especially where habitat can create linkages and connect riparian and open space corridors for species habitat.

- *Alternative B: Heritage Preservation*
  Potential impacts relating to protected species and their habitat is not expected to occur under this alternative.

  Mitigation
  See Alternative A discussion.

- *Alternative C: Heritage Explorer*
  As described above and in Part III, though listed species occur in the County and Watershed, none have been identified in any of the Valley Cultural Nodes that would be impacted if this Alternative were enacted. Resource protection is a concern in this watershed, and partnerships should continue to preserve important habitat throughout the Watershed.

  Mitigation
  Prior to developing any facilities under this alternative, an endangered and threatened species survey should be conducted to determine if habitat that supports any species of concern exists. Coordination discussed under Alternative A is recommended.

Ecologically Critical Areas

As discussed in Part III, the Lackawanna County Natural Areas Inventory identified three globally significant natural communities in the Lackawanna Watershed. These sites - Moosic Mountain Barrens, Bear Swamp, and Bald Mountain - are located on valley ridgetops, headwater hills, and mountain walls. Other ecologically critical areas include state game lands, state parks, county parks, and the river corridor itself. Each of these sites provide valuable habitat space for species of concern and taken together contribute to the abundance of natural resources in the Heritage Valley. As with

all the impact categories, development pressures are strong here, and proactive preservation must continue to occur for the long term care of the area's ecologic resources.

- *Alternative A: No Action / Continue Current Activities*
  Under Alternative A - No Action, there would be no impacts to ecologically sensitive resources from the proposed actions. Certainly sprawl and development pressures threaten unique resources, and these threats will continue under the No Action Alternative.

  Mitigation
  Counties, municipalities, and partnership organizations should continue to collaborate and develop strategies to sustain the unique and sensitive resources. Implementation of the Lackawanna Heritage River Trail will provide protection and preservation of important riparian corridors. Implementation of the recommended actions of the Lackawanna Watershed Conservation Plan and the Open Space Plan will safeguard the ecologically critical areas.

- *Alternative B: Heritage Preservation*
  Under Alternative B - Heritage Preservation, there would be no impacts to ecologically sensitive resources from the proposed actions. Certainly sprawl and development pressures threaten unique ecological resources located within the entire Watershed and these threats will continue under the No Action Alternative.

  Mitigation
  See discussion for Alternative A; this proposed alternative has few, if any, direct effects on unique ecological resources.

- *Alternative C: Heritage Explorer*
  Development of the cultural nodes in the Valley should include coordination with Lackawanna County, municipalities, and partnership organizations. Under this alternative, no identified ecologically critical areas will be negatively impacted. As discussed, avoidance of these areas is important in protecting these resources.

  Mitigation
  Measures to mitigate potential disturbance to ecologically sensitive resources recommended under Alternatives A and B apply to this alternative.

Water Resources
Although there are no federally- or state-designated wild and scenic rivers in the Watershed, in fact, the Lackawanna has been included recently in the designation of the Upper Susquehanna as an American Heritage River, intended to increase federal and state support for economic development/redevelopment, mine reclamation, water quality improvement, habitat enhancement, and cultural resource development. This Heritage River effort reinforces a host of special efforts already discussed in this EIS.

As discussed in Part III, water resource issues include both water quantity such as flooding (see discussion above) and water quality. Because of the significant water quality problems in the Watershed, considerable efforts have been made to reduce sources of pollution and improve overall water quality in the Watershed. Much of the problem relates to mining-related problems, and a host of reclamation efforts have been undertaken, are ongoing, and are planned for the future.

The focus of this EIS is programmatic action. Alternatives being considered in some cases have little or no direct bearing on the physical environment and natural resources, including water resources. In most cases, the actions being proposed, when they have physical or built form manifestation, occur in already highly developed and disturbed environments; in these cases, use of Best Management Practice techniques may allow for some modest level of water resource benefit or improvement. In any case, the issues are quite subtle and likely to be of significance only when assessed as a group. In terms of water resources, a large number of major program initiatives are already ongoing by a variety of agencies (see discussion below) which relate to the major water resource problems in the Watershed, including mining-related impacts (both abandoned mine lands and acid mine drainage), combined sewer overflows, inadequate wastewater treatment, and various types of nonpoint source runoff. These major water resource problems and these programs developed to address these problems

will not be appreciably affected by EIS programmatic actions in any direct way.

Lastly, as explained in the Watershed Conservation Plan and other related planning documents, the problems facing the Lackawanna have been daunting, resulting from decades of abuse. Although progress has been made and continues to be made, so much more work is necessary; so many more resources must be committed before Watershed goals are achieved. "Partnership" and "synergy" have been key terms in virtually all of the planning strategies being developed for water resources management, the realization being that solving so many of the problems will only happen as successful re-development and revitalization strategies are implemented. Focused Management Plan actions, which indirectly have positive community economic effects, therefore are important to support these overall programs for water resource improvement. Furthermore, Management Plan actions which bring more people into the Valley, both visitors from outside of the Watershed as well as Watershed residents themselves, can be expected to enhance awareness of and appreciation for these resources and increase much needed support for water resource programs.

- *Alternative A: No Action / Continue Current Activities*
  An impressive array of planning and management studies relating to water resources, directly and indirectly, have been undertaken, are ongoing, or are being planned by federal, state, and local agencies in the Watershed. These efforts are independent of Management Plan actions and constitute a substantial commitment of resources, both in terms of money and agency commitment. At the same time, they can be positively supported and influenced by Management Plan actions. A sampling of these special programs is presented here; each of these programs in turn includes a substantial amount of background work, analysis, management, funding support, and the like:

  Lackawanna River Citizens Master Plan (1990): This Plan recommended development of the Lackawanna River Greenway, resulting in the Lackawanna River Heritage Trail plans by the USACE and USDOI-NPS; multiple abandoned rail corridor ROW's and shoreline parcels have been acquired, though more acquisition and development work remains to be done. Project River Clean including a major riverbank debris removal campaign, channel and habitat restoration by both USACE and PADEP along substantial tributary stream mileage, and plans to deal with floodplain culm banks, CSO's, substantially more debris removal, and additional channel and habitat restoration needs. The Plan also has undertaken numerous public involvement and educational programs and worked to support a Lackawanna River Partnership and Watershed 2000.

  Watershed 2000: Supported initially by a major USEPA grant some years ago, this program has developed with the strong support of PADEP (both the Bureau of Abandoned Mine Reclamation and Bureau of Water Quality) to abate acid mine drainage and abandoned mine lands problems in the Watershed, as well as work to reduce CSO problems. The work program now consists of a 4-phase multi-year process, including a set of CSO projects being developed with the Lackawanna River Basin Sewer Authority and AMD demonstration projects:

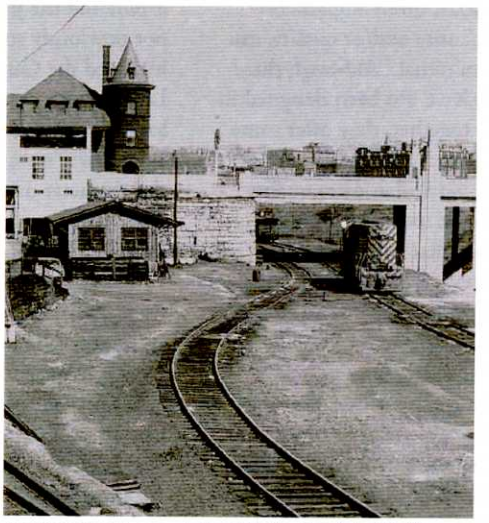
  - Leggetts Creek Restoration--Restore 3,000-ft of stream corridor, remove culm bank, silt and ash and mine rock, regrade 54-acre area for recreation, conservation, and residential uses.
  - Aylesworth Creek Restoration-Regrade culm and mine waste with re-vegetation and erosion control, install AMD treatment controls.
  - Powderly Creek Restoration-Restore 7,000-ft of stream corridor and regrade 50-acre area.
  - Dana Tunnel Treatment-Provide treatment as necessary for high aluminum discharge.
  - Lackawanna Outfall Treatment-Provide AMD treatment as necessary.
  - Various Outfall Remediation Plans-Provide AMD treatment as necessary.
  - Tributary Watershed Analysis and Prioritization

  US Army Corps of Engineers Studies and Projects: Building on its 1993 Lackawanna River Greenway Reconnaissance Study, special restoration projects include the Fall Brook and Murin Run Project and the Powderly Creek Project, as well as the Old Forge Bore Hole.

PADEP Bureau of Abandoned Mine Reclamation (BAMR): BAMR projects have often been undertaken in conjunction with other programs and involve a variety of types of actions, typically intended to reduce or eliminate negative effects of mining on stream systems and other aspects of the natural environment (e.g., stream bed sealing, bank restoration surface reclamation grading, riparian corridor restoration, culm bank removal, bank and erosion control, etc.) are located at Lucky Run, Eynon-Jermyn, Mayfield East, Eddy Creek Phase I, Grassy Island Phase I, Greenwood Creek, Tinklepaugh Creek, Sterry Creek Phase 2.

PADEP Growing Greener Projects: Mine reclamation and watershed restoration projects being funded through this Pennsylvania program include: Pennsylvania Number Nine Colliery Reclamation at Old Forge, Valley View Business Park Reclamation at Jessup, the Vandling Washout, Leggetts Creek Greenway, Marvine Colliery, and Yucca Flats reclamation. These projects range from reclamation of a 20-acre area for re-use as a soccer field to reclamation of a 400-acre area for business park re-development.

Lackawanna River Watershed Conservation Plan (2001): includes numerous recommendations which have both direct and indirect water resource implications. Recommendations are both watershed-wide and specific to tributary and municipality and encompass a broad range of watershed issues (water and environmental quality, economic development, recreation and trails, abandoned mine land reclamation, open space management, environmental education and public involvement, land use recommendations for watershed conservation, and historical and cultural conservation); special effort is given to unifying and integrating the substantial amount of planning and management program work already underway in the Watershed. Section 11.2 sets forth several water-specific recommendations: municipal environmental audits to upgrade conservation measures, stormwater BMPs, buffering and building setbacks, open space networking, performance-based zoning, and other smart growth techniques, as well as the upgrade and consolidation of public water treatment facilities with more rigorous effluent requirements and elimination of CSO's, an assessment of TMDL's with focus on sediment transport, and mitigation of all AMD outfalls and elimination of nonpoint AMD sources. Perhaps most impressive, the Plan then identifies 61-pages of detailed recommendations by Watershed community sub-area, specific to municipality and specific to tributary.



A park area has been created on this abandoned stretch of the Scranton waterfront, shown here in 1968. NEPA Photo Collection

Mitigation

Water resource problems in the Lackawanna historically have been serious, but progress has been made. Many efforts have been taken and are in fact underway to address the most significant causes of water resource degradation. Unfortunately, problems such as combined sewer overflows and acid mine drainage are extremely difficult and expensive to remediate and will require intensive commitment by Watershed stakeholders in coming years. This commitment is made doubly challenging by the economic challenges confronting Watershed communities at the same time. Although federal and state subsidies for projects have been forthcoming, at the same time these grants typically require local community match which becomes increasingly difficult for many municipalities to provide.

Additionally, as recommended in the Watershed Conservation Plan, special efforts need to be made to incorporate the most effective smart growth approaches and practices available as re-development and new develop-

ment projects are undertaken, in order to make sure that water resource impacts from future development actions are minimized.

- *Alternative B: Heritage Preservation*
  See discussion for Alternative A; this proposed alternative has few, if any, direct effects on water resources. As discussed under Alternative A, an impressive array of program actions designed to improve water resources in a variety of ways are already underway and will continue under this alternative.

  Mitigation
  See discussion for Alternative A.

- *Alternative C: Heritage Explorer*
  See discussion for Alternative A; this proposed alternative has few, if any, direct effects on water resources. As discussed under Alternative A, an impressive array of program actions designed to improve water resources in a variety of ways are already underway and will continue under this alternative.

  Additionally, because this alternative program of actions involves several sets of actions in Carbondale, Archbald, Olyphant, and Scranton where streetscapes will be improved with upgraded landscaping, new sidewalks, and other improvements, there is some limited opportunity for incorporating some improved stormwater management Best Management Practices in these designs; as stated above under Wetlands and Floodplains, because these actions are uniformly in already highly developed and disturbed site contexts, direct impacts on water resources, quantity and/or quality, can be expected to be minimal. Although these individual projects have not been designed in detail, when taken together, they offer some moderate level of positive effect in terms of water resources, in particular water quality and reduced nonpoint source pollutants loads, assuming that Best Management Practices are incorporated. Also, it is possible that these projects will stimulate additional efforts by these municipalities, as well as neighboring communities, to undertake similar projects using similar Best Management Practices, in a sense teaching by example. Finally, to the extent that critical tourism and economic re-development are stimulated by this proposed alternative, the numerous recommendations contained within the Watershed Conservation Plan and related documents as described above can be expected to be supported.

  Mitigation
  See discussion for Alternative A. Again, because all of the alternative programs of actions are primarily programmatic and relatively non-physical in nature, adverse impacts on water resources are not considerable and require little in any mitigation. To the contrary, proposed actions defining Alternative C are potentially positive, from a water resources perspective, though are not considerable themselves when viewed in combination with the array of other major federal, state, and local programs currently ongoing in the Watershed.

CULTURAL RESOURCES

Methodology

To complete the identification and assessment of impacts on cultural resources within the study area, the historic resources consultant conducted a thorough review of cultural resource files located at the Pennsylvania Historic and Museum Commission (PHMC) to determine the presence or absence of National Register-listed or eligible properties. Following the review of PHMC files, a reconnaissance field survey of the project area verified the existence and condition of the National Register-eligible and listed properties. Knowledgeable parties were then solicited for comments and suggestions regarding the resources that appeared no longer extant and the presence of additional resources not previously surveyed. Contacted parties included the Carbondale Historical Society, the Lackawanna County Historical Society, and local historian Dan Perry. The proposed alternatives were then evaluated for impacts on the character or use of historic properties.

Historic, Archaeological, Architectural, Landscape, and Cultural Resources

As mentioned in Part III, the preservation of cultural resources is of utmost concern to any Heritage Area, and in particular the Lackawanna Heritage Valley. Though once dominated by massive colliery structures and looming culm piles, the remaining significant historic resources are architectural in nature: individual commercial and municipal buildings, homes, railroads,

factories, and other structures that recall the Valley's past. Even the massive culm piles are slowly disappearing from view as vegetation returns. Continued loss of resources inhibits the ability to create an effective interpretation program and diminishes the visitor experience. Although Native Americans, particularly the Delaware and Monsee, inhabited the region, there are no associated archaeological or historic sites. The only established archaeological site, a rare patch town, is currently protected and under study.

- *Alternative A: No Action / Continue Current Activities*
  Some of the most vital historic and cultural resources in the Valley are well protected by LHVA's partner organizations, such as the rail yards and roundhouse at Steamtown NHS, the Slope 190 mine at the Lackawanna Coal Mine Tour, the Scranton Iron Furnaces (PHMC), and the Catlin House (Lackawanna Historical Society). However, as described in Part III, many other resources have limited or no protection. Under Alternative A, the loss of these resources is likely to continue. On the whole, the Valley's communities welcome preservation and re-use of historic structures, but many places lack adequate funding to help preservation efforts, and many welcome new development at any cost. Currently, the highest level of protection comes from Section 106 of the National Historic Preservation Act. This requires that impacts to any site included, eligible to be included, or potentially eligible for inclusion on the National Register of Historic Places be at least considered when a project uses federal funding or permits. As of now there are 124 listed or potentially eligible properties included on the National Register in and immediately around the Heritage Valley. As nomination of resources has been left up to individual property owners, there are many other threatened and important resources that have never been considered for the Register. Several towns in the valley have designated historic districts, and some have become listed on the National Register, but loss of resources within these districts continues. Heritage Plans were completed for Carbondale and Olyphant in 1994 which demonstrated opportunities for preservation and redevelopment of older buildings, but little follow-through has been accomplished in the following nine years.

  Mitigation
  Adherence to Section 106 requirements will continue regardless of which alternative is chosen. If Alternative A is selected, current efforts to identify opportunities for preservation should continue, as should the promotion of adaptive reuse where new development is to occur.

- *Alternative B: Heritage Preservation*
  As preservation is at the heart of Alternative B, the effects on the historic resources in the Valley would be quite positive. With a survey of the entire Valley, many more important resources will be identified and can apply for inclusion on the National Register. The suggested preservation program provides the potential to improve resource conditions, which will help interpretation and visitor experiences. However, as the vast majority of resources are in private hands and the program is voluntary in nature, some losses and deterioration of resources should be expected to continue. In addition there are concerns about unsupervised visitation to some of the more fragile resources.

  Mitigation
  As the effects on historic resources in Alternative B are positive in nature, little mitigation will be required besides those mentioned for Alternative A. To address concerns about visitors damaging or destroying resources, strict "private property" signage and occasional security patrols may be necessary.

- *Alternative C: Heritage Explorer*
  Under Alternative C, many historic resources will receive positive benefits. With a similar survey of the Valley as appears in Alternative B, resources will be identified and may be given consideration for the National Register. Meanwhile, the use of important historic resources in and along the "Heritage Explorer Tour" and individual preservation projects such as the reuse of four colliery structures in Archbald bode well for historic resources. However, many resources would still remain in private hands and some losses, especially in locations away from the main tour route may persist. Also, there are concerns about unsupervised visitation to historic resources.

Mitigation
Since the effects on historic resources are largely positive in nature, little mitigation is necessary - though the suggestions mentioned in Alternative A are applicable. Concerns about unsupervised visitation to resources may be addressed with signage and occasional security patrols.

SOCIAL OR HUMAN-INDUCED IMPACTS

Methodology

The review of social or human-induced impacts to the Heritage Valley from the three alternatives involved several methodologies. The planning team made substantial reviews of existing data and plans, including the following:

- Lackawanna & Luzerne Counties Open Space, Greenways & Outdoor Recreation Master Plan. Draft 2003
- The Lackawanna County Natural Areas Inventory Report, 1997
- Lackawanna River Greenway River Park and Trail Plan, 1993
- Olyphant Heritage Development Strategy, 1994
- Carbondale Center Heritage Plan, 1994
- Lackawanna Heritage Valley Folklife Resources Study, 1996
- Plan for the Lackawanna Heritage Valley, 1991

  In addition, the planning team conducted scoping sessions and interviews with stakeholders, tourism promoters and managers of tourist attractions, and community officials in Lackawanna County, Scranton, and several other towns in the Valley. These interviews, with several site visits, gave the team an understanding about various tourism, economic development, and social issues affection the Valley. In addition the team obtained GIS mapping data concerning land use and transportation from Pennsylvania's GIS depot at www.pasda.psu.edu.

Land Use

Much of the land within the Valley has been developed or used for mining related activity for some time. After the Second World War a decentralization trend of development occurred, with commercial and industrial uses looking for locations near major roadways, and residential development spreading up and beyond the slopes containing the Valley. There have been some reversals of this trend in the past few years, with several new hospitality, commercial, and residential developments occurring in downtowns, particularly Scranton's. However, the largest amount of new development continues to occur on green space or reclaimed culm piles, most notably the on-going entertainment, commercial, and residential development near Montage Ski Area, and industrial and commercial development near the interchanges of the recently completed Lackawanna Industrial Highway. Of special concern is development of the environmentally sensitive ridgetops that visually and physically define the Heritage Valley. None of the proposed alternatives is likely to have a direct impact on developing green space, and LHVA's continuing emphasis on preserving open space and directing development to existing urban areas will help prevent reckless sprawl development.

- *Alternative A: No Action / Continue Current Activities*

  Alternative A is seen to have little to no effect on the current land use trends of green space development and limited town center development. There are ongoing initiatives to protect critical open space, especially the ridge tops and along streams, and create interweaving recreational greenways as called for in the draft Open Space Plan. Likewise, several towns in the Valley, including Scranton, Carbondale, Olyphant, and Jessup have undertaken plans and measures to attract development to their downtowns. The Lackawanna Heritage Valley Authority has helped support many of these plans, and its planned developments are in accordance with the goals in these plans.

  Mitigation
  As there are relatively no negative effects on land use with Alternative A, mitigation seems unnecessary. However any of the Lackawanna Heritage Valley's future developments should respect and reinforce the goals of these land use plans.

- *Alternative B: Heritage Preservation*

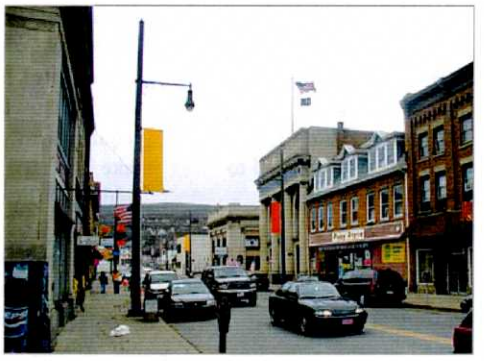
  Alternative B also would have little to no effect on land use patterns in the region. Visitors traveling to see various scattered sites might support more scattered commercial uses, but this would be a minimal influence at most.

Mitigation
As the effects on land use are minimal at most, mitigation efforts beyond those mentioned for Alternative A do not seem necessary.

- *Alternative C: Heritage Explorer*
  Of the three, this alternative would have the most impact on land use. By directing visitors to and through existing town centers, commercial and hospitality development will be more attracted to these places. Likewise, improving public aesthetic infrastructure in the these towns with streetscape and park improvements will not only attract tourists but also locals, and will help create the demand to sustain existing and new commercial and residential uses. These effects are quite positive in nature, desirable in places that have seen decline over the past few decades, and will help prevent development of greenfields such as the environmentally sensitive ridgetops.

  Mitigation
  When new development occurs in older built-up areas, it should be of appropriate scale and character to fit in harmoniously with its location. To foster this, town plans should be done for the major stops and other areas along the "Heritage Explorer Tour." Carbondale and Olyphant have completed plans that identify parcels for infill and older buildings that could be adaptively reused. Plans like these should be undertaken for Archbald, Jessup, Providence, and especially downtown Scranton.

Design of the Built Environment
This section addresses the visual impact of signs, streetscaping, and building design and construction of buildings as described in each alternative. The Lackawanna Heritage Valley is filled with older towns, characterized by dense built up areas and attractive historic architecture. Outside the towns, modern automobile-centered designs for shopping centers and office and industrial parks dominate, though attractive stretches of open space and forest, the ever-present ridgetops, and looming culm piles remain.



The preferred alternative would help direct development to existing communities like Olyphant.
Kise Straw & Kolodner photograph

- *Alternative A: No Action / Continue Current Activities*
  The current and planned developments of the Lackawanna Heritage Valley have had positive impacts on the built environment. The new Visitors Center and planned Heritage Interpretive Center are attractive buildings set nicely into the surrounding open landscape. Likewise new train stations in Olyphant, Jessup, Archbald and Carbondale are quite attractive and fit well in their respective towns. These projects have provided great examples of how new architecture can be exciting without overwhelming their surroundings.

  Mitigation
  Continued involvement with the local communities and appropriate government and non-profit agencies in the design of new structures and signage systems is recommended.

- *Alternative B: Heritage Preservation*
  Under the second alternative, the built environment would receive positive impacts from the restoration and preservation of significant historic structures - many of which are now dilapidated. No new construction would take place besides interpretive signage at various sites.

  Mitigation
  Property owners, local communities, and appropriate government and non-profit agencies should be strongly involved in any preservation or restoration of historic buildings, and any construction of interpretive signage.

- *Alternative C: Heritage Explorer*
  Of the three alternatives, Alternative C would have the most positive impact on the built environment as it proposes restoration, new construction, and signage systems throughout

the Lackawanna Heritage Valley. The orientation center and exhibitry in Carbondale and Archbald would be done through adaptive re-use of existing buildings. New construction would occur in Scranton, Olyphant, and McDade Park. Automobile signage systems would be built along the "Heritage Explorer" tour route and to and from the Visitors Center, McDade Park, and Nay Aug Park. Meanwhile, walking tour signage and interpretive panels would be built in Carbondale, Archbald, Olyphant, Scranton, and several other places along the tour would receive interpretive panels.

Mitigation
The past success of Lackawanna Heritage Valley in creating exciting and attractive architecture and designs for new construction should continue. An appropriate design theme should be created for all signage systems so visitors can easily identify Lackawanna Heritage Valley materials, yet coordination with local communities and appropriate agencies is recommended to give each town's walking tour a variation on this theme. Rehabilitation of existing buildings should be done in a careful manner, with consultation from appropriate organizations.

Social or Economically Disadvantaged Populations
Federal agencies are required to consider "high and disproportionate adverse effects" on low-income and minority populations. The Lackawanna Heritage Valley has a very small minority population - African Americans are the largest group and make up only 1% of the population, compared to 10% across Pennsylvania. There is a significant low-income population however, with 10.8% of the population below the poverty line in 2000, almost exactly the same as the statewide poverty rate.

- *Alternative A: No Action / Continue Current Activities*
  No impacts to low-income or minority populations have resulted or are predicted to result from this alternative. As such, no mitigation is required.

- *Alternative B: Heritage Preservation*
  No impacts to low-income or minority populations are predicted to result from this alternative. As such, no mitigation is required.

- *Alternative C: Heritage Explorer*
  Any impacts to low-income or minority populations resulting from this alternative would be positive. Commercial and hospitality industry growth, and resulting economic opportunities, would be focused in existing town centers like Scranton, Carbondale, Archbald, and Olyphant, which have among the highest incidence of poverty in the region. As such, no mitigation is required.

Public Health and Safety
- *Alternatives A, B, and C:*
  No impacts to public health and safety are predicted, though it should be understood that design of public facilities and walkways should take into account traffic hazards and accessibility, as pursuant to the Americans with Disabilities Act (ADA).

Construction Impacts
Construction impacts are described as unavoidable short-term effects, and long-term irreversible changes. During construction, the effects of erosion, runoff, and sedimentation are associated with ground disturbance. Noise, dust, and general air pollution generated by construction operations are also temporary impacts. Long term impacts include changes to runoff and stormwater drainage and impacts to wildlife habitats.

- *Alternatives A, B, and C:*
  Each of the alternatives would demand construction of some sort to occur. However, as the developments are for the most part small, very short-term, and very localized, it may be stated that impacts will be minimal.

Mitigation
Short-term construction impacts can usually be mitigated by following applicable regulations, best management practices, and permit requirements. Construction design should take into account stormwater management to minimize adverse long-term effects.

Socioeconomic Impacts
Socioeconomic impacts relate to population growth, employment projections, demands on public services and changes in business and

economic activity. Indirect socioeconomic impacts are related

to potential demand on services provided by businesses, such as restaurants, hotels and retail establishments that benefit from increases in the Lackawanna Heritage Valley's tourism trade. Induced socioeconomic impacts result from the spending of owners and employees of businesses receiving direct and indirect benefits from Lackawanna Heritage Valley activities.

A study prepared by D.K. Shifflet and Associates on behalf of the Pennsylvania Department of Conservation and Natural Resources in 1999 examined the spending patterns of heritage tourists visiting the Commonwealth. The study found that heritage tourists - defined as those traveling at least 50 miles to visit historic, cultural and natural/scenic attractions to learn about the past - spend approximately $103/day (in 1997 dollars) compared to other leisure travelers who spend, on average, $73/day. Adjusting this spending figure for inflation between 1997 and 2003, this suggests average daily spending by each heritage tourist of $115.

The D.K. Shifflet study identified the expenditures contributing to this overall daily spending. Adjusting to 2003 dollars, the typical heritage tourist distributes his daily spending in the following categories:

Transportation:	$ 11.30
Lodging	$ 21.00
Food & Beverage	$ 30.00
Entertainment/Recreation	$ 14.75
Retail	$ 27.50
Other	$ 10.70

In addition to this direct spending, there are indirect and induced economic impacts of heritage tourism. The DCNR study estimates indirect economic benefits of $31/heritage tourist/day and induced benefits of $50/heritage tourist/day. Correcting for inflationary effects since the time of this study, this results in an indirect economic benefit of $35.75 and an induced economic benefit of $57.70 for each day of a heritage tourist's trip.

Local area residents who visit Lackawanna Heritage Valley attractions, who do not meet the "heritage tourist" definition of the DCNR study, also produce economic impacts. Local area heritage visitors will make expenditures not related to travel and lodging for each day that they devote to exploring the Lackawanna Heritage Valley's interpretive sites and attractions. Assuming that these expenditures are somewhat less than those of the out-of-town heritage tourist, it is estimated that, on average, local area heritage visitors contribute $33.40 per day in daily spending in the following categories:

Food and Beverage	$ 9.90	(33% spending of heritage tourist)
Entertainment & Recreation	$11.00	(75% spending of heritage tourist)
Retail	$ 9.00	(33% spending of heritage tourist)
Other	$ 3.50	(33% spending of heritage tourist)

The indirect and induced economic benefits associated with local area heritage visitors are estimated to be $10.20 and $15.65 respectively, for a total average daily economic benefit of $59.25 per visitor.

Based on the current visitor profile of Lackawanna Heritage Valley institutions that track such data, it is estimated that heritage tourists constitute approximately 80% of the total visitor base and local area heritage visitors constitute 20 % of the total visitor base. School groups, originating from the local area and within the day-trip market, constitute approximately 25% of all heritage visitors to the Lackawanna Heritage Valley.

Spending by school groups is assumed to be significantly less than for other heritage visitors. For these visitors, daily spending is estimated very conservatively at $7/child, split between entertainment and recreation (ticket purchases) and food and beverage. The resulting indirect and induced economic benefits resulting from school group visitation are $2.25 and $3.25/child, respectively.

Applying these economic impact estimates to the Lackawanna Heritage Valley's existing base of 200,000 heritage visits a year results in an annual economic benefit of $29.55 million to the region. (Note: The Steamtown National Historic Site has developed economic impact estimates for its operations that range from $18 million to $42 million annually. Steamtown NHS's assessment includes the impact of the site's total operating budget, while this analysis assesses only the impact of visitors to the area.) To determine a range of socioeconomic benefits associated with the various alternatives under consideration, several assumptions were made

Table IV-1: Alternative A Benefits

	Local	Out of Area	School Groups	Economic Benefit	Economic Benefit	Economic Benefit
Direct Economic Benefit						
Transportation		$198,739		$198,739	$1,525,500	$1,724,239
Lodging		$369,338		$369,338	$2,835,000	$3,204,338
Food and Beverage	$42,446	$527,625	$9,375	$579,446	$4,348,500	$4,927,946
Entertainment/Recreation	$47,163	$259,416	$12,500	$319,078	$2,356,250	$2,675,328
Retail	$38,588	$483,656		$522,244	$3,712,500	$4,234,744
Other	$15,006	$188,186		$203,193	$1,497,000	$1,700,193
Total Direct Economic Benefit	$143,203	$2,026,959	$21,875	$2,192,037	$16,274,750	$18,466,787
Indirect Economic Benefit	$43,733	$628,753	$7,031	$679,517	$5,091,750	$5,771,267
Induced Economic Benefit	$67,099	$1,014,799	$10,156	$1,092,054	$8,186,750	$9,278,804
Annual Economic Benefit	$254,034	$3,670,511	$39,063	$3,963,608	$29,553,250	$33,516,858

about project development. Estimates of visitor usage were projected forward to a "stabilized year" of operation, which was determined to be 2008.

- *Alternative A: No Action / Continue Current Activities*
  Under Alternative A, the planned Heritage Interpretive Center will serve as the principal orientation facility for visitors to the Lackawanna Heritage Valley. Electric City Trolley service will be expanded to connect the Heritage Interpretive Center to the Electric City Trolley Station & Museum in downtown Scranton. Additionally, a Black Diamond Discovery Center will be added to the Lackawanna Coal Mine Tour, and the Lackawanna River Trail system will be completed.
  The estimated development cost of the No Action Alternative is $9.6 million, and include the Heritage Interpretive Center at the Lackawanna Visitor Center, the Black Diamond Discover Center at the Lackawanna Coal Mine Tour, and the completion of the Lackawanna River Trail. Operating cost increases required to operate the expanded programming of the No Action alternative are estimated at approximately $1.3 million.

  Under Alternative A, approximately 25,000 additional visitors will be attracted to the Lackawanna Heritage Valley in the stabilized year, including approximately 4,300 local visitors, 17,600 heritage tourists from outside the area and 3,125 additional school children participating in class trips. The resulting economic benefits associated with the No Action Alternative are detailed on Table IV-1.

  Mitigation
  Existing interpretive sites would be maintained as they exist under Alternative A, with proposed expansion efforts completed by identified and committed interpretive partners and the LHVA. Promotion of the Lackawanna Heritage Valley attractions and the mitigation of these costs would be the responsibility of the non-profit and civic organizations currently supporting these sites. Under this alternative, the LHVA would provide partner institutions with technical assistance and, in certain circumstances, matching grants for planning, capital development, land acquisition, and special programs. Partner organizations would continue to seek grant funding and federal, state, county, and local support for their efforts. The LHVA would be supported by the National Park Service, the Commonwealth of Pennsylvania, other federal and local governments, civic institutions, foundations, and the corporate community.

- *Alternative B: Heritage Preservation*
  Under Alternative B, all activities associated with the Alternative A will occur, as well as those activities identified in Part II. The estimated development cost of Alternative B, detailed in Part II, is $12.7 million ($3.1 million higher than the cost of the No Action Alternative).

  Under Alternative B, approximately 45,000 additional visitors will be attracted to the Lackawanna Heritage Valley in the stabilized year, including approximately 3,300 local visitors, 30,700 heritage tourists from outside the area and 11,000 additional school children participating in class trips. The resulting economic benefits associated with the alternative are detailed on Table IV-2.

Table IV-2: Alternative B Benefits

Direct Economic Benefit						
Transportation		$346,910		$346,910	$1,525,500	$1,872,410
Lodging		$644,700		$644,700	$2,835,000	$3,479,700
Food and Beverage	$32,670	$921,000		$953,670	$4,348,500	$5,302,170
Entertainment/Recreation	$36,300	$452,825	$44,000	$533,125	$2,356,250	$2,889,375
Retail	$29,700	$844,250	$33,000	$906,950	$3,712,500	$4,619,450
Other	$11,550	$328,490		$340,040	$1,497,000	$1,837,040
Total Direct Economic Benefit	$110,220	$3,530,500	$77,000	$3,717,720	$16,274,750	$19,992,470
Indirect Economic Benefit	$33,660	$1,097,525	$24,750	$1,155,935	$5,091,750	$6,247,685
Induced Economic Benefit	$51,645	$1,771,390	$35,750	$1,858,785	$8,186,750	$10,045,535
Annual Economic Benefit	$195,525	$6,399,415	$137,500	$6,732,440	$29,553,250	$36,285,690

Mitigation
Existing interpretive sites would be maintained as they exist, with proposed expansion efforts completed by identified and committed interpretive partners and the LHVA. Promotion of the Lackawanna Heritage Valley attractions and the mitigation of these costs would be the responsibility of the non-profit and civic organizations currently supporting these sites. Additionally, the LHVA would assume additional responsibility for coordinating the participation of private property owners of the historic sites

Under this alternative, the LHVA would provide partner institutions with technical assistance and, in certain circumstances, matching grants for planning, capital development, land acquisition, and special programs. Partner organizations would continue to seek grant funding and federal, state, county, and local support for their efforts. The LHVA would be supported by the National Park Service, the Commonwealth of Pennsylvania, other federal and local governments, civic institutions, foundations, and the corporate community.

- *Alternative C: Heritage Explorer*
  Under Alternative C, all activities associated with the Alternative A will occur, as well as those activities identified in the description of Alternative C in Part II. The estimated development cost of Alternative C, detailed in Part II, is $20.8 million ($11.2 million higher than the cost of the No Action Alternative).

  Under Alternative C, approximately 91,500 additional visitors will be attracted to the Lackawanna Heritage Valley in the stabilized year, including approximately 6,750 local visitors, 62,250 heritage tourists from outside the area and 22,500 additional school children participating in class trips. The resulting economic benefits associated with the Heritage Explore Alternative are detailed on Table IV-3.

  Because this alternatives highlights the resources within the major population centers of the Lackawanna Heritage Valley, the socioeconomic benefits will enhance existing communities and the commercial districts adjacent to heritage attractions and transportation corridors linking attractions.

  Mitigation
  Existing interpretive sites would be maintained as they exist under the Heritage Explorer, with proposed expansion efforts completed by identified and committed interpretive partners and the LHVA. Promotion of the Lackawanna Heritage Valley attractions and the mitigation of these costs would continue to be the responsibility of the non-profit and civic organizations currently supporting these sites; however, a significant marketing campaign would also be undertaken, spearheaded by the Lackawanna Heritage Valley Authority and the Northeast Pennsylvania Convention and Visitors Bureau. Additionally, this alternative will require significant involvement of county and local governmental agencies in the coordination and funding of streetscape and other physical improvements that create a more amenable environment for visitors, and residents, of the Lackawanna Heritage Valley.

  Under this alternative, the LHVA would provide partner institutions with technical assistance and, in certain circumstances,

Table IV-3: Alternative C Benefits

Direct Economic Benefit						
Transportation		$703,425		$703,425	$1,525,500	$2,228,925
Lodging		$1,307,250		$1,307,250	$2,835,000	$4,142,250
Food and Beverage	$66,845	$1,867,500	$67,500	$2,001,845	$4,348,500	$6,350,345
Entertainment/Recreation	$74,272	$918,188	$90,000	$1,082,460	$2,356,250	$3,438,710
Retail	$60,768	$1,711,875		$1,772,643	$3,712,500	$5,485,143
Other	$23,632	$666,075		$689,707	$1,497,000	$2,186,707
Total Direct Economic Benefit	$225,517	$7,174,313	$157,500	$7,557,329	$16,274,750	$23,832,079
Indirect Economic Benefit	$68,870	$2,225,438	$50,625	$2,344,933	$5,091,750	$7,436,683
Induced Economic Benefit	$105,669	$3,591,825	$73,125	$3,770,619	$8,186,750	$11,957,369
Annual Economic Benefit	$400,056	$12,991,575	$281,250	$13,672,881	$29,553,250	$43,226,131

matching grants for planning, capital development, land acquisition, and special programs. Partner organizations would continue to seek grant funding and federal, state, county, and local support for their efforts. The LHVA would be supported by the National Park Service, the Commonwealth of Pennsylvania, other federal and local governments, civic institutions, foundations, and the corporate community.

Air Quality

Air quality typically is affected by creation of significant stationary point sources of emissions, which could include significant power plant and industrial plant smokestacks and major construction sites, as well as mobile sources of emissions such as automobile and truck traffic. With the decrease in heavy industry and enforcement of tougher pollution laws, the air quality of the Lackawanna Heritage Valley has been increasingly improving and is below NAAQS limits.

- *Alternatives A, B, and C:*
  Given the largely programmatic nature of the proposed alternatives, no significant point sources of pollution are expected to be affected, either increased or decreased; proposed construction actions are extremely modest in size and duration and will not generate significant loadings of any type of air pollutant. In terms of mobile sources of emissions, no significant changes in mobile source emissions are expected to result from the proposed alternatives. Traffic impacts resulting from the alternatives are limited to low levels of additional trips to be generated by additional levels of tourism and visitation associated with the different alternatives (25,000 additional visitors for Alternative A, 45,000 additional visitors for Alternative B, 91,500 visitors for Alternative C). Keeping in mind that additional visitation must be downwardly adjusted for car trips (multiple visitors per car trip, assuming typical family or household size) and will be distributed throughout the year, incremental air quality emissions are marginal in an absolute sense and do vary among the alternatives in any case. Given the general improvement in air quality in the area together with the substantial margin between current air quality levels and NAAQS limits, there will be no significant impacts on air quality as the result of the proposed alternative actions.

Direct Social Impacts

- *Alternative A: No Action / Continue Current Activities*
  In the past decade or so, the communities in the Lackawanna Heritage Valley have begun to see the importance of recognizing, preserving, and telling the story of their pasts. Individuals, groups, and some towns have started efforts to prevent the further loss of historic resources, and create ways to develop a coherent cultural identity using the past. Under Alternative A, this modest trend would continue, but so would the larger trends of loss of resources. Furthermore, the interpretation of the Valley's past would become more fragmented, and the quality of the visitor experience more varied. This would have negative social ramifications for the cultural integrity of the region, the quality of life in each town, and minimize the opportunity for economic benefits from tourism.

  Mitigation
  Continued private, nonprofit, and local government initiatives in the preservation of resources and the improvement of historic places is recommended, with collaborative strategies developed between the groups.

- *Alternative B: Heritage Preservation*
  Under Alternative B, there would be no adverse social impacts where resources are identified and preserved. However, there would be little positive impacts beyond stemming the loss of historic resources. The other social trends described above would continue - the quality of visitor experience at resources would vary greatly and towns and attractions would still be left to develop their own interpretive program and compete for a limited visitor pool.

  Mitigation
  Like Alternative A, the continued private, nonprofit, and local government initiatives in improvement of historic places is recommended.

- *Alternative C: Heritage Explorer*
  Under Alternative C, there would be no adverse and several positive social impacts. By focusing interpretation and visitation on the historic towns of the valley, this alternative presents local communities an opportunity to showcase their resources. Capitalizing on distinct places will also attract more tourists and bring more powerful economic benefits.

  Mitigation
  When developing improvements, it is vital that local communities have a strong partnership and are given opportunities to shape improvements to their liking.

Transportation Impacts

- Alternatives A, B, and C:
  As mentioned in the discussion of air quality impacts, traffic impacts resulting from each alternative are limited to low levels of additional trips to be generated by additional levels of visitation associated with the different alternatives (25,000 additional visitors for Alternative A, 45,000 additional visitors for Alternative B, 91,500 visitors for Alternative C). Knowing that the number of car trips would be less than these visitor numbers, as there are generally multiple visitors per car trip, and will be distributed throughout the year, the increase in automobile traffic is marginal in an absolute sense and varies little between the alternatives. Keeping in mind that every alternative is set in an urban setting with roads that are generally equipped to handle higher volumes of traffic, it can be deter-mined that no adverse transportation impacts will occur as a result of any of the alternatives.

Solid and Hazardous Waste Impacts

- *Alternatives A, B, and C:*
  As stated in Part III, the Lackawanna River watershed has experienced major problems from contamination from waste sites. However, none of the proposed alternative programs of action has bearing, directly or indirectly, on solid and hazardous waste sites or issues pertaining to solid and hazardous waste sites in the Watershed, and no impacts are anticipated.

Energy Use and Conservation Potential

- *Alternative A: No Action / Continue Current Activities*
  No impacts concerning energy use or conservation are expected under Alternative A.

- *Alternative B: Heritage Preservation*
  Alternative B could be said to slightly increase energy consumption due to the increase in tourists and the driving activities associated with locating and visiting a number of resources. However, as discussed in the transportation and air quality assessments, the increase in traffic, and thus energy consumption, would be minimal.

  Mitigation
  The use of the bicycle trail along the Lackawanna River, and clustering of destination resources should be recommended to visitors.

- Alternative C: Heritage Explorer
  As under Alternative B, there would be a slight increase in energy consumption from the increased visitation to the region, and with the driving activities of tourists taking the "Heritage Explorer Tour" by automobile. However, this increase would be minimal. In addition, Alternative C offers many opportunities to take alternative transportation modes. The river itself, the riverside bicycle trail, and a suggested bus tour, and excursion train tracks all follow the route of the "Heritage Explorer Tour," and a jitney connecting Scranton's attractions offers an energy efficient way of travel for tourists.

Mitigation
When available, other means of completing the "Heritage Explorer Tour," including canoe, bicycle, bus, jitney, and train, should be suggested to tourists.

Visual and Aesthetic Impacts
While known for its historic industrial landscapes and eerie moon-like culm piles, the Lackawanna Heritage Valley also possesses many attractive historic towns and delightful parks, all framed by the powerful sublimity of the ever-present ridgetops. The LHVA's continuing effort to protect open space will help prevent negative aesthetic impacts to areas like the ridgetops, regardless of the plan alternative. However, the differing emphasis on interpretation and visitor services between the alternatives will mean different impacts on the built aesthetics.

- *Alternative A: No Action / Continue Current Activities*
  While no large impacts are expected under Alternative A, the continued loss of historic resources, especially significant architectural sites, will slowly chip away at the aesthetic character of the Valley's built up areas.

  Mitigation
  Continued private, nonprofit, and local government initiatives in the preservation of resources and the improvement of historic places is recommended, with collaborative strategies developed between the groups.

- *Alternative B: Heritage Preservation*
  Since it focuses on preserving significant resources, Alternative B would have only positive effects on the visual character of the Lackawanna Heritage Valley.

- *Alternative C: Heritage Explorer*
  Alternative C would have the most positive effect on visual character. Streetscape and public park improvements, along with preservation efforts, will help "show off" some of the most attractive places in the Lackawanna Heritage Valley.

Recreation and Tourism Impacts
A large number of recreation and tourism attractions are located in the Lackawanna Heritage Valley. These include natural attractions such as the Archbald Pothole State Park and Nay Aug Park (a National Natural Landmark), recreational attractions such as the numerous State Game Lands and Montage Mountain Ski Area, and cultural attractions such as Steamtown NHS, the Red Barons Stadium and the Everhart Museum.

- *Alternative A and B:*
  Alternatives A and B will have the least impact on tourism. Increased attendance at nearby tourist attractions and recreational resources is predicted, but with minimal physical and programmatic ties, the increase will be minimal.

  Mitigation
  Attempts to package and advertise the entire region as a destination for all types of tourists are recommended. Once here, heritage tourists should have information about other attractions, and visitors to other the other attractions should receive information on the area's heritage attractions.

- *Alternative C: Heritage Explorer*
  Alternative C is predicted to have the most impact on tourism and recreation in the region. The "Heritage Explorer Tour" has direct ties with other heritage attractions and multiple opportunities will exist to showcase other area attractions. Furthermore, this alternative makes the most use of recreational attractions, with the possibility of using the riverside bike trail or the river itself as means of touring.

  Mitigation
  As with the other alternatives, attempts to package and advertise the entire region as a destination are recommended, while information about all the region's tourism and recreational attractions should be made available whenever possible.

CUMULATIVE IMPACTS

Cumulative impacts are the combined, incremental effects of human activity on a resource. The intent of this section is to examine the overall, long-term effects that this project could have on the region.

The most significant cumulative effect is the significant loss of historic resources - not just the architectural remains, but also the stories and first-person experiences. Generally, as the region experienced its industrial decline, it has allowed and perhaps encouraged the loss of painful reminders of its past such as the once ubiquitous coal breakers. However, in the past decade there has been a recognition of the region's importance to the nation's history and a realization of its potential economic benefits as a heritage tourism destination. This led directly to the creation of the Lackawanna Heritage Valley and has caused many area communities to consider "showing off" their past as a matter of pride and economic opportunity.

Conversely, many of the region's natural resources have been steadily improving since the era of anthracite coal mining ended. LHVA's concerted efforts to protect open space from development, particularly along the sensitive ridgetops, and its environmental remediation efforts, working with groups like the Lackawanna River Corridor Association, will continue this trend.

As the growth in national heritage tourism, and interest in the Lackawanna Heritage Valley, increases, more cars and even bus tours can be expected. Maximizing the visitor's economic and social impacts while minimizing their negative impacts on resources becomes a priority.

Table IV-4: Summary of Relative Impacts by Alternative

Wetlands/Floodplains	L	L	P
Farmland	N/A	N/A	N/A
Threatened & Endangered Species	L	L	L
Ecologically Critical Areas		L	L
Biotic Communities	L	L	L
Water Resources	L	L	L
Historic, Archaeological, and Cultural Resources	L	P	P
Indian Trust Resources	N/A	N/A	N/A
Land Use	L	L	P
Design of the Built Environment	L	P	P
Disadvantaged Populations	L	L	P
Public Health & Safety	L	L	L
Construction Impacts	L	N	N
Socioeconomic Impacts	L	L	P
Air Quality	L	L	L
Social Impacts	L	L	P
Transportation Impacts	L	N	P
Solid & Hazardous Waste	N/A	N/A	N/A
Energy Use & Conservation	L	L	P
Visual & Aesthetic Values	L	L	P
Recreation & Tourism	L	L	P

Relative Effects: N = Negative Impact, L = Little Impact, P = Positive Impact

Note: This table represents the relative effects that the three alternatives could potentially have on the resource categories. This table is not to be interpreted in terms of specific impact levels on these resources

PART V:

Consultation and Coordination

- Introduction
- History of Public Involvement
- Client Group
- Consultant Team
- List of Interviewees
- List of Draft Recipients
- Comments and Responses

INTRODUCTION

Consultation with authorities and the interested public is a staple of completing an Environmental Impact Statement. Area stakeholders, community leaders, and the interested public bring expertise and viewpoints on relevant issues and developments that is crucial for properly evaluating impacts.

HISTORY OF PUBLIC INVOLVEMENT

As an ongoing operation for more than a decade, LHVA has a regular program of community contact and information. It publishes regular newsletters, has a website, organizes events such as marathon races, presented the year-long Community Heritage Festival, promotes educational programs, encouraged public rediscovery of the Lackawanna River for recreational and community use, helped mark the 100th anniversary of the famed Anthracite Strike of 1902, coordinates the Lackawanna Heritage Valley Roundtable of interpreting partners, and helped produced "Stories from the Mines", a documentary film distributed nationally on PBS, seen in 80 television markets nationally, and nominated for an Emmy Award as Outstanding Film Documentary.

Notice of Intent to prepare an EIS was placed in the Federal Register in April 2003. The Management Action Plan and EIS was the subject of three internal scoping meetings and two public meetings. The LHVA placed notices in local newspapers prior to the public meetings, sent a special letter to its mailing list of about 400, and followed up with telephone calls to key individuals urging attendance. The meetings were:

February 3, 2003. Internal scoping meeting at Kise Straw & Kolodner with consultant team, Peter Samuel of NPS, and LHVA staff.

February 21, 2003. Internal scoping meeting as above.

February 27, 2003. Internal scoping meeting at the Lackawanna Station Hotel with the Heritage Valley Roundtable. In addition to LHVA board and staff, and consultant team members, others included the Electric City Trolley Station & Museum, Steamtown National Historic Site, Lackawanna River Corridor Association, Pennsylvania Anthracite Heritage Museum, Scranton Iron Furnaces, City of Scranton, PA Department of Conservation and Natural Resources, Northeast Pennsylvania Convention and Visitors Bureau, Scranton Cultural Center, Lackawanna County, Everhart Museum, and D. K. Perry & Associates.

May 13, 2003. Public scoping meeting at the Lackawanna Heritage Valley Center in Mayfield where the consultant team sought

Heritage stakeholders attend a presentation of the draft EIS
Kise Straw & Kolodner Photograph

comment on issues and concerns, the EIS process and schedule, and findings to date.

May 27, 2003. Public meeting to discuss the Draft Interpretive Plan and the Draft Management Action Plan at Steamtown National Historic Site in Scranton. This was a well-attended meeting with numerous questions by participants, which included U.S. Congressman Paul Kanjorski. Public comment favored Alternative C, but suggested modifications to it and the Interpretative Plan.

November13, 2003. Stakeholder meeting with the Heritage Valley Roundtable at LHVA's office in Mayfield. The meeting was held to present the draft EIS and go over any comments and concerns with Lackawanna Heritage Valley stakeholders.

February 4, 2004. Public presentation of the draft EIS and Management Action Plan. This was a public meeting made during the 60-day comment period. CD-ROM versions of the document were handed out, and public comments were taken at the meeting. Comments were supportive of the plan.

CLIENT GROUP

Lackawanna Heritage Valley Authority

Board of Directors:

The Hon. Joseph J. Corcoran, Chairman
The Hon. Randy Castellani, Treasurer
Paul Browne, Secretary
Parnell Joyce
Harry Lindsay
Alan Sweeney

Staff:

John W. Cosgrove, Executive Director
Sandra K. Eggert, Director of Operations/Programs
Jesse Ergott, Community Program Officer
John C. Carling, Contract Manager
Margo Tomlinson, Executive Assistant
Alice Sokoloski, Fiscal Administrative Assistant
Diane Chelik, Administrative Assistant

Partners:

National Park Service
PA Department of Conservation and Natural Resources
County of Lackawanna
Lackawanna County Railroad Authority
Lackawanna County Historical Society
The Scranton Cultural Center
Electric City Trolley Station & Museum
Steamtown National Historic Site
Everhart Museum
Lackawanna Coal Mine
Pennsylvania Anthracite Heritage Museum
Northeast Pennsylvania Convention and Visitors Bureau
Lackawanna River Corridor Association
Voluntary Action Center of Northeastern Pennsylvania
Scranton Tomorrow
First Night Scranton

National Park Service - Northeast Region

Peter Samuel, Program Manager, Heritage Area Assistance

CONSULTANT TEAM

Kise Straw & Kolodner

Architects, Planners, Historians, Archaeologists
James Nelson Kise, AIA, AICP, Principal-in-Charge
Shawn Rairigh, Project Manager and Planner
Glenn Ceponis, Historian
Judith Kennedy, Historian

The Right Word

Interpretive Planners
Ellen Fletcher Russell
Sargent Russell

Cahill Associates

Invironmental Consultants
Wesley R. Horner, AICP, Principal Planner
Courtney E. Marm, Ecological Planner

Urban Partners

Community and Economic Development Consultants
James E. Hartling, Partner
Laura D. Memeger, Senior Associate

edventures

Consulting Education Consultants
Thomas J. McHugh

LIST OF INTERVIEWEES

The interpretive planners interviewed the following people as part of the formation of the interpretive plan, which informs large parts of the EIS alternatives and the Management Action Plan:

Anthracite Heritage Discovery Center
Darlene Ferraro-Ploch, Christine Tocki-Mulvey

Borough of Archbald
Fred Donnini, Borough Manager; Joe Daley, Borough Councilman

Carbondale Chamber of Commerce
Cynthia Klenk, Noreene Carney, Jack Gillen

Carbondale Historical Society
S. Robert Powell, Executive Director

City of Carbondale
Nancy Perri, Economic Development Director

City of Scranton
Sara Hailstone, Office of Economic and Community Development; Leo DeAngelo, project manager for Providence streetscapes

County of Lackawanna Transit System
John Finan, Colin Holmes, Jack Gillam, Larry Malski, Harry Lindsay

edventures, Inc.
Thomas McHugh, Catherine Richmond-Cullen

Electric City Trolley Museum
Dan Perry, former Director; Barbara Colangelo, Acting Director and Sales Manager

Everhart Museum
James Vipond, Executive Director

Lackawanna County Coal Mine
Barbara Colangelo, Director

Lackawanna County Historical Society
Mary Ann Moran

Lackawanna County Regional Planning Commission
Harry Lindsay, Executive Director

Lackawanna County Rail Authority
Lawrence C. Malski, Executive Director; Charlene Doyle, Administrator

Lackawanna River Corridor Association
Bernard McGurl, Executive Director

Pennsylvania Anthracite Museum
Chester Kulesa, Executive Director (PHMC regional); Richard Stanislaus, Curator; Charles Kumpas, volunteer who finds and maps breaker sites

Pennsylvania Department of Conservation & Natural Resources
Dennis De Mara, Supervisor

PEI Power Corporation, Archbald Power Station
Thomas Kukosky, Plant Manager

Springwood Group
Jim Kane, A.I.A.

Steamtown National Historic Site
Harold (Kip) Hagen, Superintendent; Bruce Gibson, Internodal Transportation Coordinator; Patrick McKnight, Historian/Archivist; John Mucha, chief of interpretive rangers; Glenn Smith, interpretive specialist; Mark Brennan, train manager; Gertrude Meyer.

Individuals:
Robert Durkin, former director Lackawanna Heritage Valley Authority
Daniel Perry, D. K. Perry Associates, consultant to LHVA and former director of several interpreting partners

LIST OF DRAFT RECIPIENTS

The following agencies received copies of the Draft EIS and Management Action Plan:

Federal Agencies
Federal Emergency Management Agency
U.S. Army Corp of Engineers
U.S. Department of the Interior, National Park Service:
- Northeast Regional Office
- Steamtown National Historic Site

U.S. Department of Transportation, Federal Highway Administration
U.S. Environmental Protection Agency, Region III

State, Regional, and Local Agencies
City of Scranton
Lackawanna County Commissioners
Lackawanna River Corridor Association

PA Department of Conservation and Natural Resources
PA Department of Environmental Protection
PA Department of Transportation, District 4
PA Historical and Museum Commission

COMMENTS AND RESPONSES

In addition to the numerous questions and comments addressed at the various meetings listed above, the following pages contain written comments received during the official 60-day public comment period from December 22, 2004 to February 22, 2004. Responses to each letter are as follows:

Letter 1: Mr. Sal Mecca

Mr. Mecca's letter requests that special attention be given to the Pennsylvania Coal Company's Gravity Railroad in the area around Roaring Brook in Dunmoore, Throop, and Roaring Brook Township. In response, the Management Action Plan calls for a thorough survey of all anthracite-related historic resources within the Lackawanna Heritage Valley. This survey would identify, describe, and assess the condition of the remaining physical resources. Many resources are already known by various historic groups and have been assessed as part of a National Register process, such as the Lackawanna County Courthouse; many are known but have not been assessed, such as the colliery remnants of Archbald; and many are only known to local residents or have been entirely forgotten, such as the various remnants described by Mr. Mecca. The team that will conduct this survey will have a way of learning about possible resources through the public, and Mr. Mecca's letter and contact information will be kept on hand for when the survey is underway. This public process is now referenced in the description of the survey in Part II.

As for the possibility of making some sort of an attraction out of the gravity railroad remnants in Roaring Brook, at this point not enough is known about them to say whether this is possible or prudent. However, it should be said that the plan calls for interpretation of gravity railroads in Carbondale, where the first American version once existed.

Letter 2: Mr. Kevin McDonald

Mr. McDonald's letter asks that language concerning the protection of open space, particularly along the ridgetops that frame the Heritage Valley, be inserted into the current EIS and Management Action Plan. He notes that this topic was well addressed in the 1991 Plan. LHVA continues to feel strongly about preserving the open space and environmentally sensitive areas of the Heritage Valley. As a result of Mr. McDonald's and other similar comments, text calling for the preservation of these unique lands now appears in Parts II, III, and IV of the EIS as well as in the Management Action Plan.

Letter 3: Mr. Ben Harper

Mr. Harper's letter addresses several concerns, all relating to the preservation of the ridgetop areas within the Lackawanna Heritage Valley. He cites the 1991 Plan's commitment to their protection and its positive language in identifying them as attractive and unique resources. The LHVA remains committed to preserving these natural and scenic resources. As a result of Mr. Harper's and other similar comments, Parts II, III, and IV of the EIS and the Management Action Plan now includes language calling for ridgetop and other open space protection, much of it repeated from the 1991 Plan. In addition, Mr. Harper sites several factual inaccuracies in the Draft EIS, including missing municipalities in the list of places where the Moosic Mountain Barrens occur and missing species in the list of threatened and endangered species. These additions may now be found in Part III.

Sal Mecca
146 E. Pine Street
Dunmore, PA 18509
570-344-0946

February 18, 2004

Lackawanna Heritage Valley Authority
Old Plank Road
Mayfield, PA 18433

RE: Comments on the Lackawanna Heritage Valley Authority Draft Environmental Impact Statement, Pennsylvania Coal Company Gravity Railroad on Moosic Mountain

Dear Lackawanna Heritage Valley Authority:

Please consider expanding the Lackawanna Heritage Valley Authority's plans and sponsor a professional archeological evaluation of the remains of Pennsylvania Coal Company Gravity Railroad in Dunmore, Throop and Roaring Brook Township on Moosic Mountain.

Reference the enclosed map detailing what I have discovered about the Gravity Railroad at this site.

I have personally spent countless hours over the past decades on foot investigating the Gravity Railroad remains that exist there. I have created the enclosed map, sort of an amateur archeological representation of this most important Lackawanna Valley Heritage area. The wealth of history contained on the ground there is absolutely fascinating.

I was surprised to learn that the emphasis on this area may be limited to a Heritage Trail. Instead, consider that there exists here enough in terms of artifacts, ruins, water distribution systems and all the other things that would make a Gravity Railroad demonstration site that would rival any of the nation's heritage sites.

Adding to the site's historical and archeological values are its ecological and water resource values. The site exists entirely within the Moosic Mountain Barrens and in the most unique portion of that ecosystem consisting of rare plant communities containing rare animal species of concern. In addition, this site and the land immediately north along the mountainside form the entire watershed for two of the major working reservoirs in the Pennsylvania-American Water Company water system, the Dunmore Number One and Marshwood Reservoirs.

Also, note on the map remnants of the Connecticut Road used by the original settlers to access the Valley.

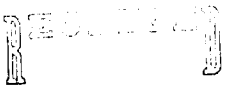
All in all, I think this area deserves a closer look and a professional evaluation by someone like the National Park Service. If there is anything I can do to assist in bringing further attention to this important area, please feel free to contact me.

Thank you for your consideration.

Sincerely,

Sal Mecca

Enclosure



BY:----------

Ben Harper
Vice Chair
Northeastern Group of the Sierra Club
1278 Gravel Pond Road
Clarks Summit, PA 18411

February 18, 2004

Lackawanna Heritage Valley Authority
Old Plank Road
Mayfield, PA 18433

RE: Comments on the Lackawanna Heritage Valley Authority (Authority) Draft Environmental Impact Statement (DEIS)

To the Authority:

Thank you for requesting comments on the revisions to the plan for the Lackawanna Heritage Valley.

The DEIS is lacking in one significant aspect. It fails to adequately recognize and to adopt equally all of the three basic resource values around which the Authority has been organized since its inception over a decade ago. In addition, there are several factual errors with respect to the Moosic Mountain Barrens that need to be addressed.

The federally funded 1991 Plan for the Lackawanna Heritage Valley (1991Plan) organized itself around three fundamental resource values: the Land, the Industry and the People, and in that order. Noticeably absent in the DEIS are statements supporting the Land resources in terms of the Valley ridgetops, an abrupt change from the scope outlined in the 1991Plan. This is in contrast to the purpose of the legislation supporting the new plan which charges the Authority with preparing a management plan which among other things is to "[r]ecommend policies for land and water management". While the DEIS outlines many policies for this purpose, it does not explain or provide a rationale for abandoning a central position of the 1991Plan which was to expressly acknowledge the natural resource values of the ridgetops—see visually the illustrations in the 1991Plan on pages 11, 57 and 93, the Preferred Alternative, the Recommended Plan and the Ultimate Plan respectively, all of which clearly outline Ridgetop Conservation Areas surrounding the Valley.

In addition, the 1991Plan stated that the "most significant natural assets of the Valley are the [Lackawanna] River and the hillsides." It continued, "[t]he ridgetops are unrecognized as an environmental resource and could be endangered by inappropriate development. If the Valley can secure these two assets, it will have created a green armature of open space which can play an important role in the future of the Valley." The natural resource values of the ridgetops are emphasized, described, illustrated and otherwise they have received very significant focus in over thirty pages of the 1991Plan. Unfortunately, the DEIS represents an arbitrary abandonment of these values and focuses natural resource attention downward toward the river or shunts responsibility for direct statements such as were made in the 1991Plan about the ridgetops to other organizations, while only indicating support for those organizations. In this respect the DEIS is in sharp contrast to the 1991Plan that embraced all of our natural resource values.

While the DEIS indicates that the preferred Alternative C incorporates the elements of the No Action Alternative, this does not go far enough. The public deserves a new plan that more expressly incorporates the key goals from the previous 1991Plan, especially recognition for the ridgetop natural resources areas.

Failure to incorporate this element of the 1991Plan has consequences that result in an inferior and distorted view of the Valley and its resource potential. As an example, contrast the beauty of our area described throughout the 1991Plan with the DEIS statement on page IV-28 appearing immediately under the heading **Visual and Aesthetic Impacts**: "*[t]hough certainly not known for its beautiful landscapes*, (emphasis added) the Lackawanna Heritage Valley's framing ridges and historic towns are attractive, while the towering culm piles present eerie moon-like reminders of its industrial past." The DEIS should adopt more of the positive attitude from the 1991Plan, and re-emphasizing the ridgetops will help to accomplish this.

The Authority should not consider potential for controversy as a basis for eliminating significant aspects of the 1991Plan from its new plan. Known development pressures existing in the ridgetop areas should not be a basis for ignoring significant descriptions of natural resource potential. The Chamber of Commerce and a handful of landowners in the ridgetop areas had requested the Authority to clarify the intent of the 1991Plan when groups opposing development in these areas pointed to the 1991Plan as a basis for protecting these areas. Citizen's Alert Regarding the Environment (CARE), the Sierra Club and substantial numbers of individuals opposed the siting of a federal prison and business park on Moosic Mountain and pointed to the natural resource values in the ridgetop areas as described in the 1991Plan. The Chamber responded and the Authority put out several statements explaining that not one aspect of the 1991Plan should necessarily be pitted against others to imply that the 1991Plan required one thing or another. Similarly, the Authority plan should not now ignore the ridgetops when the result would be to effectively pit one set of resources against another.

The then Executive Director, Robert F. Durkin, wrote letters dated January 23, 1997 and January 9, 1998 (attached), addressing the sometimes-controversial nature of our natural resource values. These letters underscore why it is important that statements of fact and vision about our natural resource values should be included in the Authority plan. On the one hand, Durkin explains that the Chamber's development plans in the ridgegtop area are not at odds with the intent of the 1991Plan, and on other hand he masterfully explains how the 1991Plan was meant to work:

"The Plan laid out a theoretical framework to address the needs of the Lackawanna Valley through Partnerships and Stewardship. The concept calls on the people and communities of the Valley to recognize their ownership of the Valley – its cultural commodities and natural resources. The premise for developing popular acceptance of community stewardship hinges on the participation of the citizenry, as individuals, elected officials and representative interests.

"The LVHA [Authority] is satisfied that the process undertaken by the Chamber in this matter, is consistent with the concept of community participation. The spirit of stewardship has been maintained. Moreover, as EDA [U.S. Economic Development Administration] begins the renewed EIS process there is once again opportunity for community input..."

Executive Director Durkin did not deny the natural resource values of the ridgetops in his letters, as the omission in the DEIS is now doing, but instead he used the Authority to try to balance all of our values through a public process, which at that time was being sponsored by EDA and an EIS that it was re-initiating. Similarly, and now, the Authority should not deny the natural resource values of the ridgetops as expressed in the 1991Plan, but rather it should expressly include these values as a significant component of the new plan for Lackawanna Heritage Valley. It is not enough to relegate responsibility for these descriptions to other organizations and then promise support for those organizations. The new plan needs to clearly express the natural resource values of the ridgetops.

On another subject, following are several factual errors in the DEIS that should be addressed.

Page III-19, under the heading **Threatened and Endangered Species**, the location of the Moosic Mountain Barrens is incorrectly described as in only Jefferson, Carbondale and Roaring Brook Townships. The Lackawanna County Natural Areas Inventory describes the Barrens in three separate sections utilizing three separate USGS quadrangle maps, and agreeing with all other sources, it shows that substantial portions of the Barrens exist in all of the following municipalities: Dunmore, Throop, Olyphant and Jessup Boroughs and Roaring Brook, Jefferson and Carbondale Townships.

Page III-19, paragraph beginning with Moosic Mountain Barrens, includes a statement utilizing outdated information from the Natural Areas Inventory: "Surveys of the site discovered two animal species of special concern, including a globally rare species." In fact, more recent surveys included in the June 1999 Lackawanna County Proposed Business Park Final Environmental Impact Statement, Volume IIa—Technical Appendices includes Lepidoptera Surveys by Louis Berger & Associates and by Tim L. McCabe and Christine N. Weber (attached) and it describes not two, but six animal species of special concern, including two globally rare species. Also, one species has not been sited elsewhere in Pennsylvania and another has not been sited in Pennsylvania in over twenty years.

Page III-20, includes tables of species which should include all of the species referenced in the surveys mentioned above: Hemiluca maia maia (Buckmoth), Chaetaglaea cerata (A sallow moth), Epiglaea apiata (Pointed Sallow), Psectraglaea carnosa (Pink Sallow), Chaetaglaea tremula (Barrens chaetaglaea) and Rhizedra lutosa (Large wainscot).

Thank you for your consideration.

Sincerely,

Ben Harper

Ben Harper

Enclosure

CARE
Citizen's Alert Regarding the Environment

P.O. Box 459, Dunmore, PA 18512 (570) 346-7197

Lackawanna Heritage Valley Authority
Old Plank Rd
Mayfield PA

Re: Comments on the Management Action Plan and Draft Environmental ~~Impact~~ Statement

Dear Sir

Please accept my comments into the record for the above mentioned document.

I did find this Management Action Plan and ~~Draft~~ Environmental Impact Statement (Plan/DEIS) to be thorough in many ways with one exception. Little, if any attention was given to the ridge tops of this valley as they were in the Plan for the Lackawanna Heritage Valley of April 1991. That Plan states "the valley is bounded visually by its green undeveloped Hillsides forming the upper "Frame" of the Valley landscape." Almost anywhere you turn your head in the Lackawanna Valley you can see this natural heritage yet this document, as opposed to the 1991 Plan hardly touches on the importance of preserving the

hilltops and proposes no real action. Today, with the sale of much of our watershed at our ridgetops by the Corp, it is extremely important that strong statements and action plans be addressed in this document as they were in the 1991 plan.

That Plan states "the most significant natural assets of the valley are the river and the hillsides. Historically, neither have been recognized for their natural beauty or contribution to the quality of life in the Valley. The Hillsides are dramatically visible - framing the Valley .... the ridgetops are unrecognized as an environmental resource and could be endangered by inappropriate development." These ridgetops are —, right now, endangered by the threat of development. The plan further states, "Each of these faces (the river and Hillsides) reflects the resources of the Valley. The Lackawanna Heritage Valley plan recognizes sites which are identified with these faces." This new document (Plan/DEIS) actually shows these faces throughout in the pictures

and on the cover itself.

The Environmental Impact Analysis (Part IV) doesn't even mention the ridgetops. It does discuss "the largest amount of development continues to occur on green space or reclaimed culm piles." The final EIS needs to state that green space development is unacceptable. Discussion should center on reuse and brown field development. There is more of this available than will ever be needed. Even the Draft Open space plan pushes for cluster development in our green spaces and ridgetops. This is unacceptable as well and should be adjusted as well.

Please make adjustments to this Plan/DEIS in order that the final EIS mirrors the 1991 plan which calls for protection of the ridgetops and green space and development on the valley floor and mine spoiled lands.

Sincerely
Kevin J. McDonald
C.A.R.E. President

Appendix A

ENABLING LEGISLATION

In the Senate of the United States, September 18, 2000.

Resolved, That the bill from the House of Representatives (H.R. 940) entitled "An Act to designate the Lackawanna Valley National Heritage Area, and for other purposes", do pass with the following:

AMENDMENTS:

Strike out all after the enacting clause and insert:

TITLE I - LACKAWANNA VALLEY NATIONAL HERITAGE AREA

SECTION 101. SHORT TITLE.

This title may be cited as the "Lackawanna Valley National Heritage Area Act of 2000".

SEC. 102. FINDINGS AND PURPOSES.

(a) FINDINGS - Congress finds that -

(1) the industrial and cultural heritage of northeastern Pennsylvania, including Lackawanna County, Luzerne County, Wayne County, and Susquehanna County, related directly to anthracite and anthracite-related industries, is nationally significant;
(2) the industries referred to in paragraph (1) include anthracite mining, ironmaking, textiles, and rail transportation;
(3) the industrial and cultural heritage of the anthracite and anthracite-related in the region described in paragraph (1) includes the social history and living cultural traditions of the people of the region;
(4) the labor movement of the region played a significant role in the development of the Nation, including-
(A) the formation of many major unions such as the United Mine Workers of America; and
(B) crucial struggles to improve wages and working conditions, such as the 1900 and 1902 anthracite strikes;

(5)(A) the Secretary of the Interior is responsible for protecting the historical and cultural resources of the United States; and

(B) there are significant examples of those resources within the region described in paragraph (1) that merit the involvement of the Federal Government to develop, in cooperation with the Lackawanna Heritage Valley Authority, the Commonwealth of Pennsylvania, and local and governmental entities, programs and projects to conserve, protect, and interpret this heritage adequately for future generations, while providing opportunities for education and revitalization; and

(6) the Lackawanna Heritage Valley Authority would be an appropriate management entity for a Heritage Area established in the region described in paragraph (1).

(b) PURPOSES - The purposes of the Lackawanna Valley National Heritage Area are-

(1) to foster a close working relationship among all levels of government, the private sector, and the local communities in the anthracite coal region of northeastern Pennsylvania and enable the communities to conserve their heritage while continuing to pursue economic opportunities; and
(2) to conserve, interpret, and develop the historical, cultural, natural, and recreational resources related to the industrial and cultural heritage of the 4 - county region described in subsection (a)(1)

SEC. 103. Definitions.

In this title:

(1) HERITAGE AREA - The term "Heritage Area" means the Lackawanna Valley National Heritage Area means the Lackawanna Valley National heritage Area established by section 4.
(2) MANAGEMENT ENTITY. - The term "management entity" means the management entity for the Heritage Area specified in section 4(c).
(3) MANAGEMENT PLAN. - The term "management plan" means the management plan for the Heritage Area developed under section 6(b).
(4) PARTNER - The term "partner" means -

(A) a Federal, State, or local governmental entity; and
(B) on organization, private industry, or individual involved in promoting the conservation and preservation of the cultural and natural resources of the Heritage Area.

(5) SECRETARY. - The term "Secretary means the Secretary of the Interior.

SEC. 104. Lackawanna Valley National Heritage Area

(a) ESTABLISHMENT. - There is established the Lackawanna Valley National Heritage Area.

(b) BOUNDARIES. - The Heritage Area shall be comprised of all or parts of Lackawanna County, Luzerne County, Wayne County, and Susquehanna County, Pennsylvania, determined in accordance with the compact under section 5.

(c) MANAGEMENT ENTITY. -The management entity for the Heritage Area shall be the Lackawanna Heritage Valley Authority.

SEC. 105. Compact.

(a) IN GENERAL - To carry out this title, the Secretary shall enter into a compact with the management entity.
(b) CONTENTS OF COMPACT. -The compact shall include information relating to the objectives and management of the area, including -
(1) a delineation of the boundaries of the Heritage Area; and
(2) a discussion of the goals and objectives of the Heritage Area, including an explanation of the proposed approach to conservation and interpretation and a general outline of the protection measures committed to by the partners.

SEC. 106 Authorities and Duties of the Management Entity.

(a) AUTHORITIES OF MANAGEMENT ENTITY. -The management entity may, for the purposes of preparing and implementing the management plan, use funds mad available under this title to hire and compensate staff.
(b) MANAGEMENT PLAN. -
(1) IN GENERAL. -The management entity shall develop a management plan for the Heritage Area that presents comprehensive recommendations for the conservation, funding, management, and development of the Heritage Area.
(2) CONSIDERATION OF OTHER PLANS AND ACTIONS. -The management shall plan-
(A) take into consideration State, county, and local plans;
(B) involve residents, public agencies, and private organizations working in the Heritage Area; and
(C) include actions to be undertaken by units of government and private organizations to protect the resources of the Heritage AREA.
(3) SPECIFICATION OF FUNDING SOURCES. -The management plan shall specify the existing and potential sources of funding available to protect, manage, and develop the Heritage Area.
(4) OTHER REQUIRED ELEMENTS. -The management plan shall include the following:
(A) An inventory of the resources contained in the Heritage Area that is related to the purposes of the Heritage Area and that should be preserved, restored, managed, developed, or maintained because of its historical, cultural, natural, recreational, or scenic significance.
(B) A recommendation of policies for resource management that considers and details application of appropriate land and water management techniques, including the development of intergovernmental cooperative agreements to protect the historical, cultural, natural, and recreational resources of the Heritage Area in a manner that is consistent with the support of appropriate and compatible economic viability.

(C) A program for implementation of the management plan by the management entity, including -

(i) plans for restoration and construction; and

(ii) specific commitments of the partners for the first 5 years of operation.

(D) An analysis of ways in which local, State, and Federal programs may best be coordinated to promote the purposes of this Act.

(E) An interpretation plan for the Heritage Area.

(5) SUBMISSION TO SECRETARY FOR APPROVAL.-

(A) IN GENERAL -Not later than the last day of the 3-year period beginning on the date of enactment of this Act, the management entity shall submit the management plan to the Secretary for approval.

(B) EFFFECT OF FAILURE TO SUBMIT. -If a management plan is not submitted to the Secretary by the day referred to in subparagraph (A), the Secretary shall not, after that day, provide any grant or other assistance under this title with respect to the Heritage Area until a management plan for the Heritage Area is submitted to the Secretary.

(c) DUTIES OF MANAGEMENT ENTITY. -The management entity shall

(1) give priority to implementing actions specified in the compact and management plan, including steps to assist units of government and nonprofit organizations in preserving the Heritage Area;

(2) assist units of government and nonprofit organizations in-

(A) establishing and maintaining interpretive exhibits in the Heritage Area;

(B) developing recreational resources in the Heritage Area;

(C) increasing public awareness of and appreciation for the historical, natural, and architectural resources and sites in the Heritage Area; and

(D) restoring historic buildings that relate to the purposes of the Heritage Area;

(3) encourage economic viability in the Heritage Area consistent with the goals of the management plan;

(4) encourage local governments to adopt land use policies consistent with the management of the Heritage Area and the goals of the management plan;

(5) assist units of government and nonprofit organizations to ensure that clear, consistent, and environmentally appropriate signs identifying access points and sites of interest are placed throughout the Heritage Area'

(6) consider the interests of diverse governmental, business, and nonprofit groups within the Heritage Area;

(7) conduct public meetings not less often than quarterly concerning the implementation of the management plan;

(8) submit substantial amendments (including any increase of more than 20 percent in the cost estimates for implementation) to the management plan to the Secretary for the Secretary's approval; and

(9) for each year in which Federal funds have been received under this title-

(A) submit a report to the Secretary that specifies-

(i) the accomplishments of the management entity; and

(ii) the expenses and income of the management entity;

(B) make available to the Secretary for audit all records relating to the expenditure of such funds and any matching funds; and

(C) require, with respect to all agreements authorizing expenditure of Federal funds by other organizations, that the receiving organizations make available to the Secretary for audit all records concerning the expenditure of such funds.

(d) USE OF FEDERAL FUNDS.-

(1) FUNDS MAD AVAIABLE UNDER THIS TITLE. - The management entity shall not use Federal funds received under this title to acquire real property or any interest in real property.

(2) FUNDS FROM OTHER SOURCES. -Nothing in this title precludes the management entity from using Federal funds obtained through law other than this title for any purpose for which the funds are authorized to be used.

SEC. 107. Duties and AUTHORITIES OF FEDERAL AGENCIES.-

(a) TECHNICAL AND FINANCIAL ASSISTANCE. -The Secretary may at the request of the management entity, provide technical and financial assistance to the management entity to develop and implement the management plan.

(2) PRIORITY IN ASSISTANCE. -In assisting the management entity, the Secretary shall give priority to actions that assist in-

(A) conserving the significant historical, cultural, and natural resources that support the purpose of

the Heritage Area; and

(B) providing educational, interpretive, and recreational opportunities consistent with the resources and associated values of the Heritage Area.

(c) APPROVAL AND DISAPPROVAL OF MANAGEMENT PLANS.-

(1) IN GENERAL. -The Secretary, in consultation with the Governor of the Commonwealth of Pennsylvania, shall approve or disapprove a management plan submitted under this title not later than 90 days after receipt of the management plan.

(2) ACTION FOLLOWING DISAPPROVAL.-

(A) IN GENERAL. -If the Secretary disapproves a management plan, the Secretary shall advise the management entity in writing of the reasons for the disapproval and shall make recommendations for revisions to the management plan.

(B) DEADLINE FOR APPROVAL OF REVISION. -The Secretary shall approve or disapprove a proposed revision within 90 days after the date on which the revision is submitted to the Secretary.

(C) APPROVAL OF AMENDMENTS.-

(1) REVIEW. -The Secretary shall review substantial amendments (as determined under section 6(c)(8)) to the management plan for the Heritage Area.

(2) REQUIREMENT OF APPROVAL. -Funds made available under this title shall not be expended to implement the amendments described in paragraph (1) until the Secretary approves the amendments.

SEC. 108 Sunset Provision.

The Secretary shall not provide any grant or other assistance under this title after September 30, 2012.

SEC. 109 Authorization of Appropriations.

(a) IN GENERAL. -There is authorized to be appropriated to carry out this title $10,000,000, except that not more than $1,000,000 may be appropriated to carry out this title for any fiscal year.

(b) 50-PERCENT MATCH. -The Federal share of the cost of activities carried out using any assistance or grant under this title shall not exceed 50 percent.

APPENDIX B

INVENTORY OF ELIGIBLE AND LISTED HISTORIC RESOURCES

Appendix B

Inventory of Eligible and Listed Historic Resources

High Sign.	Map #	Name	Address	City	County
	1	Drew R. Conklin Farm	RD 1, Box 108, Hack Road	Benton Township	Lackawanna
★	2	Miners & Merchants Bank Building	13 North Main Street	Carbondale	Lackawanna
	3	Automobile Service Station	3 Gordon Avenue	Carbondale	Lackawanna
	4	Carbondale Commercial Historic District	Bounded by the creek, 6th St., John St.,	Carbondale	Lackawanna
	5	Carbondale Industrial Historic District	Dundaff Street	Carbondale	Lackawanna
★	6	Coggins Property	81-83 Lower Powderly Road	Carbondale	Lackawanna
★	7	Dzielak Property	146 Upper Powderly Road	Carbondale	Lackawanna
	8	Hart Property	189 Brooklyn Street	Carbondale	Lackawanna
	9	Klots Throwing Company Factory	20 8th Avenue	Carbondale	Lackawanna
	10	Marci Property	207 Belmont Street	Carbondale	Lackawanna
	11	Methodist Episcopal Church	20 North Church Street	Carbondale	Lackawanna
★	12	No. 3 Shaft Site (Locus 83)	Lackawanna River at Gordon Ave. & Pike St.	Carbondale	Lackawanna
	13	Our Lady of Mt. Carmel Church	Fallbrook & Brown Streets	Carbondale	Lackawanna
	14	PA National Guard 109th Infantry Regiment Armory	22-28 Eighth Avenue	Carbondale	Lackawanna
	15	Skovira Property	141 Dundaff Street	Carbondale	Lackawanna
★	16	Trinity Episcopal Church	56 South River Street	Carbondale	Lackawanna
	17	U.S Post Office, Carbondale	North Main Street & Lincoln Avenue	Carbondale	Lackawanna
★	18	Villa Street Church/Store	Brown & Villa Streets	Carbondale	
★	19	Drift Mine Entrance	South of Salem Mountain Road	Carbondale Township	Lackawanna
	20	Clark's Green Historic District	North Abington Road, Maple Street, & portions of Glenburn Road	Clark's Green	Lackawanna
	21	Fern Hall	Route 247 North (Old Owego Turnpike)	Clifford Township	Susquehanna
	22	Ackerly Creek Bridge	S.R. 4011 over Ackerly Creek	Dalton Borough	Lackawanna
	23	Dalton Historic District	Main St., Mill St., Turnpike Rd.	Dalton Borough	Lackawanna
★	24	Dunmore Cemetery	Blakely & Warren Streets	Dunmore Borough	Lackawanna
	25	Dunmore Reservoir No. 1	Dunham Road	Dunmore Borough	Lackawanna
	26	Pennsylvania Oral School for Deaf Mutes	1800 North Washington Ave.	Dunmore Borough	Lackawanna
★	27	Temple Israel	500 East Drinker Street	Dunmore Borough	Lackawanna
	28	Bushnell-Payton House	1508 Jefferson Avenue	Dunmore/ (Scranton?)	Lackawanna
★	29	Lehigh Valley (Conrail) Railroad Bridge (178.C)	0.1875 Mile southwest of S.R. 2006 (Main Street) Bridge	Duryea Borough	Luzerne
	30	School (name not stated)	312 Stephenson Street	Duryea Borough	Luzerne
	31	Jermyn Borough Historic District	Entire borough	Jermyn Borough	Lackawanna
	32	William Loftus House	805 Hill Street	Jessup Borough	Lackawanna
	33	Carbon Bridge No. 196.91		Moosic Borough	Lackawanna
	34	Smith's Pond & Bridge Complex	Van Brunt Street at Orchard Street	Moscow Borough	Lackawanna
	35	Niagara Bridge	S.R. 4008	Mount Pleasant Township	Wayne
	36	Pleasant Mount Fish Culture Station		Mount Pleasant Township	Wayne
★	37	Delaware & Hudson Canal Company Gravity Railroad	Extending from Wayne County Line through Carbondale, to Scranton	Multiplemunicipalities	Lackawanna and Wayne
	38	Newton Ransom School	1814 Newton Ransom Boulevard	Newton Township	Lackawanna
★	39	Olyphant Borough Hall	Willow Avenue	Olyphant Borough	Lackawanna
	40	Olyphant Elementary School	Susquehanna Avenue & Lincoln Street	Olyphant Borough	Lackawanna
★	41	St. John the Evangelist Roman Catholic Church Complex	35 William Street	Pittston	Luzerne
	42	Borr & Casey Building	27 North Main Street	Pittston	Luzerne
	43	Tripp Family Homestead	1011 North Main Street	Scranton	Lackawanna
	44	The Finch Building	424 Wyoming Avenue	Scranton	Lackawanna
	45	Lackawanna Avenue Commercial Historic District	200-500 blocks Lack. Ave; 100 bl. Wyoming and Washington; 400 bl. Spruce	Scranton	Lackawanna
	46	Tony Harding Building (REA Bldg.)	600 Lackawanna Avenue	Scranton	Lackawanna
	47	Scranton Armory	900 Adams Avenue	Scranton	Lackawanna
	48	Roger Williams Public School No. 10	901 Prospect Avenue	Scranton	Lackawanna
	49	Harrison Avenue Bridge	Over Roaring Brook	Scranton	Lackawanna
★	50	Lackawanna Iron and Coal Furnaces	159 Cedar Avenue	Scranton	Lackawanna
★	51	Terence V. Powderly House	614 N. Main Street	Scranton	Lackawanna
	52	St. Peters Cathedral Complex	315 Wyoming Avenue	Scranton	Lackawanna
★	53	Delaware, Lackawanna & Western RR Station	Lackawanna and Jefferson Avenues	Scranton	Lackawanna
	54	Albright Memorial Building	N. Washington Avenue at Vine Street	Scranton	Lackawanna
	55	Dime Bank Building	Wyoming and Spruce	Scranton	Lackawanna
★	56	Dickson Works	225 Vine Street	Scranton	Lackawanna
★	57	Central RR of NJ Freight Station	602 West Lackawanna Avenue	Scranton	Lackawanna
	58	Municipal Building/ Central Fire Station	340 N. Washington Avenue/518 Mulberry Street	Scranton	Lackawanna
★	59	Grand Army of the Republic Building	303 Linden Street	Scranton	Lackawanna
	60	Ad-Lin Building	600 Linden Street	Scranton	Lackawanna
★	61	First Church of Christ, Scientist	520 Vine Street	Scranton	Lackawanna
★	62	Delaware Lackawanna & Western RR Yard (Steamtown District)	Cliff Street on West and Mattes Street	Scranton	Lackawanna
★	63	Century Club of Scranton	612 Jefferson Avenue	Scranton	Lackawanna
★	64	Joseph Cassese House	1000 Clay Avenue	Scranton	Lackawanna
★*	65	Lackawanna County Courthouse/John Mitchell Monument	Washington Avenue, Linden Street, Adams Avenue and Spruce Street	Scranton	Lackawanna
★	66	Masonic Temple and Scottish Rite Cathedral	416-20 N. Washington Avenue	Scranton	Lackawanna
	67	North Scranton Junior High School	1539 North Main Avenue	Scranton	Lackawanna
	68	[no name]	617-619 Madison Avenue	Scranton	Lackawanna
★	69	Penn Avenue Historic District	300 Block of Penn Avenue	Scranton	Lackawanna
	70	Mertz Hardware	306 Penn Avenue	Scranton	Lackawanna

NR Status	Significance	Anthr. Related	Prop. Type *	Ident. in 1992
E	Late 19th Century/early 20th Century vernacular farmhouse & gambrel roof barn	Y	AI/S	N
E	1871-1914 (dates over main entrance)	Y	AI/S	N
E	Built c.1923; transportation resource	N	AI/S	N
E	No survey form. Carbondale was chartered a city in 1851.	Y	AI/S	Y
E	Late 19th century & early 20th century industrial & related buildings	Y	AI/S	N
E	c.1900 multifamily residence; very near D&H Coal's Powderly Mines	Y	H	N
E	c.1880 residential dwelling	Y	H	N
E	c.1890 residential dwelling	Y	H	N
E	Built 1917; Italian Renaissance style; silk mill	Y	AI/S	Y
E	Built c.1900; frame dwelling that once housed a bar/saloon and a confectionery/bakery	Y	AI/S	N
E	Built 1892; rebuilt after 1901 fire; Edward Langley, architect; Richardsonian Romanesque style	Y	EPB	N
E	No. 3 shaft was started in 1853 and is listed as a separate colliery until 1897	Y	C-S	N
E	Built 1925 on site of previous church destroyed by fire; Neoclassical style	Y	EPB	N
E	Built 1924-1930	Y	AI/S	N
E	Built c.1865; multi-family dwelling with Victorian detailing	Y	H	N
E	Built 1841; Gothic Revival style	Y	EPB	N
E	Built 1911; James Knox Taylor, supervising architect; Beaux Arts/Neoclassical style	Y	AI/S	N
E	Built c.1880; early example of religious architecture in the region	Y	EPB	N
E	Good example of drift mine	Y	C-S	N
E	1811-1948; Primarily residential, with small community park & former hardware/farm supply store	Y	H	N
E	Built in 1916; 29-room country manor	Y	H	N
E	Built 1904; altered 1929; closed spandrel concrete arch bridge	Y		N
E	Late 1800s/early 1900s; mixed commercial & residential	Y	H	N
E	Earliest graves date to 1860s; most decorative & high style cemetery in area	Y	AI/S	N
E	Built 1891; masonry gravity dam & reservoir; land it sits on may have been owned by the Pennsylvania Coal Co.	Y	___	N
E	Built 1938	N	AI/S	Y
E	Built 1925	Y	EPB	N
E	Built 1890; Queen Anne style single family house; Arby Wilmot Jurisch, architect	Y	H	N
E	Constructed 1916; double-track, triple-span deck-girder bridge	Y	RR	N
E	Date not stated; appears to be late 1800s/early 1900s school building	Y	AI/S	N
E	Period 1870-1945; approx. 560 resources including the Jermyn Colliery & East Jermyn mine worker housing	Y	H	Y
E	Built c.1890-1900; occurred during period of growth as coal mining increased	Y	H	N
E	Railroad bridge; 2 trusses totaling 221 feet; Delaware & Hudson Railway Company	Y	RR	N
E	WPA bridge 1930-1952; pond may predate bridge	Y	___	N
E	Stone arch bridge over Johnson Creek; built c.1957	N	___	N
E	1903-1926, plus c.1840 house; on Lackawaxen Creek; includes Stephenson Pond, now Hankins Pond, constructed in 1859	Y	AI/S	N
E	1829-1899	Y	RR	Y
E	Constructed in 1939	N	AI/S	N
E	Built 1912; municipal building	Y	AI/S	N
E	Date not stated. Appears to be early 1900s; Education	Y	AI/S	N
E	1869-1952; church, school, rectory, convent; served immigrant population drawn by anthracite industry	Y	EPB	N
E	Date not stated; appears to be late 1800s Italianate commercial building	Y	AI/S	N
NR-L	19th Tripp Fam.	Y	H	Y
NR-L	1898 ICS Hudson Coal Office	Y	C-OA	Y
NR-L	1860-1920 commercial core of anthracite Scranton	Y	AI/S	Y
E		Y	AI/S	N
NR-L	1900 Armory	Y	AI/S	N
NR-L	1896-1941 Education	Y	AI/S	N
NR-L	1922 Engineering	Y	AI/S	Y
NR-L	1848-1903	Y	AIF	Y
NHL	Leader of Knights of Labor 1879-93	Y	LHS	Y
NR-L	1867 Romanesque Architecture	Y	EPB	Y
NR-L	1907-8 Neo-Classical Revival station	Y	RR	N
NR-L	1890s Library - philanthropy	Y	AI/S	Y
NR-L	1890 Banking for the small depositor – Romanesque	Y	AI/S	Y
NR-L	1856-19xx various support industries for mining	Y	AI/S	Y
NR-L	1891	Y	RR	Y
NR-L	1888 seat of municipal govt. since 1890s/1905 center for fire	Y	AI/S	N
NR-L	1886 Victorian Romanesque-Duckworth GAR	Y	LHR	Y
NR-L	1897	Y	AI/S	Y
NR-L	1879 – Albert Ward Neo-Cl Rev. architecture	Y	EPB	Y
NR-L	1899-1839 transportation and industry	Y	RR	Y
NR-L	1913-1946 Private Women's club – civic improvement	Y	EPB	Y
NR-L	1911 – Italian businessman	Y	H	N
NR-L	1902 First session of the Anthracite Coal Strike Commission 1924 posthumous for labor leader	Y	LHR	Y
NR-L	1927-30 Architecture Raymond Hood	Y	EPB	Y
NR-L	1922-49	Y	AI/S	N
E	Queen Anne style duplex; no date given	Y	H	N
E	Late 19th Century row of Victorian period commercial structures	Y	AI/S	N
E	3-story commercial Victorian; date not stated	Y	AI/S	N

Inventory of Eligible and Listed Historic Resources

High Sign.*	Map #	Name	Address	City	County
	71	Lackawanna Steam Laundry	308-312 Penn Avenue	Scranton	Lackawanna
	72	B. Horowitz & Company	314 Penn Avenue	Scranton	Lackawanna
	73	[no name] 316 Penn Avenue	Scranton	Lackawanna	
	74	Goldsmith Brothers, Inc.	318 Penn Avenue	Scranton	Lackawanna
	75	Eisner & Sons, Inc.	320-322 Penn Avenue	Scranton	Lackawanna
	76	Elson Co. 324-326 Penn Avenue	Scranton	Lackawanna	
★	77	Nay Aug Park Arthur Avenue	Scranton	Lackawanna	
	78	Sanderson Avenue Bridge	Sanderson Avenue over the Lackawanna River	Scranton	Lackawanna
	79	Delaware, Lackawanna and Western Railroad Bridge	crossing Keyser Avenue (S.R. 0307)	Scranton	Lackawanna
	80	Clark Property	25 West Market Street	Scranton	Lackawanna
	81	New York and Ontario & Western Railroad	North side of Lackawanna River	Scranton	Lackawanna
	82	Casey Parking Garage (Casey Parkway Garage)	128 Adams Street	Scranton	Lackawanna
★	83	Scranton Electric Building (Board of Trade Building)	507 Linden Street	Scranton	Lackawanna
	84	North Scranton Bank and Trust	1902 North Main Avenue	Scranton	Lackawanna
	85	Everett Warren Home	620 Madison Avenue	Scranton	Lackawanna
	86	Peck Lumber Manufacturing Company	East Market Street	Scranton	Lackawanna
	87	Niagara/Liberty Hose Company	West Market Street	Scranton	Lackawanna
★	88	Scranton Lace Curtain Company	Meylert Avenue & Glenn Avenue	Scranton	Lackawanna
	89	George H. Catlin House	232 Monroe Avenue	Scranton	Lackawanna
	90	District Reservoir No. 5	Montage Mountain Road	Scranton	Lackawanna
	91	Scranton Railway Company (Trolley)	801 Providence Road	Scranton	Lackawanna
	92	Delaware, Lackawanna and Western Arch	Keyser Avenue	Scranton	Lackawanna
★	93	Scranton Estate	Ridge Row, University of Scranton	Scranton	Lackawanna
	94	Scranton Life Building	538 Spruce Street	Scranton	Lackawanna
	95	Accounting House	722 Vine Street	Scranton	Lackawanna
	96	Scranton Central High School	501 Vine Street	Scranton	Lackawanna
★	97	Lackawanna County Prison	North Washington Avenue & New York Street	Scranton	Lackawanna
★	98	U.S. Post Office and Courthouse, Scranton	Washington Avenue & Linden Street	Scranton	Lackawanna
★	99	International Correspondence School Printing & Binding Plant	Wyoming Avenue & Ash Street	Scranton	Lackawanna
	101	T.M. Miller Building	614 Wyoming Avenue	Scranton	Lackawanna
	102	Fenwick L. Peck House	545 Jefferson Avenue	Scranton	Lackawanna
	103	Delaware, Lackawanna and Western Railroad	Approx. 0.7 miles between Mileposts 669 and 668	Scranton	Lackawanna
	104	Sanderson Avenue Historic District	Green Ridge Avenue & Sanderson Avenue	Scranton	Lackawanna
★	105	Green Ridge Historic District	Capouse Ave., Woodlawn St., Washington St., Sunset St.	Scranton	Lackawanna
	106	Hill Historic District	Costello St., Ash St., Webster St., Myrtle St., Irving St.	Scranton	Lackawanna
	107	Scranton Technical High School	723 Adams Avenue	Scranton	Lackawanna
	108	Marine Corps League Museum	1340 Alder Street	Scranton	Lackawanna
★	109	Lackawanna & Wyoming Valley Railroad, Laurel Line	Cedar Avenue to Rocky Glenn Pond	Scranton	Lackawanna
	111	Green Ridge Branch Library	1032 Green Ridge Street	Scranton	Lackawanna
	112	Scranton School District Administration Building	425 North Washington Avenue	Scranton	Lackawanna
	113	Charles Sumner Woolworth House	520 Jefferson Avenue	Scranton	Lackawanna
	114	Silkman House	2006 North Main Street	Scranton (Providence)	Lackawanna
	115	Leach Range Training Complex		South Abington Township	Lackawanna
	116	Bone House No. 2 (Building No. 6)	5614 Route 196	South Canaan Township	Wayne
	117	Building No. 3 (Shaffer Homestead?)	Route 196	South Canaan Township	Wayne
	118	Building No. 4 (Shaffer Store?)	Route 196	South Canaan Township	Wayne
	119	Octagon Stone School House	L.R. 63017 near southern end of Lake Quinn	South Canaan Township	Wayne
	120	I.O.O.F. No. 959 Hall (Odd Fellows Hall)	S.R. 3003 at S.R. 196	Sterling Township	Wayne
	121	Vandling Borough Hall (also used as fire house)	634 Main Street	Vandling Borough	Lackawanna
	122	Waverly Community House	Main Street	Waverly	Lackawanna
★	123	Waverly Historic District	Portions of Abington Road, Clinton, Beech, Church and Academy Streets, Carbondale Road, etc.	Waverly	Lackawanna
★	124	Delaware & Hudson Canal Company Gravity Railroad Depot	South Street	Waymart Borough	Wayne
	125	The Newry	516 Exeter Avenue	West Pittston	Luzerne
	126	Carbondale City Hall and Courthouse	1 North Main Street	Carbondale	Lackawanna
	128	Dolph-Sunnyside Industrial District	East of Peckville	Jessup Borough	Lackawanna
	129	DL&W RR Station and Freight House	Market Street	Moscow	Lackawanna
	130	Clay Avenue Historic District	Clay Avenue	Scranton	Lackawanna
	131	Florence Apartments	643 Adams Avenue	Scranton	Lackawanna
	132	Hobart Company	302-304 Penn Avenue	Scranton	Lackawanna
	133	Main Street Historic District	Main Street	Scranton	Lackawanna
	134	Marvin Colliery	Boulevard Avenue	Scranton	Lackawanna
	135	Scranton Tribune Building	334-336 N. Washington Avenue	Scranton	Lackawanna
	136	Gentex Plant		Simpson, Fells Twp.	Lackawanna
	137	Slope 190 Mine	McDade Park	Scranton	Lackawanna
	138	Dolfinger Glass Works	Rt 6	White Mills	Wayne
	139	Petersburg Silk Mill	Petersburg section, backside of hill section	Scranton	Lackawanna
	140	Early Iron Workers Houses	Moosic Street	Scranton	Lackawanna
	141	St. Stanislaus Church		Olyphant Borough	Lackawanna

NR Status	Significance	Anthr. Related	Prop. Type**	Ident. in 1992
E	Late 1800s (no date stated) commercial building	Y	AI/S	N
E	Late 1800s (no date stated) commercial building	Y	AI/S	N
E	Late 1800s (no date stated) commercial building	Y	AI/S	N
E	Built 1903; concrete arch vehicular & pedestrian bridge	Y	___	N
E	Built 1900 as a feed mill; later used as a repair shop, an electric motor shop, and an auto shop	Y	AI/S	N
E	Built in 1925-1926 to serve the Hotel Casey	Y	AI/S	Y
E	Built 1926	Y	AI/S	N
E	Built 1880; in 1892, firm considered most extensive concern of its kind in the area	Y	AI/S	N
E	Built 1905; additions/ alterations 1919 & 1937; group of connected structures	Y	AI/S	Y
E	Dam constructed 1888-1893 on Stafford Meadow Brook	Y	___	N
E	Narrow stone tunnel that allowed the N.Y.and O.& W. RR to pass through the DL&W embankment	Y	RR	N
E	Built in 1915 in response to growth during coal boom period	Y	AI/S	N
E	Built 1896; major addition 1923; Gothic Revival	Y	AI/S	Y
E	Date not stated; no photos	Y	AI/S	N
E	Appears to be late 1800s/early 1990s manufacturing building	Y	AI/S	N
E	Built 1850-1851; alterations 1899	Y	RR	Y
E	Late 19th century/early 20th century residential neighborhood	Y	H	Y
E	1901-1920; Classical Revival/Georgian Revival	Y	AI/S	Y
E	1900-1901; to provide passenger & freight services between Scranton & Wilkes Barre	Y	RR	N
E	Built 1910-1911; Tudor Revival style; Lewis Hancock Jr., architect	Y	AI/S	Y
NR-L	1840-1936 Greek Rev.	Y	H	Y
E	1900-1940s; vernacular single dwelling	Y	AI/S	N
E	1850-1900; vernacular store with living space above	Y	AI/S	N
E	Built 1887	Y	EPB	N
E	1920-1940s; Dutch Colonial Revival style; core built 1920; multiple additions	Y	AI/S	N
	Arts-and-Crafts Bungalows, & Foursquares	Y	H	N
E	Farmhouse c.1800	N		Y
E		Y	AI/S	N
E		Y	H	N
E	Late 1880s (no date stated) commercial building	Y	AI/S	Y
E	May no longer be extant.	Y	C	Y
PE	Former silk mill.	Y	AI/S	Y
PE	Glass/crystal manufacturer, worker housing	Y	AI/S	N
PE	Unique Vernacular houses, early	Y	H	N

Appendix C

LACKAWANNA HERITAGE VALLEY
Interpretive Plan

Appendix C contains an Interpretive Plan, completed in September 2003, that forms the basis of the strategies, tours, and programs described and mapped in the Preferred Alternative and the Management Action Plan. LHVA staff, stakeholder reviews, and public comment have modified aspects of this plan (these changes are now reflected in the Interpretation Plan section of Management Action Plan in Part II of this EIS.) However, this plan's essential ideas and rich detail remain.

Submitted by: The Right Word
Ellen Fletcher Russell and Sargent Russell
FINAL: September, 2003

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INTRODUCTION

This task report describes a cycle of interpretive programs for the Lackawanna Heritage Valley, including a thematic structure, an analysis of assets and challenges to interpretation, and various strategies to overcome or enhance these. The report also describes an interpreted visit to the Heritage Valley, including orientation, context-setting programs, a variety of options or "tracks" for tours, waysides and trail stops, vistas and programs for enhancing and interpreting key places.

The report also identifies pre-visit elements and touring aids, and describes the interpreting partners currently active at each interpretable place. It concludes with the role of LHVA as the conveyor and linking agency in a comprehensive interpretation of the Lackawanna Heritage Valley.

THEMATIC STRUCTURE

This part of the interpretive plan articulates a title for the LHVA's interpretive program; a core message each visitor would receive at each interpretive site; a summary storyline that conveys in quick sweep the broad elements of the Heritage Valley's history and significance; the themes that run through the presentation of each program and site interpretation; and the key stories that will be developed through the cycle of interpretive programs.

Title

A title, like a logo, instantly conveys the essence of the message that follows. Like a logo, it is part of an identity visitors can easily perceive, and follow confidently from website to brochure to welcome center to train platform to interpreted site. The 1991 Plan for the Lackawanna Heritage Valley suggested that the phrase "the Lackawanna Heritage Valley in the Age of Anthracite" is the central "theme" linking the Heritage Valley's historically significant resources. The phrase, while not a true theme, did work well as a "sifting screen" for historians selecting resources within the study area for their interpretive value. It also places emphasis on anthracite and its influences on the Lackawanna Heritage Valley, and creates a time frame that compresses the story into a "core era" between 1830 and 1940. With one important change, the 1991 phrase makes an effective title for the LHVA's cycle of interpretive programs. The suggested revision is:

"The Lackawanna Heritage Valley and the Age of Anthracite."

This title acknowledges that the Lackawanna Heritage Valley is significant today because of what happened here during the century when coal was king. The revision of the word "in" to "and" corrects the false suggestion that the interpretive program is limited to that single epoch. The title is catchy enough to be recognized and remembered, it contains a "key word" - anthracite - that may be new to some vocabularies, but will be reinforced throughout the visitor's encounter with the Heritage Valley.

Core Message

The core message is the heart of the LHVA interpretive program. Every visitor who visits any Heritage Valley site or reads any LHVA literature will be exposed to the elements of this statement.

The Lackawanna Heritage Valley was a great, integrated industrial system designed to extract, process and transport the anthracite coal that fueled the building of America. The mechanical - physical -- elements of the system, the mines and works, the rails and mills, were abandoned piecemeal when their usefulness was done. But the organic element of the system, the people, rich in character, resilience and enterprise, survives. The people of the Heritage Valley today shape a new era of reclamation based on community, heritage and the natural environment.

Summary Storyline

The Lackawanna Heritage Valley's history and significance is well articulated in the 1991 Plan for the Lackawanna Heritage Valley. This Summary Storyline narrates a timeline from prehistory to the present that touches upon key elements of the Heritage Valley's history. Orientation programming and site interpretation will be based on this storyline.

Prehistory

Dense, glittering strata of black anthracite below the Lackawanna Heritage Valley are the compacted essence of steamy tropical forests that grew here more than three hundred million years ago. Over aeons, climate altered, trees died, the earth's crust heaved and enfolded the rich organic remnant of the Pleistocene forest. More time passed, glaciers scoured, and, melting, left the sinuous river to trace the valley floor.

Ten thousand years ago Indians filtered in; by the time of European settlement they were the Delaware and the Munsee, pushed here from southeastern Pennsylvania. Town sites and paths, fields and fishing grounds of these native tribes' relatively domesticated Late Woodland period were co-opted by the first New Englanders to settle in the Heritage Valley. Little but legend remains of the Native American Lackawanna Heritage Valley - Capouse village overlaid by early Providence, a burial ground on a bluff near the river, plow-churned arrowheads catalogued and archived for posterity.

Early Settlement

Just before the Revolution, stretching westward from crowded coastal New England, the first settling Europeans made their way into the Lackawanna Heritage Valley. Connecticut representatives staked out Providence Township in 1770; its first resident, Isaac Tripp, arrived the next year, choosing his home site along the old road north out of Wilkes-Barre. Within two generations, by the 1820s, the crossroads at today's Main and Market streets had become a stop on the route between Boston and New York, its bustling center a little village with hotel, houses, stores, churches and water-power mills.

Unbeknownst to Providence, flourishing along New England lines, something different was happening 16 miles up the Heritage Valley in another little settlement momentously named Carbondale. There, in 1814, having been shown a straggle of "curious black stones," Philadelphia merchants William and Maurice Wurts had bought tracts of coal land and in 1823 organized the Delaware & Hudson Canal Company to mine anthracite and move it over the mountains and out to market. Soon enough the tentacles of the D & H empire had snaked tracks southward, linking each little Heritage Valley town along the way into the great human and industrial system that was the Northern Coal Field.

The Age of Anthracite

The Lackawanna Heritage Valley landscape is one of the most intensively cultivated places in the world. Nestled between green hillsides, the tight grids of its small towns echo the vast subterranean network of anthracite coal mines that fueled the rise of 19th-century industrial America.

Carbondale dominated the industry, the site of the first mines in the region and the home of the ingenious Gravity Railroad that hoisted the coal up and out of the Heritage Valley. The Wurts Brothers' opening of the first mines and their organization of the rail-and-canal transportation system established the relationship between mine and railroad that shaped the industrial future of the Heritage Valley. From Carbondale the Gravity Railroad crossed the mountain to Honesdale; then extended southward down the Heritage Valley, to Archbald in 1843, then to Heritage Valley Junction between Olyphant and Providence in 1858 and on to the newly booming Scranton about a year later.

If Carbondale was the anthracite era's Plymouth Rock, Scranton was its Houston: rich, bright, up-to-the-minute. Rather than on mining, Scranton's focus was first on the industrial use of anthracite, and then on transportation. The Heritage Valley's new collieries were as high-tech then as fiber optics is today. From mid-century on, the prospect of profit attracted ideas, money and enterprise. Incalculable human energy - most supplied by brand-new European immigrants - poured into building and working the anthracite empire ruled by those with wealth and land.

For nearly 150 years, the Lackawanna Heritage Valley was the heart of the nation's economy. Booming cities spread and steepled and spired on Pennsylvania coal. Railroads clattered and factories smoked on it. America gobbled black diamonds, growing sleek and rich and powerful in the world. Far below the Heritage Valley floor, men hacked and hauled out incalculable tons of Pleistocene substrate; others sifted and sorted and chuted it onto the rails. This was dark and dangerous work: these men were neither sleek nor rich. But they were many, and eventually, in their numbers, they were powerful. Anthracite miners created the nation's first labor unions, and participated in some of the most violent strikes.

They also built strong, close-knit and lasting communities, centered on church and family and fraternal organizations. These towns nurtured the spirit, they nourished human ties and they made safe places for newcomers to sink permanent roots.

The End of the Era

By 1930, the anthracite industry was on the wane. New energy sources - electricity, oil and gas - were gaining ground. The industry's entrepreneurial spirit flagged: new uses and markets for anthracite coal were not developed. Year after year profit and production slid. As coal declined, so did related Heritage Valley industries: railroad transportation, machine and repair shops, silk mills that employed miners' wives and daughters.

By the early 1950s, anthracite mining had dwindled by 85%. The Knox Mine Disaster of 1959, flooding the subsurface mines throughout the Heritage Valley, slew an industry already moribund. As the collieries closed down one by one and in company-wide clusters, they left behind a ravaged landscape. Towering culm piles, gargantuan breaker skeletons, incalculable tons of obsolete machinery: a ravenous industrial world had died, and its corpse sprawled over the played-out Heritage Valley.

Reclamation and Renewal

By mid-20th century, the Lackawanna Heritage Valley's anthracite industrial system was nearing the end of its course. The mines and works, railroads and mills, was abandoned piecemeal by its operators when its utility ended. The people, however, and the communities which they had built, survived essentially intact. Rooted in pride and in place, the Heritage Valley's cities and towns kept their distinctive characters in the face of change. Many of the system's other components, too, are still sound, and being retooled for newer, greener uses.

The old entrepreneurialism of the coal and rail kings has given way to a different kind of enterprise. Wreckers and scavengers, developers and business interests, environmentalists, governments, chambers of commerce: these and other new players have claimed coal wastelands and timbered ridges, rail lines, river banks, open space and historic places. Little by little, the old coal system is being recycled, redeveloped, re-deployed. Scranton's magnificent Lackawanna Station is now a first-class hotel. Stretches of a greenway trail flank the west bank of the river; an urban railyard houses museums of steam railroading and of the electric trolley. Museums of anthracite mining and miners' life revivify a former strip mine. Elsewhere, a plant atop a culm pile generates steam and electricity from landfill gases. A rail line, the county's, thrives as a freight carrier on the old Delaware & Hudson trackage - on special occasions now it carries people as well. Private entrepreneurship flourishes, too: on old colliery sites now stand houses and commercial buildings, on the strip-mined hillsides flourish profitable landfills and industrial and automotive recycling businesses.

The Lackawanna Heritage Valley is well advanced in its transition from industrial decline to 21st-century renewal. People have realized that their Heritage Valley is a key to the history of the American nation, and they themselves are the heirs, the curators and the narrators of its complex and compelling story.

Themes

An interpretive theme is a recurrent central idea that appears time and time again in a set of programs. The most apt definition of the word derives from music, in which a theme is "a short melody constituting the basis of variation, or other repetition with modification." A theme can be a word or a phrase: it is a reminder to those creating a program that a certain idea should be introduced early and repeated regularly throughout the presentation. It is useful to bear in mind that themes are mnemonic devices or tools for the use of those who plan and evaluate interpretive programs. Visitors will nowhere encounter lists of themes.

The 1991 Plan recommended as a theme structure a set of three key words in balance: Land, Industry and People. This Interpretive Plan suggests in the core message an image of the Lackawanna Heritage Valley as a system comprising mechanical and organic (human) elements. The theme set and core message are compatible, and can be applied in a variety of ways to the Heritage Valley's interpretable sites.

The theme structure articulated here is an equation integrating these three dynamic elements into forms that explain everything a visitor sees in the Heritage Valley today. Every chapter of the Lackawanna story from Native American fisheries through colliery reclamation, and every Lackawanna site from a Greek Revival village house to the remnant of a mammoth colliery can be seen as a facet of the great system comprising land, industry and human beings. Each site has an intersection with each theme, each theme intersects the other themes, and the interpretive program will build itself around these stimulating junctions.

Land

Land is the valley itself, the setting for the historical drama of the Lackawanna Heritage Valley. It reflects centuries of interplay between nature and human enterprise. The theme includes the geological processes that formed the Heritage Valley's rich anthracite strata, and the coal-seam peculiarities that determined where mines were sunk, where towns were sited and where culm piles burgeoned. The subterranean city of coal. The theme invites consideration of the primeval landscape encountered by Native Americans, the network of early rivers and roads and water-power streams that brought westward-migrating New Englanders to settle this later-disputed region. The land theme runs from prehistoric times through the present and into the future, encompassing geology and hydrology, patterns of settlement and mining, programs for repairing industrial damage and restoring spoiled lands for new uses. For the Heritage Valley, the land theme includes opportunities for scenic vistas, and touring, hiking, canoeing, and other possibilities for outdoor recreation.

The Land theme is expressed in the shape of the Heritage Valley and the occurrence of anthracite at and below its surface. It can be seen in glaciated landforms, in striations at road cuts, in the water-power streams flowing into the Lackawanna River, in the relationship among coal lands, rail lines and human settlements along the valley floor. Strong interpretive sites for the Land theme include overlook sites along the Industrial Highway and Route 307, Lake Scranton, Providence Corners, Slocum Hollow, Nay Aug Park and Gorge, McDade Park, Archbald Borough at Laurel Run, Archbald Pothole and the City of Carbondale. And throughout the length of the Heritage Valley, sometimes hidden in dark dells, or lost under urban pavements, we can return to the Lackawanna River; historical and geographic continuity epitomized in the ever-flowing and ever-renewing cycle.

Industry

Industry is in the broadest sense human enterprise and work of every kind. In pursuing their lives, even the most primitive people shaped and altered primeval land. They trampled its surface into paths, they furrowed it for planting, they scored and delved and moved things from one place to another. For most sites in the Lackawanna Heritage Valley, the transforming industry was the anthracite complex which includes sites and facilities for mining, processing and moving coal, and the related industries that arose adjacent to anthracite. The theme links the Heritage Valley from end to end along the road and rail and trolley corridors that stitch the towns into linear patterns. The Industry theme encompasses the creative force of business leadership, and the labor of the newest and least skilled of immigrants. It encompasses the relationships between capital and labor, between corporation and community, between men and machines. In the development of this theme, the visitor will observe the beginning, the spectacular growth and eventual deterioration of one of the most transforming industries in American history.

Strong sites for interpreting the Industry theme include Steamtown and the Trolley Museum, the Iron Furnaces, the Lackawanna County Rail Authority tracks on the old D & H line, the Coal Mine Tour at Slope #190, Providence Corners including Scranton Lace and the Marvine Colliery site, Archbald Borough at Laurel Run including the CoGen plant, and the City of Carbondale.

People

People are the real dynamic element in the system that built and ran the Lackawanna Heritage Valley. They imagined, built, operated, dismantled and restored the scars left by anthracite mining and its ancillary industries. They built and used churches, houses, factories and businesses. Their lives at home and at work, the hallmarks of their distinct communities, the ways they cared for children and for one another comprise this theme. The theme also explores the relationships between people and work, adults and children, between church and union.

Under this theme, "they the people," teem all the groups and groupings, severalties, pluralities and majorities, the migrations in and out, siftings and driftings of large populations and single individuals.

Strong sites for interpreting the theme of People include the Pennsylvania Anthracite Museum's permanent exhibits and the temporary exhibit on the 1902 strike, the Lackawanna Historical Society's Catlin House, several neighborhoods in Scranton including the South Scranton area near the former Sauquoit Mill, the Hill and Green Ridge; Providence Corners and The Plot; the Borough of Olyphant and its churches; and the City of Carbondale.

Key Stories

Key stories are natural, historical and cultural ideas and important moments to be communicated in the context-setting programs at orientation centers and developed more fully in site interpretations and through programs developed in conjunction with LHVA's partner interpreting institutions. While no overall contextual program is available for the Heritage Valley as a whole, some of the key stories are already being told by the partners.

Prehistory

The elements of this ancient story set the stage for the 18th, 19th and 20th century drama to come.

- The formation of anthracite coal.
- The shaping of the Heritage Valley, the river and creeks, Nay Aug Gorge and Archbald Pothole.
- The movement and settlement of neolithic people in the Pre-European Contact Period; the uses they made of the land and its resources.

Early Settlement

Connecticut's royal charter grants the New England colony this Heritage Valley for westward expansion; early settlement mimics Lenape land-use patterns. Providence flourishes for a century before the anthracite tide engulfs it by 1860.

- The Contact Period of Lenape life, and the settlement of Capouse village.

- The Susquehanna Company of Connecticut's 1770 claim on Providence Township lands (today's Scranton to Olyphant).
- The late-18th-century settlement of Providence, Hyde Park, "Ragged Island," Olyphant and other villages by New Englanders and other eastern in-migrants.
- The Tripp and Silkman families as examples of early Heritage Valley immigrants; their houses and Providence village as examples of New England cultural influence.
- Pre-industrial life: farming, timbering, water-power mills.
- The struggle between Connecticut and Pennsylvania for land and power in the Lackawanna Heritage Valley; the minimal impact this had on early towns.

Anthracite Comes of Age

Anthracite coal fuels the industrialization and urbanization of America; the industrial Heritage Valley attracts, employs and is transformed by the early arrivals from Europe; the Lackawanna Heritage Valley is at this period the heart of the nation's anthracite production.

- William & Maurice Wurts's 1814 purchase of anthracite tracts at Carbondale, and their later exploitation of the resource.
- The Wurts Brothers' 1823 formation of the Delaware & Hudson Canal Company to mine coal and develop transportation for it.
- The D & H Gravity Railroad: why it was needed, how it worked, where it went.
- The first locomotive run in the United States, 1829, the Stourbridge Lion on the D & H Gravity line, proved that steam power was feasible for railroading.
- Local entrepreneurship creates industries: Wurts, Scranton, Hendricks, etc.
- The 1849 establishment of the first American labor unions in the northeastern Pennsylvania coal fields, leading eventually to the Workers' Benevolent Associations and the United Mine Workers.
- The 1851 chartering of Carbondale as the first city in today's Lackawanna County.
- The sinking of mines in scattered locations within carting distance of Carbondale.
- The first and second waves of immigration, highly skilled English and Welsh, 1820s - 1830s; Irish and Germans, 1840s and 1850s, who founded Baptist, Methodist, Episcopalian and Catholic congregations and organizations, especially in West Scranton, Carbondale, Blakely and Dunmore.
- The 1840 establishment of iron furnaces at Slocum Hollow by William Henry, Seldon and George Scranton; the 1848 T-rail contract that boosted the Lackawanna Ironworks to its first boom.
- The impact of the Lackawanna Iron & Coal Company on the American iron industry, on the City of Scranton, and on the Heritage Valley anthracite and rail complex.
- The effects on the Heritage Valley of the southward extension of the D & H Gravity Railroad from Carbondale to Providence in 1859.
- The capitalization of industrial development - Philadelphia, New York City, Europe.
- The development of ancillary industries: engines, rail cars, machinery, powder making, sawmilling.
- The rise of silk throwing and other textile industries in the Heritage Valley as employers of women and girls.
- The practice of child labor under the age of 16.

Peak Years and Consolidation

Between 1880 and 1930 the Heritage Valley achieves a pinnacle of prosperity, with anthracite production peaking in 1917-18, the silk industry leading the nation in 1919, and Heritage Valley towns and cities flourishing with people and improvements.

- The consolidation of anthracite railroads and coal companies that created massive conglomerates that dominated the industrial system.
- The second wave of immigration, 1870s through 1920, from Southern and Eastern Europe into the Heritage Valley in response to expansion in anthracite-centered industry.
- Mine work before and after the Avondale Mine Disaster and the establishment of the Bureau of Mine Inspectors in 1871.
- The high-tech status of anthracite mining and processing technology
- Urbanization of Scranton and Carbondale: civic leadership, downtown commercial areas, interurban transportation, culture and entertainment.
- The first successfully operated electric trolley system in the world established in Scranton, 1886.
- Jermyn physician Matthew J. Shields in 1899 developed a simple and standard method of caring for injured mine workers that established the concept of First Aid.

- The rise of the United Mine Workers Union which by 1900 represented some 65% of the Northern Coal Field workers.
- The UMW's 1900 strike which drew national attention to the labor situation in the anthracite fields, and taught John Mitchell and his union lessons on political maneuvering and public relations.
- The major strike of 1902 which shut down anthracite collieries, gained wage and workday concessions for the miners; and witnessed a mighty labor organization equal to a confrontation with the united forces of management and capital.
- The enactment of Child Labor laws and the early 1900s innovations in breaker technology (chance cone) that made breaker boys obsolete.
- Founding of the International Correspondence School, 1891, to provide specialized education for miners, and, eventually, for all the industrial trades.

Decline

Industrial decline in the Heritage Valley, beginning much earlier but evident after World War II, owing to the confluence of events including widespread economic depression, intransigent labor/management problems, and the rise of alternative energy products. Strong communities and a ravaged landscape are the primary survivors.

- The 1902 removal of Lackawanna Iron & Coal to Buffalo NY where it became a steel plant - due to changing technology and to consolidation and reintegration in the iron and steel business.
- The rise of electricity, gas and oil as alternatives to anthracite for industrial and domestic use.
- The constellation of other developments that stressed the Heritage Valley's anthracite-centered industrial system: international depression, extended labor disputes, the aggressive marketing of bituminous coal.
- The Knox Mine Disaster of 1959 that flooded mine tunnels under the valley and effectively ended subsurface mining in the Northern Anthracite Field.
- Silk largely succumbed to competition from artificial fibers after disruption by World War II.
- Garment factories based on cheap labor after World War II fled in the 1960s to cheaper labor markets overseas.

Reclamation and Renewal

In recent years Heritage Valley communities have cultivated new leadership and developed a vision for the future based on the historical and cultural legacy of the anthracite era.

- The continuing reliance of families upon community resources - churches, ethnic organizations, neighborhoods - instead of employers for mutual aid and support.
- The vacuum created by the collapse of the anthracite industry giving rise to new entrepreneurs and diversified enterprise: South Scranton's Capital Records; the use of coal waste to generate electricity and steam in Archbald; Olyphant's WEA Manufacturing, pioneers in DVD technology; the DeNaples development of landfill technology to repair scarred coal lands (?); other?
- The effects of exploitation on the natural environment.
- The effects of deindustrialization on local communities.
- Initiatives to inventory, conserve and wisely re-use resources to improve the quality of residents' lives and promote visitation from outside (Earth Day, early 1970s; the Scranton Plan for redevelopment of abandoned coal lands; McDade Park, 1960s?; NPS Master Plan for a . . . Coal Park, 1972; CoGeneration, 1970s; Steamtown, 1986; LRCA, 1987; LHVA, 1990.
- Environmental activities of the Bureau of Mine Reclamation (PA), DER, Clean Water Act (U. S.), PennDOT and Interstate Highway System.
- Lackawanna County Railroad Authority.

ASSETS AND CHALLENGES TO INTERPRETATION

This section provides an analysis of assets and challenges to interpreting the Lackawanna Heritage Valley stories for visitors. It also looks at strategies to interpret these complex landscapes.

Assets

The core of the Lackawanna Heritage Valley - Scranton to Carbondale, Moosic to West Mountain -- is a manageable size: about 16 miles long and up to three and four miles wide. A visitor can look down and comprehend its shape from roadside shoulders along Route 81 near Nay Aug Park, or Route 307 just past Lake Scranton, or from any of several places along the Industrial Highway.

From the western hills the Heritage Valley is geographically coherent, nestled like a giant technicolor relief map between steep mountain ridges to the east and west. There is the big city anchoring the southern end, the spired towns up the line, scrubby trees and distinctively sculpted landforms that mark the old coal lands, the sinuous river snaking down the valley floor. Interpreted vistas can be interesting and illuminating orientation features for the Lackawanna Heritage Valley.

Then, a gift from geology and history: most of the key sites in the Heritage Valley organize themselves along a spine traced by the river, several sets of railroad tracks, and the linear Main Street that stretches from Old Forge to Carbondale. This spatial organization derives from the shape of the valley, the course of the river, and the subterranean location of the coal seams, but the layout of key interpretable sites could not be more compatible with an interpretive program designed to be accessible to visitors in many different ways.

The Industrial Highway itself is an interpretive asset, offering both an "express route" to each of the key interpretable places and the potential for a series of pullouts where views can be enhanced and interpreted. Another asset is the inter-valley street network, the "local route" option for moving around within Scranton and the towns, and in some stretches for moving from one town to the next.

Of incalculable value as an asset is the Lackawanna County Rail Authority (LCRA) operating on the old D & H tracks running parallel to the river from Steamtown to Carbondale. Although nearly every heritage corridor would profit from having a full-length, operable rail route, the Lackawanna Heritage Valley is the only one in which such a route exists, intact and already in use. LCRA provides operational services for the excursions run by the Electric Trolley Museum out through the Crown Avenue tunnel and to the Scranton Iron Furnaces site. Eventually, perhaps within eighteen months, the service would extend to the Lackawanna County visitor Center, which is the gateway to Montage Mountain ski area, the County Stadium, and the new affluent residential communities established there.

Another asset is the COLTS bus lines. COLTS currently runs a bus from central Scranton to the McDade Park attractions that are not served by other public transportation and not simple to find by car from center city. COLTS also operates bus routes up the Heritage Valley between Scranton and Carbondale.

Another boon to a comprehensive interpretive program is the existence, the professionalism, the thematic compatibility and the high quality of the programs of the Heritage Valley's existing interpreting institutions. There are seven major ones: Steamtown and the Electric Trolley Museum, the Pennsylvania Anthracite Museum and the Lackawanna County Coal Mine Tour, Everhart Museum, the Lackawanna Historical Society and the Carbondale Historical Society. Each one offers, at least periodically, exciting experiences and absorbing exhibitry on topics related to the LHVA thematic focus.

Another asset observed during field work is that in every Lackawanna Heritage Valley community we visited we found local officials and private citizens who not only remember and value the past, but who understand the way the area works today. Most of these people have storytelling skills, and a willingness to meet and talk to the public. Tours and other interpretive programs can be designed to employ these interests and abilities - and so to present to visitors the sought-after resonance of the authentic.

In addition to this, we found in interpreting institutions, government agencies and other organizations a high level of competence and commitment to the appropriate redevelopment of heritage resources. Throughout the area we found responsible people in positions of authority who are willing to work with LHVA and to suggest how their resources could fit within a Heritage Valley-wide program of heritage tourism.

Challenges

Despite the Heritage Valley's coherence when viewed from above, once down from the mountains and touring by car, the landscape's legibility quickly falls apart. Seen from the inter-valley road and street network, much of the watershed is illegible, and worse, great stretches of it are devoid of any particular regional character.

Vehicular routes through the Heritage Valley tend to be slowed by everyday local traffic. The daily business has nothing to do with heritage tourism, or with making the landscape inviting to visitors. By the time a driver has made it to Peckville, he's likely to be dispirited and ready to give up.

Probably the most significant challenge to on-site historical interpretation is the disturbing scarcity of visible, legible sites related to anthracite, the railroads, or the textile industry. This is a area that, only forty years ago, was visually dominated by the massive presence of coal breakers. In 1925 more than 150 of them loomed over towns and neighborhoods - today not a single one remains intact. Fifty years ago, every town had its textile mill.

Few of those survive, either. The railroad has fared a little better: there are tracks, bridges, stations, yards - even freight trains run through the Heritage Valley with enough frequency to be a memorable part of the landscape.

These challenges to interpretation are not unique to the Lackawanna Heritage Valley. Every heritage area that is not a museum within walls faces similar problems. No heritage area is cordoned off from the everyday lives of its residents, and none sports a full complement of sites illustrating the range of its historical significance. In every one of them flourish the landscapes of quotidian life: generic, franchised, convenient for the automobile. Nevertheless, there are effective ways to interpret these complicated, often compromised places.

Challenges to Interpretation in the Lackawanna Heritage Valley
And Strategies to Meet Them

Challenge	Interpretive Strategy
Illegible landscape, devoid of regional character	Choose, map and mark limited number of driving routes among sites
Streets slowed by local traffic	Use highways as express routes, use train and bus transportation
Scarcity of sites related to anthracite industrial system	Provide images and working models of colliery, industrial and railroad systems for orientation and site interpretation.

INTERPRETIVE STRATEGIES FOR COMPLEX LANDSCAPES

The following strategies can help reconnect Lackawanna Heritage Valley landscapes with their hidden histories; they can provide ways to guide our visitors and to furnish their imaginations so they can see and understand the stories that now sleep invisible and unspoken under the opaque surfaces of the modern world.

Create a gateway transition between the ordinary and the special.

Visitors starting their experience of the Lackawanna Heritage Valley need to make a transition between the familiar state of being at home or on the highway, and the exploratory state of being travelers in a new environment. At the gateway, or orientation, programs show them and tell them what they are going to see; give them a notion of what it means. The orientation experience motivates visitors to explore, and prepares them to understand what they see. If sufficiently motivated, they would allow themselves to be transformed from the tourist state to the more intrepid and adventuresome state of traveler. Finally, visitors leave the gateway orientation with their itineraries chosen and some kind of "ticket" in hand that would guide them through the Heritage Valley and admit them at the doors of its attractions.

Control the experience.
The overall streetscape up-the-line from Scranton is undifferentiated and confusing, but the sites recommended for interpretive development are not like that at all. They are clear and interesting, and would be enhanced by special interpretive media. Paraphrasing the old "Twilight Zone" overture, "we control the vertical and the horizontal," we mean to control the way people experience the Heritage Valley by delivering them directly and with minimum distraction to carefully selected, enhanced and interpreted sites. A very good way to do that is to provide alternative modes of transportation appealing enough to persuade people to leave their cars at the gate. Once they are at a site, we show them where and how to look, and suggest things for them to do.

Plant images of the missing elements.
Because so much of the past is missing from today's landscape, interpretation must supply detailed pictures and models of things that are no more. People once lived in the shadows of breakers, their houses stood close to tremendous industrial blocks. Outside their windows the trains rumbled by. Daylight hours were punctuated by the factory whistle. A common element of all on-site interpretive installations would be large-scale historic photographs, particularly colliery images taken in the early 1900s by John Horgan. Other photographs, particularly of domestic and industrial situations, people and streetscapes, would also be used for on-site and orientation programs. Bird's eye views, aerial photographs and large-scale atlas maps would also help establish historical context for the Heritage Valley's interpretable places. At least one interpreted site would feature a working model of a coal breaker - with sound effects - that would permit visitors to see the gargantuan scale of those once-common but never ordinary industrial structures.

Juxtaposing images of past and present in both orientation and on-site programs would furnish visitors' minds with historical perspective, and would prepare them to understand the meaning of the modern vistas they encounter in the field.

Provide something authentic.
Most of what people encounter in the course of their daily lives is both expected and familiar. In the 1960s, as

the interstate subculture was homogenizing the experience of travel, the Holiday Inn chain popularized the slogan "the best surprise is no surprise." Now, forty years later, a tourist can cross the American continent without encountering the slightest variation in landscape, food or lodging. There are no regional variations on the interstate, and yet the kind of curious traveler who chooses to visit a heritage corridor is looking for just that. Interpretive programs need not be limited to providing historical background and context: they can include samples of current regional culture as well - festivals, food, music - such things, when regionally distinct, can add memorably to the offerings of this heritage area.

Because the program described in this report offers visitors a way to get around without their cars, and because it would occupy people for three or four hours at a stretch, they would have to be fed. Among the proposals here is a program called "station lunch," which would provide both business opportunities for Heritage Valley residents and regional meals for visitors. Other authentic experiences could include bed-and-breakfast lodging in historic houses of various kinds, as well as church suppers and picnics and festivals.

Utilize partners' skills and residents' talents to provide "personal service" programs.
Nothing makes a visitor feel like an "insider" more quickly or thoroughly than taking a tour led by an expert - look at the Lackawanna County Coal Mine Tour, led most authoritatively by retired coal miners and miners' sons. No one forgets the compelling, first-hand quality of that tour, even when the guide speaks of practices that were current long before his own time. In a similar vein, no one is more an expert on his own town or neighborhood than a long-time resident. One of LHVA's interpreting partners, the Lackawanna Historical Society, has a specialty in developing neighborhood tours and in training guides and docents. LHS is willing to use its skills to plan and train guides for tours throughout the Heritage Valley. Many informants have told us that they themselves would like to lead programs and tours, and they have spoken of other people's willingness to volunteer. The active involvement of residents could add great authenticity to the experience visitors receive - and it builds awareness and pride in communities. It also creates a pool of trained experts who could imbue other tour programs with the same dynamic, first-hand authority the Coal Mine Tour has already achieved. In the best case, residents who become involved may help to expand programs into areas suggested by their own individual and group experience.

Make memorable and meaningful ATTRACTIONS out of the elements at hand.

The Lackawanna Heritage Valley needs a "centerpiece" that would make people want to venture out from Steamtown and Scranton; something that makes them say, "WOW! That was fantastic." It must be something people instinctively like, something they would talk about after they leave. Every museum tries to build an attraction into its program: Steamtown has the Moscow excursion; at the South Street Seaport people can sail New York Harbor on a Gloucester fishing schooner. These experiences are little vacations from ordinary life, people open up under their influence: they are attractions.
The Heritage Valley already has some good attractions in place: visitors can go down in a coal mine, they can ride on a steam train, they can take a magnificent excursion on an electric trolley, they can visit a rail baron's baronial mansion. But each of these experiences is associated with a particular site or museum - there is nothing of comparable power that would move visitors out of the city and through the Heritage Valley.

The Lackawanna Heritage Valley does have the ingredients to make other attractions with the potential for a similar Wow Factor. Read the next section of this report for a description of a train ride attraction that would link many of the Heritage Valley towns and their key interpretable places. But that's not the only attraction we can make from the elements already in place in the Lackawanna Heritage Valley. How about: a working model of a vibrating, dusty, thrumming coal breaker; a canoe ride on the river; or seeing landfill gas turning into power and steam? How about touring a house where a miner's family lived in 1920; or watching high-tech cloth being woven in the traditional way, hearing the racket of machinery?

Provide Special Food: Station Lunch
Because many visitors would be excursion-train passengers and thus not mobile enough to go in search of their own meal, we must provide food for them as part of their memorable heritage experience. We have observed, not just in this region but in other places known for special cuisines, that there are not many restaurants where this special food is available to the public. In the Lackawanna Heritage Valley, the best access to such food seems to be at festivals, and at church suppers. The "Station Lunch" concept builds on this, offering visitors a sample of good local dishes, and offering church auxiliaries and other community members a business opportunity based on proven skills and inclinations.

This program would organize groups (including restaurants) that already put on excursion, church or fire house meals, and engage them to prepare box lunches for weekend visitors. There would be a program coordinator,

possibly an entrepreneur who pays himself a salary from the proceeds. The coordinator would arrange for any number of organizations to participate in the program. He or she would arrange with one or more participating groups to provide the lunches each weekend day. . The coordinator would estimate the number of visitors expected to require a lunch on that day, and work out menus and logistics with the cooking organization and excursion operator. Visitors could eat lunch on station platforms, or take the boxes away to eat somewhere else. Most key interpretable places are scenic, and would have benches or picnic tables where visitors can relax and enjoy the view.

We have learned that one-time versions of this program have already been done in Carbondale, and they have worked well. People love the box lunches, and the program makes money for its sponsor. Restaurants make good and willing participants in the program, too.

PRE-VISIT ELEMENTS AND TOURING AIDS

Marketing, Website, Signage, Rack Card, General Brochure

Before developing any pre-visit materials, it is important to decide what each item should accomplish. No item produced should be any larger than it must be, or include any information or details extraneous to its specific mission.

Website

Many potential visitors would first encounter the Lackawanna Heritage Valley while at home, surfing the Internet. Its website would be an important tool LHVA can use to attract people to become visitors, and to give them a preview of what they would find.

The website should be viewed as a marketing tool, with some visit planning capability. It might incorporate some of the more spectacular photography and historic images from the orientation audiovisual show and exhibit, being sure to include an image and brief, appealing text description of the railroad excursion, each Key Interpretable Place and each interpreting institution. A video clip simulating moments from an excursion would be a stunning addition. A map showing highway approaches to the Lackawanna County Visitor Center, the Steamtown/ Internodal Center, and Carbondale would be an essential element as well.

The website should also offer a regularly updated schedule of excursions and other programs. Pre-visit, advance ticketing is optional on the website -- programming such a service would be complicated, and would involve credit-card transactions. An alternative would be a telephone number to LHVA, or to another entity designated to handle prebooked visits, especially group tours. This entity should be able to offer tickets for railroad excursions, and also individual tickets for each participating attraction.

Rack Card

The rack card is similar in its goal to the website, but targeted to visitors who are already on the road, in the general vicinity of the Lackawanna Heritage Valley. It is a simple marketing and informational tool designed to motivate a visit. It would include an eye-catching image, a key phrase, a map to the three welcome and orientation venuses, details of operating dates and hours, and a phone number, address and website address.

Signage

Signage should conform to an overall graphics design plan which designates color scheme, typeface, and recognizable logotype image. The plan also designates orders of magnitude so that signs are only large and bold enough to be effective without being more intrusive than they need to be. Highway signage is the first (and boldest) level of directional signage. It is designed to guide visitors to the welcome and orientation areas. Site signage is more subtle in size and impact, and directs people from parking or station areas to interpretive installations and trail heads. Driving tour signage, also subtle in size and impact, alerts visitors to turns, waysides and interpreted sites along the route.

Map-Guide (General) Brochure

This piece would work both as a pre-visit tool and as a guide during the visit itself. The brochure would be available at the welcome and orientation sites, and at each rack maintained by an interpreted site in the Heritage Valley. It functions as a mini-orientation piece, and a general guide visitors would carry. The brochure would include introductory theme-and-significance text, an overall map showing welcome and orientation points, parking areas, visitor services, the rail excursion, driving and pedestrian routes, each key interpreted place, and all the interpreting institutions. As this piece would also be mailed on request, it would also include dates and hours of operation, telephone number, address and website address.

Touring Aids

Excursion Schedules

A tabular, easy-to-read schedule would set forth the dates, times and fares for excursion trains and COLTS buses serving the LHVA sites. The schedule would be inexpensively produced on rack-card-sized stock, to be slipped into an envelope or a map-guide brochure. It should be rigorously kept up to date.

Guide to the Lackawanna River Trail

This specialized guide for pedestrians and cyclists would delineate the River Trail, including interpreted sites and side trips. It would also show the locations of trailside and nearby historic sites, the LHVA Key Interpretable Places, canoe and kayak launches, parks and picnic areas, and linkages with other trail systems. For the time being, this trail guide could be inexpensively produced and printed in modest numbers, permitting periodic revisions as trail sections are completed.

Site Guides

These site-specific visit aids would provide portable versions of the interpretive materials provided at the site installations. Each would include thematic focus and background for its site, illustrated by historic maps and images. Each would feature a map of the site area, with walking and driving routes and nearby attractions.

PARTNER INTERPRETING INSTITUTIONS AND LHVA

Interpreting Institutions as Partners

This report will not provide redundant descriptions of the interpreting institutions, but it will comment on the way each one fits into the comprehensive visitor experience. It will focus on the ways in which each site can contribute to and benefit from the comprehensive Heritage Valley interpretation.

Steamtown National Historic Site (National Park Service)

Steamtown is at the center of a very accessible and highly compact set of attractions in downtown Scranton. They include the railroad museum and yard, the Trolley Museum, the platform for train excursions through the Heritage Valley, the shopping center known as Steamtown Mall, the Scranton Iron Furnaces, and the southern section of downtown Scranton. It is also adjacent to the designated site of the planned Internodal Transportation Center, and it is one of most likely places where a pedestrian might begin a hike along the Scranton Greenway. Altogether, Steamtown is a perfectly situated, central site to which visitors could be directed, oriented, and sent out to tour the Lackawanna Heritage Valley. As such, it should play a key role in the comprehensive program.

Steamtown currently interprets steam railroading in America, and in Pennsylvania in particular. Steamtown's excellent interpretive programs provide orientation and interpretive coverage for the LHVA railroad theme element. The railroad theme would be further developed by LHVA programs at the sites in Providence, Archbald and Carbondale.

In past years, Steamtown has offered a regular rail excursion to Moscow, in the LHVA project area, and seasonal trips up the Heritage Valley between Scranton and Carbondale. Onboard interpretation is provided to three cars by one ranger with a speaker system. During the summer of 2003, Steamtown began a more regular excursion to Carbondale. One trip had been run at the time of writing (August, 2003). The Carbondale Business Association organized a program of activities for visitors at the end of the line, including a chicken barbecue that was enjoyed by all. By the summer of 2004, some eight round trips per month would be made to Carbondale, with stops by request, where a program or attraction exists, at certain towns up the line. In order to make the Carbondale run more attractive for Steamtown, some infrastructure improvements are needed. Most important for both safety and authenticity would be the construction of a wye (turnaround) at the end of the line. (Without the wye the train can not turn around, and must return with the tender in front of the locomotive. This means that the engineer does not have a good view of the track.) Grade crossing improvements are also needed for purposes of safety. In the absence of a regular excursion service on the Lackawanna County Rail Authority trackage, LHVA could work with Steamtown and with the municipalities to ensure that programs are developed, and station stops scheduled, for the Key Interpretable Places described in another section of this report. It is important that visitors find a compact constellation of activities at the station stops including interesting interpretive installations, attractive streets and parks, good food, and adequate visitor services in each town designated as a station stop. LHVA would oversee the development of interpretive programs and collaborate in marketing the excursion, the municipalities would provide the food and services, and Steamtown would run the trains.

Steamtown offers shorter train rides to the Lackawanna Historical Society's Catlin House, providing a link with one of the interpreting partners. This ride could become a regular weekend excursion, improving the link and delivering more visitors to the LHS. There is also a short excursion to Nay Aug Gorge. These short excursions

offer visitors the experience of steam railroading without exhausting the time they are willing to spend touring, and the costs are reasonable both for Steamtown and its visitors. In former years, Steamtown operated a short excursion to the PHMC Scranton Iron Furnaces site. The Trolley Museum took over the run, using electric trolleys on the train tracks. Due to a safety practice known as "lockout," light rail (trolley) cannot use the tracks during the same time period as "heavy rail," or trains. Whether the Iron Furnaces are visited by trolley or by train, visitors should be able to reach the site easily and on a regular, well-publicized schedule.

Steamtown has distributed the draft of its Comprehensive Interpretive Plan update. Two points are relevant to LHVA interpretation: first, the Steamtown plan recommends a Heritage Valley driving tour. The driving tour recommended in this LHVA plan could serve Steamtown's purposes, thus Steamtown could collaborate with LHVA on developing the route, signage and brochure. Second, we recommended an addition to Steamtown's programming to make a better fit with LHVA anthracite themes: we proposed that Steamtown consider expanding its programming to include the broader topic of steam power in the 19th-century Lackawanna Heritage Valley. Stationary steam engines ran nearly every industrial process, from collieries to silk mills. Without interpretation, it is nearly impossible to imagine the magnificent power of a steam plant, or the way a single massive engine could power all the moving, lifting, pumping operations of the colliery. Of all the interpreters, Steamtown has the best potential to interpret this powerful central idea. Steamtown has a plan for an Industrial, Science & Technology Discovery Center, part of the original museum concept, which would interpret steam power, among other themes. This plan should be implemented.

Steamtown could also play a key role in the archive project mandated for the three Pennsylvania heritage corridors devoted to the interpretation of anthracite. The corridors are committed to cataloguing and providing space for storage and research. Steamtown, already both central and dense, could host the anthracite archives. The Stores Building, the oldest on the site, badly needs rehabilitation. The anthracite archives could give it a sustainable new use, and provide an incentive for its restoration, and Steamtown's administration would welcome this addition to the site.

Steamtown, adjacent to the track from which the LHVA train excursion would depart, and adjacent to the site where the Internodal Transportation Center would be built, would be a good place for the LHVA welcome and orientation facility, either on a temporary or permanent basis. Steamtown's site superintendent has indicated that the Heritage Valley orientation could be accommodated with space, which would have to be located outside the Steamtown admission point.

Related only by proximity to Steamtown, the Chamberlain Army Ammunition Plant, manufacturers of ordnance, occupies one of the finest and most interesting industrial buildings in the Heritage Valley. This site is also near the Scranton Iron Furnace, and also involves metal in an industrial process. We have arranged to tour the works and will assess with management and security there the possibilities of tours. These tours might be contextually linked to the iron industry, and could be architectural, historic-industrial, or process-focused. In preliminary conversations, Chamberlain agreed that such process tours would be permitted.

When asked what this plan could provide for Steamtown, the site supervisor responded that the most important element from his point of view would be the implementation of the Scranton Greenway portion of the River Trail. This would provide a much-needed pedestrian link between Steamtown Plaza, the Iron Furnaces, the University of Scranton and Nay Aug Park. See the "Four Tracks: Pedestrian and Cyclists" section of this report for a fuller discussion of this trail segment.

Electric City Trolley Museum
(Lackawanna County)
The Trolley Museum, adjacent to Steamtown, is also adjacent to the site where the Internodal Transportation Center would be built. The LHVA welcome and orientation facility, and the departure point for its excursion tours, could be located either at the Trolley Museum or Steamtown. In preliminary discussions, a Trolley Museum official agreed that the orientation installation could be accommodated on site. It would have to be outside the museum's point of admission.

The Trolley Museum contributes to the Lackawanna County story by illustrating through its exhibitry and its tour the way the interurban electric trolley tightened the linked system of the industrial Heritage Valley and contributed to its cohesive development as a series of increasingly connected cities and towns. It also provides an opportunity to introduce the idea of electricity first supplementing then supplanting steam power to drive colliery and industrial processes, and to transform domestic life in the region and the nation.

The Trolley Museum operates regular Laurel Line excursions to the PHMC Scranton Iron Furnaces site, creating an important link with one of the interpreting partners. This link would be noted in the LHVA comprehensive

excursion schedule. The continuation of the trolley excursion from the end of the Crown Avenue tunnel is a key element in this interpretive plan.

Lackawanna Coal Mine Tour
(Lackawanna County)
Located in McDade Park on the west side of Scranton, the Coal Mine Tour is arguably the most dramatic element in a Heritage Valley tour. It is both a very appealing and highly authentic experience, offering visitors the opportunity to descend a coal mine with a former miner (or the son of a miner) as a guide. The county is making plans to expand the capacity of the tour without sacrificing its appeal.

Because McDade Park is somewhat out of the way except for people traveling on the Northeast Extension of the turnpike, its accessibility is an important issue for the LHVA comprehensive program. Although the park can be reached via the Number 33 COLTS bus, which also stops at Steamtown, the route from downtown is overly long and involves many stops. A regular bus link with a direct route would be a great improvement. PHMC, Lackawanna County and LHVA could work with COLTS to develop a regular, direct bus route between the Steamtown/ Internodal site and McDade Park so that visitors could move between downtown Scranton and McDade park quickly and easily.

Pennsylvania Anthracite Museum
(Pennsylvania Historical and Museum Commission)
Adjacent to the Coal Mine Tour in McDade Park, the Anthracite Museum focuses on the life and work of the people of the collieries of northeastern Pennsylvania. Secondary themes deal with ancillary industries: mills and factories, canals and railroads. This museum interprets several aspects of LHVA themes, particularly as they relate to people at home and at work.

The museum is currently (spring, 2003) exhibiting a temporary show on the Great Strike of 1902. This is one of the key Lackawanna Heritage Valley stories, as the strike culminated in a progressive era of reform in labor-management relations between anthracite workers and colliery operators. Although some of the artifacts are on loan from other collections, LHVA should encourage and support the museum in developing a smaller, portable version of the exhibit that would relate directly to the Northern Field collieries of the Lackawanna Heritage Valley. The exhibit could be shown at the County Visitor Center, in a Carbondale venue, in the school system, and elsewhere as appropriate.

The Anthracite Museum collections would be of key significance to LHVA as it develops the interpretation of its key sites. The colliery and coal-town photographs of John Horgan, in particular, would be critical to the interpretation of Archbald, Providence and Carbondale.

The Archbald site, discussed below in this report, features interpretation of a colliery with a working model of a breaker. Preliminary conversations with the acting director of the anthracite museum have explored the possibility of the Archbald interpretive program being a museum "satellite." Details of the collaboration would be worked out among LHVA, the borough of Archbald, PHMC and the Anthracite Museum.

LHVA could assist the Anthracite Museum by working with COLTS to develop a regular, direct themed-vehicle bus route linking all the heritage sites and attractions between the Steamtown/ Internodal site and McDade Park so that visitors could move among them quickly and easily.

Scranton Iron Furnaces
(Pennsylvania Historical and Museum Commission)
The expansion of the American rail network depended on a major restructuring of the nation's iron industry. The most important components of the railroad were iron, especially after the development of the T-rail in the 1830s. At that time, Great Britain supplied all the T-rails used in building American railroads, but this began to change in the 1840s. This iron furnace, founded in 1842 by a partnership that included George and Selden Scranton, was in 1847 one of the first American furnaces to produce railroad rails. The city of Scranton was built on this enterprise, which, as the Lackawanna Iron & Coal Company, became one of the nation's largest manufacturers of iron and steel rails. In 1902 the company moved its operations - including almost everything that had been built at this, its original site - to Buffalo, New York. The stone chimneys that stand today are the palest reflection of the booming inferno of an industry that once claimed the banks of Roaring Brook.

The iron furnace of which this site is a remnant was to the southern end of the Heritage Valley what the D & H Gravity Railroad was to Carbondale at the northern end. Like the birthplace of the D & H, the iron furnace today is a tiny remnant of an immense and powerful industrial system. Minimally interpreted, it conveys little impression of the significance of the iron industry in the industrial development of the Lackawanna Heritage

Valley and the northeastern United States. This site would benefit from an enhanced on-site interpretation including a diorama of the whole operation that would give a sense of the way its product poured into the burgeoning rail system that linked the nation and carried the momentum of its growth.

At present, interpretation at the Iron Furnaces is factual, but it lacks impact. The site is maintained as a grassy park, with the four huge masonry chimneys set off as stabilized ruins. An undistinguished steel pavilion crowns the stacks, giving visitors an opportunity to peer down the chimneys from above. On-site information consists of several picture-and-text panels in and around the pavilion. None of this gives the viewer a sense of the power and scale of what stood here a century ago, nor does it hint at the historical irony of this peaceful green park. The viewer can not sense, from what he now sees, that the Iron Furnaces were once the fiery heart of the city of Scranton. The interpretive program at this site must be given more content, and must deliver more of a kick.

Visitors can reach the Iron Furnaces by car or on the Laurel Line excursion from the Trolley Museum. Otherwise the site, although visible from the back of the old DL & W passenger station (now the Radisson Hotel), is not easy to get to. The Scranton Iron Furnaces could benefit from the development of the Scranton Greenway (Loop) portion of the River Trail, which would link it to Steamtown where part of its story is told, and to other sites in downtown Scranton. The Iron Furnaces should also feature on the driving tour route, and receive additional publicity in LHVA and Trolley Museum literature.

Lackawanna Historical Society
(private)
The Lackawanna Historical Society maintains and offers tours of the Catlin House, one of the few house museums available in the Heritage Valley. It also maintains an excellent research library including primary and secondary sources on county and local history, historic maps and atlases, and a photograph collection. The Society has an outstanding record in developing house tours and walking tours, and in recruiting and training guides.

The society's Catlin House headquarters might provide the setting for dramatic presentation (perhaps sponsored by LHVA) on the public and private sides of life in a great urban house, or on the relationship between the industrialist and the people of his industry. LHS could achieve increased visitation from LHVA marketing and promotion via orientation programs. It could participate, possibly as subcontractor or consultant, in LHVA interpretive programming by undertaking the development of the driving tour, the walking tours of Key Interpretable Places, and the recruitment and training of guides and docents. Because of the role LHS played in the tour of Olyphant churches, it could make a valuable contribution to LHVA program development by taking a lead role in developing the program for the Olyphant interpretive installation. The society's collections would provide a good deal of material that would illustrate and enrich interpretive installations.

Everhart Museum of Natural History, Science and Art
(private, in Nay Aug Park owned by City of Scranton)
The Everhart Museum is a classic art and natural history museum supported by a small, culturally dynamic city. Its collections include a well-known and beloved assemblage of birds from all parts of the world, Dorflinger Glass, prehistoric artifacts and fossils, Native American, African and ancient art, and American landscape paintings. Recent additions to the museum include a major gallery for changing exhibits, and new space for educational programs and workshops. Two series of landscape paintings featuring coal breakers, one by artist John Willard Raught (1857-1931), the other by Niccolo Cortiglia (b. 1893) can be used in LHVA interpretive development. In Nay Aug Park, next to the museum, the 1902 Brooks Coal Mine, an old interpretive feature not much used today, could be studied and possibly further developed as a mine tour attraction.

The Everhart Museum is a dynamic cultural center for the Lackawanna Heritage Valley, with energetic leadership, good collections, a fine building and a beautiful setting. The museum has recently achieved a renovation giving it a large and attractive changing exhibit gallery, and dedicated space for educational programs. It should continue to build on existing strengths, solidifying and extending its base of support and using that support to influence such developments as the Scranton Loop trail and the improvement of Nay Aug Park. The City of Scranton has begun to renovate Nay Aug Park, and the museum might take the opportunity expand beyond its walls to develop outdoor space for natural history programs, themed gardens and outdoor sculptural installations. Some of these sculptures might be interpretive in nature and reflect the history of the city and the park itself.

The museum could benefit from LHVA marketing and promotion in orientation and brochure programming. It could also benefit from the development of a dedicated COLTS bus route connecting the cross-town Scranton sites from McDade to Nay Aug.

The Everhart Museum could contribute to LHVA programming by participating in interpretive development for the Brooks Mine, by assisting picture research and permitting the use of its collection for interpretive purposes. The museum's most important role, however, is as a centerpiece and focus for Scranton's cultural life. It should continue its current drive to increase community and corporate support, to draw repeat visitors through changing exhibits and appealing programs, and to provide a place for cultural events and celebrations.

Carbondale Historical Society
(private)
The Carbondale Historical Society, housed on the third floor of the city hall, does not currently maintain any public space, but is planning to mount a major exhibit on the gravity railroad. CHS is the leading authority on, and owns a major collection of, documentary and artifactual material on the Delaware & Hudson and the Gravity Railroad.

The City of Carbondale is interested in developing heritage tourism, and this interest would be served by the city's being designated a gateway and anchor for the Heritage Valley program. For its part, the city must provide sufficient reason for visitors to get off the train or out of their cars, and spend time. Streetscape improvements, site clean-up and interpretive development activities must all be successfully completed before Carbondale is ready to be billed as a major attraction. The City of Carbondale, the Carbondale Historical Society and the Chamber of Commerce could work as a committee to prepare the city for additional tourist visitation, improving the appearance of Main Street and the sites selected for interpretation. The committee could also oversee the development of interpretive installations, tours, "station lunch" and other programs.

Lackawanna Heritage Valley Educational Institutions
Although the area's university and colleges are not interpreting partners, they can still play an important partnership role in developing and presenting LHVA programs. Internship arrangements might be worked out among LHVA, an educational institution and an interpreting institution (or a history or museum professional) so that each project would be designed, managed and supervised by a qualified project director. Such projects could be funded by proposal to LHVA, and produce reports and programs of professional quality. Students would acquire skills and experience in public history, and community members would participate as informants and docents. For example:

- Interpretive development would require a great deal of both contextual and site-specific research. Advanced history students could accomplish the research (consulting with LHVA or with the Lackawanna Historical Society) and deliver it in the form of reports with copies of historic images and maps.

- Students could also undertake oral history projects, which would be particularly useful and timely in Archbald, Olyphant and Carbondale. Such projects can be an effective way to document local history as well as to encourage the involvement of many people from the target communities.

- English and Theater Arts students could develop and present living history programs and dramatic enactments at sites. LHVA would carefully manage the quality of such presentations through funding of sound proposals that include plans for script review, actor training and program supervision.

THE ROLE IN INTERPRETATION OF THE LACKAWANNA HERITAGE VALLEY AUTHORITY
The Lackawanna Heritage Valley Authority is the presenter of the comprehensive Lackawanna Heritage Valley experience, comprising existing attractions and interpreting institutions and newly developed sites and linkages. As the presenter, it is LHVA's job to transform tourists into travelers, to propose their routes and destinations, and to give them a comprehensive introduction to the significance of the region and the meaning of the places they would see.

The interpretive mission of the LHVA is to foster the creation of an enriching and satisfying visitor experience of the Lackawanna Heritage Valley. Interpretive programs on aspects of the LHVA theme structure exist, and new ones would be developed by other entities; but no organization except the LHVA is charged with creating and presenting a comprehensive visitor experience of the Heritage Valley.

The LHVA's essential roles would be in the areas of marketing, pre-visit information, comprehensive ticketing, orientation and context-setting, wayfinding, linking, and in providing or encouraging theme-specific interpretation of key sites that would otherwise go uninterpreted.

Key interpretive projects and responsibilities would be:

Development and maintenance of LHVA website.
LHVA should develop and regularly update a website (as described above) promoting and introducing the Heritage Valley visitor experience. Partners and attractions should be included in the primary material, and hyperlinks to others' sites should be included.

Development and distribution of rack card and general brochure.
Both of these items relate to the overall Heritage Valley experience, and as such would be LHVA products.

Development of a comprehensive graphic design package.
As the comprehensive experience comes together, graphics would be an important part of it, from highway and directional signage to brochures and exhibit designs. It is important to develop a recognizable image people would immediately connect with the Heritage Valley program. It would include color scheme, typeface, logo, and a set of shapes and sizes for a range of directional and informational signs. Attached to this plan is a recommendation for a logo: it is derived from 1930s advertising for anthracite, and features the silhouette of a breaker. Note: Graphics for visitors should avoid all acronyms, especially as so many of the regional entities are known by nearly identical ones.

Development, programming and operation of welcome and orientation facilities.
This report recommends welcome and orientation facilities at the County Visitor Center on I-81, at the Steamtown/ Internodal Center, and at Carbondale. LHVA need not be the sole, or even the principal partner in any of these facilities, but it should develop design - or at the very least, detailed design standards - for each one, along with content and supporting materials. LHVA should take a key role in the development of each one, even if responsibilities are assumed by partners. LHVA should also be sure that each center is maintained and operated to a consistent standard.

Encouragement for the development of the railroad excursion link, partnership with LRCA in the development of the River Trail and other pedestrian routes, and principal development of the driving tours.
Because the railroad excursion, whether operated by Steamtown or by a private entrepreneur, would be a key asset linking interpreted sites, LHVA should actively encourage its development. The excursion operator would contract with the Lackawanna County Rail Authority, whose subcontractor, the Delaware & Lackawanna Railroad, would provide the services. LCRA could also provide historic diesel locomotives and passenger cars. Alternatively, the excursion entrepreneur could use themed light-rail cars, which would cost something to build or acquire, but would probably be more cost-effective as excursion vehicles than a heavy-gauge train. An entrepreneur might be attracted to the rail program because he or she could provide not only tourist excursions, but could market dinner runs, mystery tours and other kinds of excursions that might not be related to LHVA themes or sites. al
LHVA should be involved with the planning of any rail excursion program, ensuring that the schedule complements the Steamtown excursions and effectively links the Heritage Valley's key places and interpreted sites. Barbara Colangelo, who organized the Laurel Line excursion for the Trolley Museum, could advise on the development of a rail excursion program.

LHVA would be the principal developer of the driving tour, which will probably be the first excursion "track" to become available to the visiting public. This tour should be an early priority. The route, together with overlooks and waysides and parking, should be designed in cooperation with appropriate municipalities and departments of transportation.

The pedestrian route is essentially the River Heritage Trail currently under development by LHVA and the Lackawanna River Corridor Association. The Scranton Greenway (Loop) portion of the trail would be a key nonvehicular "track," particularly in downtown Scranton between Steamtown Plaza and Nay Aug Park. Linking Steamtown, the Trolley Museum, the Scranton Iron Furnaces, Scranton University, the Lackawanna Historical Society, Nay Aug Park and the Everhart Museum, the realization of the Scranton Greenway would be a great asset to the Scranton heritage sites, and to the vitality of downtown Scranton as well.

Lookouts and Waysides
Lackawanna Heritage Valley highways and urban streets offer several spectacular vantage points from which visitors could command sweeping views. There is excellent potential for overlooks along the Casey Highway

(Industrial Route 6), Route 307 west of Scranton Lake, Harrison Avenue in the Hill Section of Scranton and Lincoln Avenue in Carbondale. Other opportunities exist in several of the Key Interpretable Places (particularly in Providence), and are described in those sections of this report.

Development of programs at each key interpretable place.
LHVA would take the lead in developing the program for each of the key interpretable places. It is important that each place be properly programmed to provide a satisfying arrival, food and comfort facilities, and an array of activities that would satisfy visitors for an hour or two. It is even more important that LHVA take the lead in focusing the content and presentation of the interpretive components so that site interpretation fulfills its part of the comprehensive plan, and that themes and stories are appropriately presented.

It is not necessary for LHVA to do site interpretation alone. It can achieve its goals by recruiting another entity - a municipality, historical society, or neighborhood group - to collaborate or even to take the lead. LHVA could then offer technical and financial assistance in exhibit development, design and construction. LHVA would take charge of linking the site to the comprehensive program through marketing and promotion, orientation, brochure, excursion schedule, driving tour, and so on. LHVA would retain tight control over the "look" and content of all interpretive installations, so that each is a recognizable part of a whole, and so that the overall visitor experience is complete, consistent and coherent.

Work with interpreting partners to engage the skills and resources of each.
LHVA already convenes a Round Table comprising the interpreting partners and others. A similar structure could handle cooperative program development in which responsibilities are to be allocated or shared among two or more partners. In addition to the interpreting institutions, this interpretive development round table should also include representatives of the municipalities in which Key Interpretable Places are located, and it should also include representatives of LCRA, COLTS and DOT. IF the LHVA contracts interpretive development to an outside firm, that firm could be assigned responsibility for convening the interpreting partners and coordinating their participation.

HEART OF THE HERITAGE VALLEY: THE RIVERSIDE VISIT

With "Side Trips" to Heritage Attractions beyond the Heritage Valley

Moving Through the Heritage Valley

This report delineates several distinct "tracks" or transportation modes through which visitors can experience the Riverside Visit. Each track links orientation, all the key interpretable places and the LHVA's interpreting partners; and each track allows visitors to decide how many sites to visit before returning to the starting point. A visitor would be able to choose one track and stay with it throughout, or, alternatively, he could mix transportation modes and transfer among them at his own pleasure. By organizing "track" options, visitors decide how much time to spend and which sites to see - but LHVA controls the way they move around, and the way they arrive at each site.

Arrival: Orientation and Starting the Journey

Visitors would converge on the Lackawanna Heritage Valley in several ways. At present, most of them arrive in private cars, although within five or six years the completion of the Lackawanna Cut-Off project may allow passengers to arrive by train from New York City. In addition, as the Delaware & Hudson Heritage Corridor continues to develop, and as Lackawanna Heritage Corridor marketing reaches Pocono region visitors, Carbondale is likely to become a secondary gateway.

At present, "attraction" highway signage directs interstate drivers inclined to a Scranton-area destination toward either Steamtown or the Montage Mountain ski resort, where the Lackawanna County Visitor Center stands near the highway exit. Those driving the most direct route from the north - from Canada, New York State and New England - approach on I-81 south. Signage could direct these drivers either to the Steamtown area or to the Lackawanna County Visitor Center. Drivers approaching from the mid-South would approach the Heritage Valley on I-81 north, along which they encounter the County Visitor Center enroute to the city. Drivers from the direction of Philadelphia would come by way of the Northeast Extension of the Pennsylvania Turnpike to I-81 North. Likewise, visitors coming from the west, along the Pennsylvania Turnpike or I-80, would approach the region on I-81 north, encountering the Visitor Center before coming to the Scranton exits. Visitors from southern New England, the Pocono region, New York City and New Jersey, however, would approach Scranton on I-380 and I-84, and would encounter the Scranton exits and Steamtown signage without having passed the County Visitor Center. Future train passengers from New York City would be delivered direct to the Internodal Transportation Center to be built on the State parking lot adjacent to Steamtown.

It is clear that the Lackawanna Heritage Valley must establish welcome, marketing, and orientation facilities both at the Lackawanna County Visitor Center and in the immediate Steamtown vicinity. Welcome and orientation programming should also be provided in Carbondale, due to the proximity of the Pocono area and to the D & H Heritage corridor just over Moosic Mountain from the Lackawanna Heritage Valley's Pioneer City. The D & H Heritage Corridor, in particular, is likely to be a good source of visitors as it continues to develop attractions and activities in the adjacent Route 6 towns of Honesdale and Hawley.

Lackawanna County Visitor Center

The handsome county visitor center, not yet fully developed, is a stunning modern building reminiscent of a high-style late-19th-century railroad station. It currently offers an interactive marketing and visit-planning computer program where visitors can arrange lodging and see a preview of a variety of Lackawanna County cultural and tourist attractions. There is also a gift shop and café, and restroom facilities. The top story function room commands sweeping views of the Montage Mountain area. When fully developed, the visitor center would incorporate a second building designed to house interpretive exhibits. At present, parking is limited, but according to LHVA officials, more parking would be provided during the next phase of development.

The Lackawanna County Rail Authority is completing work on an electric trolley line that will connect the Internodal Transportation Center (to be built adjacent to the Steamtown/ Trolley Museum) and the County Visitor Center. The planned trolley platform is at a lower elevation than the visitor center building, and the two levels would be connected by a passenger elevator. The trolley ride between the Visitor Center and Scranton would take approximately 15 minutes.

The Pennsylvania Department of Transportation estimates that some 80,000 cars per day pass the visitor center on I-81. Some of these cars can be induced to exit the highway to use the facilities at the visitor center, and would in the process of doing so encounter information about Lackawanna Heritage Valley attractions. In addition, a impressive three million people per year visit Montage Mountain. They may also visit the center and discover the Lackawanna Heritage Valley. Obviously, skiers go to Montage Mountain in the winter, which is the off-season for Steamtown and the other heritage attractions. Capturing the skiers would encourage off-season visitation, a desirable outcome for the local economy.

Marketing Program

When planning the program for a facility, it is essential to understand the way that facility would work as part of a larger system. The Lackawanna Heritage Heritage Valley as a system would first attract visitors, then orient them and assist them in planning the details of their visits, then help them find their way through the region along selected paths or "tracks."

The Lackawanna County Visitor Center is a "remote" facility. Located outside the interpreted area, it is perfectly situated to house a program that would send visitors into the Heritage Heritage Valley, its points of interest, and its story. In fact, many drivers who go to the Visitor Center may never intend to visit Scranton or the Lackawanna Heritage Heritage Valley at all. They are through traffic, or skiers enroute to the Montage Mountain resort. The program they encounter at the Visitor Center can make them aware that the region has other attractions they are sure to enjoy. At the Visitor Center, people should decide to make a trip to Scranton and/ or the Lackawanna Heritage Valley. They don't have to choose - yet - between shopping at the mall, going to Steamtown, or taking off on a train ride.

The Visitor Center program would be a carefully crafted marketing tool. It should include inspiring exhibitry - a brief audiovisual program with supporting large-scale photomurals would be effective. The program shows visitors a picture of a Heritage Valley they can't resist. They "see" themselves on an exhilarating train ride beside a beautiful river, they "see" themselves going down a coal mine. They see images of convivial picnic lunches, and (because some days will be rainy and others will be cold), they see groups in cozy restaurants, too. A considerable part of heritage tourism involves interesting food. While a narrator describes the national significance of the Lackawanna Heritage Valley, these potential visitors see images of intriguing and attractive places, interspersed with historic images that suggest a meaningful and interesting past that would be illuminated if the visitor just steps aboard the train.

Once a visitor has made the decision to go from the county visitor center to Scranton, he may either drive there, or, after the electric trolley is operational, he may go by trolley. Either way, he would end up at or near the planned Internodal Transportation Center adjacent to Steamtown. When he leaves his car or steps off the trolley, the visitor has reached a second decision point: now I'm here, what do I do next? This is where the orientation program comes in.

Express-Tour Visitors
Certain visitors would proceed directly from the County Visitor Center to a Lackawanna Heritage Valley tour: these are visitors in private cars who choose not to go to Scranton at all, preferring to skip the urban part of the experience and go directly to the small towns. These visitors, primarily older people who do not relish city driving, would take the "express" driving tour (see a description of this option on pages 14 - 17). These visitors would receive welcome and orientation at the Visitor Center, but miss the context-setting exhibitry (described below) offered at the Steamtown/ Internodal Transportation Center. They would, however, be able to pick up a similar program at Carbondale.

Changing Exhibit Gallery
The Lackawanna Heritage Valley is rich in possibilities for heritage-related exhibits, and in collections that could furnish material for them. Yet few facilities have first-class gallery space where an exhibit could be mounted to advantage in an accessible, attractive and secure location. The County Visitor Center, particularly the planned Interpretive Building, would provide an idea venue for these rotating programs. For example: the Anthracite Museum is currently (spring, 2003) showing an exhibit on the Great Strike of 1902. Although the exhibit contains some borrowed material, it could be reconfigured with items from the Anthracite Museum's own collections, and installed for a six-month run at the Visitor Center. Similarly, the Carbondale Historical Society is planning a major exhibit on the D & H Gravity Railroad - including many original artifacts never exhibited before. The Historical Society's space on the third floor of Carbondale City Hall is not a good place for such an exhibit - LHVA could offer Visitor Center space, and would at the same time assist a partner and offer a fine program to its own public.

Context Setting and Excursion Planning

Steamtown Plaza, Orientation Program and Station Platform
Steamtown Plaza is dense with possibilities for a visitor, or for a resident enjoying local attractions. It has parking, shopping, museums and rides - all compressed into a manageably sized site with a big impact. This denseness and compression is appealing to visitors, and is to be encouraged and enhanced by the co-location of even more activities. Visitors disembark from the trolley, or park their cars, at the Steamtown plaza (or, in the future, at the Internodal Transportation Center adjacent to it). Once they're out of the cars, they're at liberty to do whatever they choose. They're no longer Heritage Valley visitors - at least for the moment. The end of the ride is a new decision point, and LHVA would be competing with all the attractions a visitor can reach from there. He may be lured by the attractions of downtown Scranton, by the Steamtown excursion, by a hike along the Scranton Greenway, or by the idea of taking a bus to McDade Park to see the Coal Mine Tour and Anthracite Museum.

The County Visitor Center would have marketed the bundle of appealing options available at the end of the trolley ride; here at the terminal, LHVA must make a second appeal for the visitor's time and interest, and make it easy for him to get on with a journey through the Heritage Valley.

Of course, many visitors would arrive at this point - the Steamtown vicinity - without having been to the county visitor center at all. They should encounter a version of the general "marketing" program described above, followed by an orientation to the Heritage Valley, its sites and themes. At the same place they should find practical visit-planning tools and a ticket counter that would allow them to customize and arrange a tour.

The site chosen for this program should have enough space for both the context-setting orientation, and for an excursion-planning element which would include as a backdrop a large version of a Heritage Valley map with excursion "tracks" for drivers and train passengers alike. The space should provide comfortable seating, as well as access to restroom facilities and water.

Both the Steamtown N. H. S. and the Trolley Museum have expressed interest in housing the LHVA orientation and visit-planning exhibitry. Either site is appropriate, and each one offers distinct advantages. Placing the LHVA program at Steamtown would give it greater visibility, and access to Steamtown's considerable visitor pool. The Trolley Museum, however, is closer to the county train platform, and may be able to offer more floor space.

At either museum, the LHVA orientation and visit planning exhibitry should be movable, so that it can go to the Internodal Transportation Center later, if that building as built seems to be a more desirable place for it. At either site, the LHVA orientation would have to be located *outside* the museum's admission point so that visitors can reach it without paying an admission charge.

Context-Setting Orientation and Excursion Planning
The LHVA gateway orientations would have two basic elements: a context-setting orientation which

introduces the Heritage Valley's storyline and theme structure, and a set of tools a visitor can employ to custom-design a tour. The context-setting element, which includes the design of the exhibitry as well as some large-scale photomurals and a map, would also function as the marketing reinforcement required at this second decision-point.

In the context-setting orientation, the visitor would grasp the shape of the Lackawanna Heritage Valley and glimpse sites that convey elements of its character as a place. He would come to understand the form and history of the great industrial system men laid over it to extract, process and market anthracite coal, and to house the people who invented the system, built it and made it work. The context-setting orientation could feature a diorama or large-scale relief map presented either as a tabletop display or as a wall mount. It could employ large-scale photomurals on panels. The centerpiece of the orientation could be an audiovisual program, no longer than 10 minutes, during which the audience would be seated.

The excursion-planning element of the orientation would feature a very large, colorful, and somewhat schematic map. The map would clearly show the Heritage Valley with its network of state and interstate highways, the key interpretable sites detailed in this report, and the interpreting partners' sites. Visitors would see at a glance that they could opt for a train ride excursion, or make a similar trip by private car. They would get the idea that food and comfort facilities are available at many places. They would also see the relative distances between one site and the next, and the map would show them how long it would take to ride or drive the entire route. The excursion-planning counter should be staffed, because people will have questions, and they will need transportation and admission tickets. This facility should, without question, sell admissions to all the interpreting partners' sites. Knowing that there are challenges, LHVA should nevertheless work with all its partners to develop a discount "pass" that would admit a visitor to any attraction for a day or a weekend.

FOUR "TRACKS" FOR TRAVELING THROUGH THE HERITAGE VALLEY

Visitors would be offered a series of alternative ways to visit the sites of the Lackawanna Heritage Valley: a train excursion with regular scheduled stops at the interpreted sites from Steamtown, a "mirror" route via COLTS buses, a road-and-highway route they can follow by private car, and a pedestrian route utilizing the River Trail. Visitors can choose a single track, or they can mix transportation modes at will. They can also customize a visit to include only the sites they select, and they can turn around and go back to the starting point at any place along the way.

A Train Ride up the Line, with Stops

This rail track, potentially the most dramatic way visitors would travel through the Heritage Valley, is described first, even though it may not be implemented for some time. When people leave their cars behind to travel in another way, they abandon their normal condition. When they move around a landscape via any means other than the private automobile, they're not tourists anymore, they are travelers. It's a different point of view. Unlike a road trip through a virtually undifferentiated urban streetscape, a train ride follows the scenic route, through an interesting and relatively unspoiled "backyard" corridor. Passengers won't even see the strip malls and automotive services as they follow the river, glimpsing the older, central sections of the Heritage Valley towns.

The train excursion controls not only the route people take from one site to another, but also the point at which they are delivered to the key interpretable places. These delivery points - railroad stations and other stops - are described elsewhere in this Plan under the Key Interpretable Places. They have been selected for their interpretive value, and would be carefully groomed and programmed to present elements of a core interpretive experience.

LHVA's role would be to encourage an entrepreneur or organizational entity to undertake to run the excursion, utilizing the Heritage Valley's many rail-related assets and resources to create a profitable enterprise that would also provide a link between Steamtown and the towns to the north. The excursion could utilize either a historic train (perhaps a steam train operated by the Steamtown NHS, or a diesel locomotive) or a specially built light-rail car. It would operate on the old D & H rail line, now operated by the Lackawanna County Rail Authority (LCRA). The excursion train could run on high-season weekends, Saturdays and Sundays from May through October. It should have a regular schedule that would allow people to ride to a site, get off and explore, perhaps have a meal, then board the next train and proceed. They could even walk between some sites, picking up the train again at the station of their choice. The next "track" described in this section, the COLTS bus line, would mirror the train service.

For the time being, Steamtown will provide rail excursion service to Carbondale. (See "Steamtown NHS" entry above.) Plans for the year 2004 call for 8 round trips per month during the May-to-October season. Plans could be made for station stops in such towns as can provide programs and activities for visitors. LHVA's participation would be to develop programming in the Key Interpretable Places.

Although the excursion train is intended to be the linking element of the Heritage Valley's core interpretive program, it is likely to attract residents as well, and there should be a way for them to use it in the course of their daily lives. Round-trip and one-way tickets could be sold at Steamtown, and at the LHVA gateways in Scranton and Carbondale, and perhaps could be available at the borough halls in the towns as well. If the passenger train proves popular with residents, a weekday option for commuters could be offered as well as the weekend excursion. The greater the popularity of the train, the more economical its operation would be, and the lower excursion fares would be as a result.

The COLTS Bus: Linking the Scranton Sites and Mirroring the Excursion Train

A Cross-Town Heritage Bus

The most intractable circulation problem shared by several of the Scranton heritage sites is cross-town transportation. McDade Park is especially difficult for visitors to reach. Although the Number 33 COLTS bus does run between Steamtown and McDade, the route swoops way out of the way, and it takes a long time. The major challenge in creating a cross-town public transportation route is that as a group the heritage sites span the city from the Moosic slope to the side of West Mountain in a band that crosses the Lackawanna River. Scranton's topography and its street grid facilitates north-south travel, while there is no major east-west artery. The challenge can be met by designing a dedicated linking route. Ridership or another form of income would have to support the costs of operating the route.

According to conversations with Colin Holmes and board member Lawrence Malski, the County of Lackawanna Transit System (COLTS) would be willing to work with LHVA to develop a single bus route that would link the Scranton heritage attractions Everhart Museum, Lackawanna Historical Society, Radisson Station Hotel (with path to Iron Furnaces State Park), Steamtown and Trolley Museum, Anthracite Museum and Lackawanna County Coal Mine Tour. Further discussions would determine route, costs, and the kind of vehicle to be used. If such a route attracted enough riders to support it, the vehicle could be specially designed, or painted with a logotype and recognizable color scheme. At peak times the bus could carry an interpreter (possibly a volunteer student from the University of Scranton or another local college), and at other times it could offer recorded interpretation about the Heritage Valley as a whole, the significance of Scranton, and interesting notes along the way about the downtown, the Hill district, the river and railroad corridor, and the anthracite industry as represented by Washburn Cemetery and the Coal Mine Tour site. The vehicle could carry advertising placards for each attraction, as well as for the Heritage Valley excursion, the "station lunch" program, and special events promoted by LHVA or its partners.

Most of the Scranton heritage attractions are already reachable by one bus route or another, but under this plan, a visitor could board a single bus at a stop near the Steamtown Plaza/ Internodal Center and without making a transfer, arrive at any of them.

A Bus for the Heritage Valley Towns

In addition to serving Scranton, COLTS routes run up the Heritage Valley to serve the towns enroute to Carbondale. COLTS officials say they could operate a regular route up and down the line that would mirror the excursion rail route and run on a regular schedule. Such a bus route would form the core of a nonvehicular "track." The bus could initially operate on weekends between May and October. If the routes were to become popular with resident riders, or if off-season visitation were to grow, the bus season could be extended.

While the bus routes described here are intended as part of the LHVA interpretive experience, they could also carry members of the public. The up-the-Heritage Valley route in particular, running directly as it would between the Steamtown plaza and Carbondale, could be used by residents for commuting, shopping and other purposes. These local riders would thus help support a bus route that directly contributes to the LHVA visitor experience.

The Heritage Valley Core and Mid-Scranton Driving Tours

A driving tour would be the third "track" for exploring the Heritage Valley. Such a tour could begin at the County Visitor Center on I-81, or it could begin at the orientation at the Steamtown Plaza/ Internodal Center in town. Certain tourists absolutely refuse to drive in cities: these visitors, entering the program at the County Visitor Center, could opt to bypass Scranton altogether and proceed directly to the sites between Providence and Carbondale. Although they would miss a great deal, they would still encounter a satisfying program, including all theme elements and an orientation presentation at the Carbondale gateway.

Unlike the rail or bus routes, which are inflexible, the driving tour permits visitors to take side-trips from the Key Interpretable Sites to see clusters of theme-related sites that are not along the Heritage Valley spine or core route. These side-trips are briefly described in this report under the appropriate Key Interpretable Sites sections.

A special map-guide would set out the driving route. It would include an introduction to the Heritage Valley and its story, and brief descriptive, illustrated passages on each of the Key Interpretable Sites and on each of the existing interpreting institutions. The actual driving tour would have two sections: the mid-Scranton sites, and the river corridor sites from Providence to Carbondale. (See attached map for route delineations).

Mid-Scranton

This tour segment comprises the sites in the band across the midsection of the city, and finishes with an easy link to the Heritage Valley Driving Tour. The route would be designed to start at the Steamtown/ Internodal Center gateway with its context-setting exhibitry and orientation, and to proceed as follows:
(assume street grid runs north -south, i. e Washington Street runs south to north)

- East on Lackawanna Avenue, south on Adams Avenue to *Scranton Iron Furnaces State Park.*
- North on Adams Avenue, east on Linden Street to *Lackawanna Historical Society.*
- North on Quincy Avenue, east on Mulberry Street to Nay Aug Park entrance and *Everhart Museum*
- North on Harrison Avenue, west on Gibson Street (viewing part of Hill section, and enjoying a dramatic westward vista over the city), south on Wyoming Avenue (viewing downtown landmarks),
- West on Lackawanna Avenue, across the river bridge, south on South Main Street, west on Washburn Street (noting the Washburn Street Cemetery with a brochure note on the burial there of miners killed in the 1871 Avondale Mine Disaster, which led to legislated reform in the anthracite industry). North on South Dewey, west on Jackson, south on South Keyser to Continental Drive and the entrance to McDade Park, *Lackawanna County Coal Mine Tour and Pennsylvania Anthracite Museum.*

To join the spine of the Heritage Valley driving tour from McDade Park, the map would guide visitors:

- North on South/ North Keyser Avenue, east on Market Street to park in City lot west of Main Street, for *Providence and The Plot.*
- From Providence and The Plot, join the Heritage Valley driving tour route and proceed toward Olyphant and Carbondale.

Heritage Valley Driving Tour

The Scranton By-pass Option.
There will be visitors - mostly older people -- who will insist on using their cars to tour the Heritage Valley, but who will not drive urban streets. This plan provides a comprehensive and acceptable option for them. Those drivers would be able to start at the County Visitor Center, then follow I-81 to the Main Street exit and drive one mile south to the Providence site. Although they would not get the context-setting experience at the beginning of the tour, they would be able to pick up a similar exhibit at Carbondale. This option would be delineated as an inset on the Map-Guide brochure.

The Core Driving Tour
Starting at the orientation and context-setting experience in one of the buildings at the Steamtown/ Internodal Center, where the driving tour visitor has parked his car, the Core Tour proceeds:

To Providence and The Plot
- North on North Washington Street to Marion Street in the Green Ridge neighborhood, where he jogs right then left to continue north on North Washington Street. This is the heart of the *Green Ridge* residential neighborhood.
- West on Electric Street, then a jog onto Market Street, crossing the Lackawanna River on Market Street, crossing Main Street and proceeding to the City parking lot on the north side of Market Street in "restaurant row."
- Leaving his car, he uses his map to explore the *Providence section and The Plot* as desired.

Side Trip: *Through Leggets' Gap.* Leave Providence going west on Market Street. Follow signage to Routes 11 and 6 to the towns of Clark's Summit, Clark's Green, Dalton and Waverley. Leggets Gap through the West Mountains was an early access point to the Heritage Valley. Roads, the railroad, and the Interstate Highway all run through the gap on their way west. Clark's Green was an agricultural community until 1907 when the Northern Electric Railway began transforming it into a Scranton suburb. Waverley is a pretty, green town that was a summer resort for the well-to-do entrepreneurs and businessmen, and is filled with Greek Revival, Victorian and early-20th-century houses, restaurants and shops.

To Olyphant

- Leaving the Market Street parking lot, the driver turns north on Main Street (noting the gate house that once guarded the *Henry Belden Rockwell estate* on the site of Weston Park), then right on Depot Street and into The Plot. Turning left on Amelia (noticing enroute the *D & H office* building and the *megaliths* that were railroad bridge abutments), he proceeds to Parker Street, turning right and crossing the river.
- Turning left on Boulevard Avenue, he traverses the old *Marvine Breaker site*, goes under I-81 and across the Lackawanna River.
- At North Main Street he turns right, proceeding north (noticing enroute the *Valley Junction historic site* marked today by the Mid-Valley Alignment building on the east side of the road.
- East on Lackawanna Avenue, crossing the river into *Olyphant*, and continuing east to parking at Public Square near the Queen City Railroad Station.

To Archbald

- From Public Square, the driver proceeds north on North Valley Street (noting the old *D & H passenger station* and WEA Industries, formerly the *Olyphant Silk Mill*).
- North Valley Street becomes Constitution Street in Jessup.
  Side Trip: *William Loftus House*. 805 Hill Street. Continue on Constitution Street, turning right on Hill Street. Continue to #805, near the railroad tracks. The house was built ca. 1895-1900 during boom times in the anthracite industry. William Loftus's father James invented an electric ratchet drill for use in mining.
- Return to Church Street.
- Church Street east to *Grassy Island* Avenue (noting the name of the first and one of the most important Heritage Valley collieries), turning northwest on Route 247, which he follows out to the Casey Highway.
- Casey Highway to Exit 5: Salem Road. Salem Road west into the borough of Archbald, then left (south) on Church Street past *St. Thomas Aquinas* church and the borough hall.
- Church Street becomes Laurel Street, which the driver continues to follow south, crossing Laurel Run, passing the Archbald passenger station and finally arriving at the *Gravity Slope interpreted site*.
  Side Trip: *Varden Village*. Return through borough of Archbald to Salem Road. Follow it east past Route 6 and over Moosic Mountain. (Small roads from this point must be identified and mapped.) After bearing east and north through several V's, one comes to Route 196 at the village of Varden in South Canaan Township. There stand 6 historic buildings including a 19th-century general store and several houses of similar period. Approximately a mile away along a scenic road on Route #63017 stands a rubblestone-wall octagon school house built around 1830 and in use as a school until 1900. This rural community is interesting to contemplate because the Lackawanna Heritage Valley was completely absorbed by the anthracite industrial system. It had to be provisioned from outside: the rural countryside beyond the Heritage Valley, in and around places like this village, engaged in the business of provisioning the great industrial system.

To Carbondale

- Proceeding north on Laurel to Monroe Street, the driver turns left (west) to cross the Lackawanna River on the Monroe Street bridge.
- North on Main Street (passing a culm pile related to the old *White Oak breaker*, familiar from the Gravity Slope story, then a wild and rocky stretch through which the river runs beside the road) to Roosevelt Street (Route 107) in Jermyn. (Here the brochure notes the old Windsor Hotel, where Jermyn doctor Thomas Shields proposed the standard emergency treatment for miners' injuries that became the *first-aid system*).
- Left on Route 107.
- Right (north) on Commercial Route 6 to Cottage Street, which joins Main Street at *Carbondale*. From there proceed to parking for the *orientation and context-setting exhibitry* at the Pioneer Bank building at the corner of Main and Salem streets.
  Side Trip: the *D & H Heritage Corridor*. Leave Carbondale on Canaan Street, which becomes Route 6 east. This route parallels the track of the Delaware & Hudson Gravity Railroad over the mountain. The D & H Corridor begins along Route 6 at Waymart (where a Gravity Railroad depot is under restoration). It continues to Honesdale (rail excursions along the Stourbridge Line to Lackawaxen PA), then on to Port Jervis on the Delaware River, and from there north to Kingston on the Hudson. This heritage corridor is thematically identical to the Lackawanna, and has a number of D & H-related sites and attractions, along with canal towpaths and other hiking trails.

The Express

Driving visitors who want to streamline their visit timetable can opt for a quicker route that uses the highway system to hop from one site to the next. (As the map would delineate both the Core and Express routes, a visitor could mix and match a route using sections from each option.)

To Providence

From the Steamtown gateway, this visitor would proceed north on North Washington to Mulberry, where he would turn east, cross the river, and get on Route 6 & 11 North. He would take that to I-81 South, then exit at Main Street and proceed south on Main to the Providence site as above.

To Olyphant

From Providence, the Express, like the Core Route, follows Main Street to Olyphant. This driver leaves Olyphant on Division Street, proceeding out to the Casey Highway.

To Archbald

For Archbald, the Express takes Exit 5, Salem Road, and proceeds as in the Core Route to the Gravity Slope site.

To Carbondale

Leaving Archbald, the Express takes Salem Road back to the highway and continues to Exit 7, which enters Carbondale from the north, on Canaan Street, passing the *D & H nexus* at the Ben-Mar site before arriving at parking for the gateway orientation.

The Tour for Pedestrians and Cyclists

The core pedestrian and bicycle route follows the Lackawanna River Heritage Trail, which is currently under development and not continuous. In the future, pedestrians would be able to walk 32 miles along the river corridor between Old Forge and Vandling. At present, they can use completed segments to move through and between several of the LHVA interpreted places. These segments are mentioned again at the relevant sections of this report. The completed segments are:

- CNJ Trail, Scranton to Taylor. Three miles acquired, 1 ½ miles in Scranton developed.
- O & W Providence Trail, ½ mile acquired and developed. (This trail segment runs through the interpreted site of *Providence and The Plot*, from Market Street to the Parker Street Bridge.)
- O & W Blakely to Archbald. Three miles acquired and developed. (This segment runs from the Peckville School north to the Laurel Street trailhead at the *Gravity Slope interpreted site in Archbald.*)
- Lackawanna Heritage Crossing. 150-foot pedestrian-bicycle bridge across the Lackawanna River between Mellow Park in Olyphant and Condella Park in Blakely.
- O & W Trail, Simpson to Forest City. Eight miles of trail easement acquired, trailhead developed at PA 171 in Simpson.
- D & H Trail, Simpson to Lanesboro. 41 miles acquired, some sections developed.

More recently, rights-of-way along the Ontario Scranton & Carbondale Railroad have been acquired: in Scranton and Throop, between Archbald and Jermyn, and in Carbondale. These segments await development.

Eighteen miles of right-of-way remain to be acquired before the River Trail is continuous from the confluence of the Lackawanna and Susquehanna rivers to Stillwater Dam above Forest City.

The Scranton Greenway (Loop)

See map of Greenway route.

Scranton's circulation pattern presents a serious challenge to organizing a visit that would include the city's major cultural and heritage attractions. Scranton's street pattern facilitates north-south travel, but, particularly in the central section, east-west travel is difficult due to waterways, highways and extensive rail lines and yards. Many of the key anthracite-related attractions are located in a band crossing the central part of the city from the Steamtown site on the west to Nay Aug Park on the east. Some of these are very difficult to visit due to out of the way locations or to scarcity of parking.

The Lackawanna River Corridor Association has taken the lead in identifying and developing a pedestrian route - the Scranton Greenway -- that would center on Steamtown and utilize rail rights of way and other paths on both sides of the river. LRCA's Greenway plan also includes conceptual plans for several attractions adjacent to the path. These attractions have not been fully described, but would neither duplicate nor compete with businesses already operating in downtown Scranton. The path, together with the associated developments, would result in a great deal of river-related activity including flatwater boating of various sorts, markets, sports and venuses for entertainment.

The Greenway would link the Central New Jersey Terminal with downtown Scranton, Steamtown, the Trolley Museum and the proposed Internodal Transportation Center, and with the Iron Furnaces, the Lackawanna Historical Society, the University of Scranton, the Everhart Museum and Nay Aug Park. Such a chain of links would be of tremendous value to residents, students, merchants, heritage and cultural institutions, and visitors. Several heritage attractions, particularly the Iron Furnaces and the Lackawanna Historical Society, are difficult to visit because they are out of the way, or have little available parking. They would derive benefit from a pedestrian link with sites that are more central, and have more parking. Scranton University students would be provided a simple, automobile-free way to get from the campus and its playing fields to the downtown to enjoy themselves (and to boost the economy). Both students and pedestrian visitors are more likely than car-bound ones to shop, eat and drink in downtown Scranton, bringing great economic benefits to the downtown merchants.

The Scranton Greenway faces four critical challenges: new (or reutilized historic) bridges, negotiation with the county railroad (LCRA) for joint pedestrian/rail use of tracks, the cleanup of several contaminated sites, and some steep elevation changes between street level and the river. However, the Greenway is perhaps the most important segment of the River Trail because of its ability to link Scranton's heritage attractions, and also for its potential to stimulate the economy of downtown Scranton. Every effort should be made to support and further this trail project.

PROGRAMS AT THE KEY INTERPRETABLE PLACES

Each of the Key Interpretable Places holds clues to part of the Lackawanna Heritage Valley's industrial story. Each has been chosen for interpretation not just because of what once happened there, but also because of signs the past has left for us to read in the landscape today. Each of the Interpretable Places has been transformed by cultural and industrial shifts; massive landforms and structures that once seemed as permanent as the mountains themselves have vanished. The power of time to effect change of almost unimaginable magnitude is an important part of the story.

Still, in these Interpretable Places, the past has not vanished without a trace. Clues abound, in expansive vacancies and linear voids, in the anomalous puzzle of a building different from its neighbors, in the slash of an old turnpike road across a later street grid. Interpretation supplies the keys that restore meaning to traces of the past, and give visitors access to a comprehensible picture. At these interpreted places, visitors find transformed historic landscapes, and tools they can use to read them. They are invited to stand at certain, selected vantage points from which they can look, explore and imagine as though they were urban archaeologists. The sites themselves, plus historic images, maps, and text, furnish people's imaginations so they can reconstruct the past and experience "spirit of place."

Providence Square, Providence Station, and the Plot

Interpretable Resources

Interpretable resources include Silkman House/Scranton Public Library branch, Lackawanna River Corridor Association 2006 North Main Street (1840), Providence Presbyterian Church 2018 North Main (1846), Providence Methodist Church (1852), Tripp House 1011 North Main Street (1812, 1880, 1890), Weston Park, Rockwell Gate House, Parodi Cigar Manufactory/International Silk Mill, Lackawanna River and Greenway including steep riverbank cliffs and an old waterpower mill site, The Plot, two Providence railroad stations - D & H, O & W -- Peck Lumber, Scranton Lace Factory (1891), Green Ridge, and Marvine Breaker Site. The Plot is particularly interesting for interpretation: there are massive stone structures on open land owned by the Rail Authority to mystify and interpret, several handsome and intriguing 19th-century buildings including a handsome D & H office, two depot sites, the bend of the river itself and rural-looking walks along its banks. Tours of 19th-century Providence have been developed to some extent already. West Market Street houses a number of cafes and restaurants that could contribute to the visitor's comfort and pleasure.

Relationship to Thematic Structure

At Providence and The Plot, the Lackawanna Heritage Valley's three themes are balanced in a story that features the tide of the great anthracite industrial system sweeping over an early, self-contained village. The Land theme comprises the river and the stream that powered early mills, the gap in the western mountain range, and the Native American settlement site that proved hospitable to 18th-century European arrivals. The People theme is illustrated by the Tripps and Silkmans; the early-19th-century Protestant churches; by the post-1860 houses where lived the anthracite late-comers; and by the still-legible commercial, residential and industrial pattern of the village center. The theme of Industry is most powerfully illustrated by the swash of railroad remnants crossing The Plot, evidence of the expansion of the Carbondale-centered system southward through the Heritage Valley in the mid-19th century. The arrival here of the D & H Gravity Railroad swept the old village into the industrial system, transforming it and linking it once and for all to the rest of the Lackawanna Heritage Valley.

Providence stories cluster most densely in the pre-industrial "Early Settlement" and the "Anthracite Comes of Age" periods.

Background

Even to the unschooled eye, Providence looks different from the other Heritage Valley towns. It is more ancient and less ordered-looking; studded with small and stylish old buildings. Although there may be an isolated older building elsewhere, Providence is easily the most ancient-looking place. To the east there is a wild and steep descent to the Lackawanna River, and views of an industrial landscape on the opposite side.

Before it was absorbed into Greater Scranton in 1866, Providence was a distinct village with a local character and a history of its own. Indians of the Lenape nation lived nearby in a village they called "Capoose" -- their burial ground was near the Yankee town. Settled in the 1770s by Connecticut farmers, the little hamlet of Providence grew up at the crossroads where the Philadelphia turnpike met the road to New York. By 1850 there were a dozen houses, stores, water-power grist mill, an axe & scythe factory, a bridge, two churches and a hotel.

During the second half of the 19th century, Providence was swept along with the rest of the Heritage Valley into the expanding toils of the anthracite coal industry. In 1850 and '51 the DL & W Railroad extended its lines through the town; coal mines were opened above the river. In 1860 the Von Storch breaker was built on the east side of the river, towering over the town. Houses for the Welsh and Irish miners covered Providence open space with breathtaking speed; more collieries, more breakers followed.

In 1907 the Northern Electric Trolley Line linked Providence with downtown Scranton, as the railroad linked it with the rest of the Heritage Valley. As recently as 1930, however, Providence was still a distinct place, separated from other Scranton neighborhoods by the sinuous river with its steep banks.

Legible architectural and landscape resources in Providence can be used to interpret the pre-anthracite era, and the impact of anthracite and industry on an ancient town in its path. Each of the major Heritage Valley themes of Land, Industry and People can be illustrated and interpreted at and around Providence Corners. The William Silkman House (ca. 1840), several other houses, a Presbyterian (1847 - '86) and a Methodist (1852) church, the ancient crossroads itself, the street pattern, the river-edge bluff, the bridge site and remnants of early industry all survive - legible and interpretable - to this day. Parodi Cigars occupies the old International Silk factory. Although it's no longer making silk, the manufacture of cigars is an old Heritage Valley industry that was a companion to collieries as cigar factories often employed children. (We will investigate the possibility of process tours of this facility.)

Current Site Conditions

Providence gives a different impression of itself than other Heritage Valley towns do, especially when seen from the Market Street Bridge approach. From the east side of the river, Market Street seems to be a road into a different town. With the wild and steep ascent from the Lackawanna River and the backyard view of the Silkman House and its neighbors, Providence conveys the idea that it is an older place than the other towns. In contrast, The Plot, with its swash of railroad tracks and scatter of railroad landmarks and sites, associates archaic Providence Square with the anthracite tide of the second half of the 19th century. Programs at this site would capitalize on the distinct first impression it makes on observant visitors.

Although visitors could enjoy Providence as it is right now, several improvements would add to the site's legibility and its charm. First, several sets of billboards lining the steep section of East Market Street rising from the bridge to Main Street could be removed. Next, the picturesque old Providence Square Station that served the N. Y. O. & W. Railroad nestles in the Market Street bend beyond the bridge. The Lackawanna River Trail passes beside it. The old station is now stranded in a well-established junkyard, but if the site were acquired it could become an attractive and appropriate place for interpretation, picnics, or a small recreation-related business.

Providence would be a major LHVA destination, its programs including arrival sites, parking, a restroom facility, context-setting exhibitry, interpreted sites and views, walking trails and driving routes. Today's Providence is a thriving commercial and residential neighborhood, with several appealing restaurants and cafes and a city parking lot on West Market Street. The Lackawanna River Trail runs from Steamtown in Scranton through this site and north past I-81. The Lackawanna River Corridor Association (LCRA) has its office in the Silkman House on Main Street, and has installed several interpretive panels in the terraced back yard. The Lackawanna County Rail Authority operates freight trains along the old D & H tracks running through The Plot, and owns a large parcel, the site of the former Providence Station, bounded by Wurtz and Amelia avenues, Depot Street and the Lackawanna River. The City of Scranton is implementing a Providence Square Streetscape Improvement Project around the Main Street - West Market Street intersection.

Partners and Potential Partners

City of Scranton
The Office of Economic and Community Development is planning a streetscape project for Providence Square comprising landscaping for the square itself, and curbing, lighting and street furniture along Main and Market streets. The city owns the branch library at the Silkman House, and could give LHVA permission to establish its interpretive installation on that property. The OECD could work with LHVA on permitting visitor parking in the city lot on Market Street, and developing signage linking the parking area with Main Street, Market Street and The Plot. The City could also work on acquiring rights-of-way on a private stairway leading from a property on Main Street near the Rockwell gatehouse up the hillside to the edge of Weston Park. It could also collaborate with LHVA in obtaining permission for interpretive installations on properties in The Plot.

Lackawanna River Corridor Association
The LRCA is the prime mover in the development of the River Trail. LHVA could work with LRCA in acquiring, or acquiring rights to use, the old O & W Providence Square depot on lower Market Street along the trail. LRCA could be encouraged to give priority to developing the river trail segment through Providence and The Plot, and could participate in developing the interpretive installations throughout this site.

Lackawanna County Rail Authority
LCRA owns the former D & H Providence Station site, a large parcel of land between Amelia and Wurtz avenues, Depot Street and the river. There is a long shed on the property, but the place where the station stood is vacant. This site is recommended as the key Providence interpretive installation, and it is recommended that a station-and-interpretive installation be built on it. LCRA's current plans call for the county to take the parcel, but LCRA would be willing to consider a proposal for the interpretive use.

Lackawanna Historical Society
LHS has considerable experience in planning and presenting architectural and house tours. It can recruit neighborhood participants, develop the tour and train guides to present it. This skill should be employed in planning driving and house tour programs for Providence and for the Green Ridge neighborhood, which is linked to the Providence site. LHS collections include photographic, map and archival material that would be useful in developing the interpretive installations.

Arrival
At this site as at all the others, interpretive strategies are carefully devised to control the way visitors approach, the places they see, and the routes they take from one spot to another.

People would approach the Providence site in four ways: on an excursion train, on foot or on a bike, on a county bus, or in a private car. Depending on mode of transport, they would arrive at one of two interpretive installations where they would receive a general site orientation and an interpretive display that illuminates a distinct aspect of the Providence story:

- Excursion train riders, and those touring on the COLTS bus, would arrive at the D & H Railroad Station site on Depot Street in The Plot;
- Motorists, having driven out Wyoming Avenue and through part of Green Ridge, would be directed to the D & H station site as well, where parking would be made available.
- Other motorists would park in the city lot on West Market Street parking lot a short distance west of Main Street. From there, signage and a marked sidewalk "path" would direct visitors to the Silkman House yard.
- Pedestrians, having walked the Lackawanna River Trail segment from Steamtown would encounter a stairway climbing the riverbank to the back yard of the Silkman House on Main Street.

Interpretive Installations
We propose two primary and three secondary interpretive installations in this area. The primary installations would be reception sites with orientation and context-setting information as well as site-specific stories. These would be roofed structures fitted with panels for image-and-text displays. One of them would incorporate restroom facilities and a pavilion for fine-weather activities. The three secondary installations would be viewing stations where vistas would be keyed and interpreted.

D & H Depot (site)
Visitors disembarking the County Rail excursion and the COLTS buses would encounter Providence at the old D & H Depot. The station site is owned by the county rail authority (LCRA), and could be made available for

LHVA use. There is no permanent building on the site today: we propose a structure that would work as a railroad station and orientation facility offering restrooms; with a roofed extension that would serve as a pavilion for fine-weather activities and accommodate orientation and interpretive programming.

Research must be done to determine the appearance of the original station building. The new structure should reference rather than replicate it, in orientation, shape and massing. It should be a wooden structure, although the open platform section (the pavilion) could use iron and other metals. The design should accommodate exhibit panels, text rails and brochure rack. Benches should be reminiscent of outdoor railroad station seating. There is an old baggage cart on the site now: this cart should be salvaged and used for site ambience.

The reception and orientation component for both the Depot and Silkman interpretive installations would feature a large-scale, hand-drawn, colored "you-are-here-and-you-can-get-to-there" map of the area bounded roughly by Route I-81 to the north, Route 6 to the west, Green Ridge Avenue to the south, and Wyoming Avenue to the east. The eye-catching map would include key streets, paths and buildings in Providence Corners, The Plot, part of Green Ridge, Scranton Lace Works and the Marvine site. The first text element would be a sweeping significance statement for the entire focus area; the second text element would guide visitors to interpreted sites, walks and drives in the immediate vicinity.

A feature at both primary interpretive installations would be a brochure rack with site-specific brochures delineating nearby walking and driving routes, accessible sites of interest and recommendations for meals. The rack would also contain a combined train/bus schedule and a full range of other LHVA brochures.

Context-setting exhibitry at the Depot site would feature the arrival and impact of the great united anthracite-railroad system that swooped down on this place with the 1850s extension from Carbondale of the D & H Gravity Railroad. Historic images and photographs of nearby related sites would be linked in the story of the industrialization of a long-settled town. Before the railroad, the neighborhood now known as The Plot was a fairgrounds with a race track. The D & H shot through the area in a narrow strip bounded by the aptly named Wurtz Avenue, and by Amelia Avenue on the south. Across from the depot, the large and eyecatching brick Victorian, can be identified as a former D & H office. In the wake of the railroad came anthracite extraction and processing. Views and excursions from this spot would reveal the sites of two massive breakers - Von Storch and Marvine - that once sandwiched this comely little town, but by now are memories themselves. A walk along the local segment of the River Trail would take visitors past several sets of massive and mysterious-looking megaliths - these were bridge abutments that carried the N. Y. O. & W. Railroad over streets, the D & H tracks, and the Lackawanna River. From atop one of them visitors could command views of the railroads and their landmarks.

Industrialist Henry Belden Rockwell's mansion, a high Victorian Italianate palace that stood where Weston Park is today, is recalled for visitors through the small and stylish gatehouse that survives at Main and Pond streets today.

Silkman House

The interpretive installation would stand on the lower terrace in the Silkman House back yard, on the landing at the top of the stair leading up from the river trail. A primary design requirement would be compatibility with the beautiful old house itself. The installation would be a wooden structure, roofed and open-walled, possibly a summer-house reflection of the Greek Revival tetrastyle form of the house itself. Exhibit panels, text rail and a brochure rack would fit between the wall posts, and built-in benches would be a feature of the design.

Like the installation at the Depot, the Silkman pavilion would feature an orientation map and image-and-text significance. Providence-specific routes and activities would also be suggested, and for visitors' convenience a brochure rack would be stocked with LHVA and site-specific brochures.

The site-specific element for the Silkman House installation would tease out threads of each of the major Heritage Valley themes: Land, People and Industry. Exhibitry here would speak of the small town as it was before the D & H Gravity Railroad brought the anthracite industry in its wake in 1859. (See Task I. A. 2 for a discussion of Providence history and significance.) A schematic map would show the geographic imperatives that determined the site of the 18th-century Connecticut settlement - the roads and the river, the gap in the western mountain range and the waterpower value of Leggett's Creek; the Lenape pattern upon which the Yankees superimposed their own town. Images and text would draw viewers' attention to the steep embankment, halfway down which can still be seen the remains of early mill sites. Another exhibit element would introduce as a character William Silkman, the mid-19th-century citizen who opposed the Wurts Brothers' expansion into Providence with the railroad and attendant anthracite industry. Unlike his neighbors, whose houses postdated the Wurtses, Silkman owned the mineral rights under his house. While mines tunnel under other parts of

Providence, here there are none. An interesting point to interpret: the Silkmans opposed the D & H, but not the Von Storch colliery, the effect of which was at least as damaging to the character of Providence. The reason: Von Storch was a neighbor, while the Wurts Brothers were outsiders from boom-town Carbondale - virtually a different world in the mid-1800s.

Megalith Lookout

Massive stone structures make mysterious landmarks scattered throughout the northern corner of The Plot. All were abutments for bridges on which the N. Y. O & W. Railroad crossed local streets, other railroad tracks, and the Lackawanna River. The one with the most promise for interpretation stands near the southeast corner of Dean Street and Heermans Avenue. The Lackawanna River Trail skirts the structure, so it is readily available both to pedestrians and to visitors in cars. The abutment retains its backfill, which is gently graded from street level to the top of the structure. A safety platform may be required before visitors could be encouraged to climb the megalith.

From the top one can see evidence of two railroads, and the factories, warehouses and office building of the Delaware & Hudson. There are also visible clues that suggest that the industrial system was once greater and more complex than it appears to be today - meaningful linearities suggesting more railroad tracks, vacancies in prominent places. There is also a good view of what appears to have been an old farmhouse caught and squeezed between the converging tracks of the two railroads. The old house, simple and rural in spite of its century between the rail lines, seems a strong metaphor for Providence itself.

Interpretation would include historic maps and photographs that show the extent of the railroad system at Providence, the compassing spread of colliery and industry. Looking at these, and seeing the ghostly impress of the vanished past on the landscape itself, the visitor is invited to imagine the mighty system whose remnants are glimpsed from this special vantage point.

Parker Street Bridge

The Lackawanna River Trail leaves the N. Y. O. & W. right of way to cross the river on the Parker Street Bridge. From the north side of the bridge one has a clear view into the vast site of the former Marvine Breaker, which is now being graded for redevelopment. There are also interesting views of the "mysterious" megalithic abutments of the bridge that carried the N. Y. O. & W. tracks over those of the D & H. There are sidewalks on both sides of the bridge, which is not a historic structure, and ample room for a modest-sized image-and-text wayside station built into the bridge rail.

Weston Park

Providence occupies a steep and rocky site, and Weston Park crowns one of the summits. Accessible by car through local streets, the park can also be the destination for an exhilarating climb straight up the hillside from Main Street opposite Pond Street in The Plot on a steep wooden stair. (An alternate route twists uphill from Market Street on steep streets and alleys and inter-block stairways.) Interpretation here would be limited to wayside stanchions of rustic design and in materials compatible with WPA projects. Interpretation would deal with the views, the WPA-built park, and the Rockwell mansion that formerly occupied the site. The theme here is change over time: even structures and systems that seem as permanent as the Pyramids give way to massive shifts in economy and culture. The view from the summit is spectacular, sweeping across The Plot, Green Ridge and the Marvine Breaker site. Picturesque Weston Park was built by the WPA, and features a picnic area, small community center and a swimming pool. It is worth seeing for the WPA association alone, but there is more: the park occupies the site of the Henry Belden Rockwell mansion, a palatial estate that once occupied a good portion of Providence village.

Intriguingly, the Rockwell gatehouse still stands - recognizably distinct from all the buildings around it -- on Main Street opposite Pond Avenue. It is a small building, but an architecturally distinguished one, with steep hip and cross-gable roofs and a sophisticated asymmetrical massing. Anyone seeing it would wonder. Interpretation near the gatehouse and the stair up the hill would focus on the Belden estate, and on two ideas more important than the estate itself: the power of transformation to obliterate historical memory, and the power of the remnant to invoke an understanding of the vanished whole. If this gatehouse were gone, there would be no reason to remember the Belden mansion . . . a page of local history would have slipped out of mind. Oblivion happens without effort or intention, and it happens all the time. Instead, because this remnant survives, it acts as a "place marker" for the whole. Even when no living person remembers, people wonder, and question. As long as a remnant survives, a site isn't completely lost.

Note: The Rockwell Gate House should be protected as a historic site. Further: a steep wooden stair climbs the hill between Main Street and Spring Street adjacent to Weston Park. It offers a direct route to visitors touring Providence and The Plot on foot. According to Bernard McGurl of the Lackawanna River Corridor Association,

the City of Scranton may have built the staircase to provide access to the swimming pool in the park, and maintained it until some time in the 1970s when pool use declined. The stair now has a "private property" sign on it, although it may still occupy a public right-of-way. An effort should be made through deed research to identify the public right-of-way that almost certainly exists between Main Street and the park, and other public property rights in the immediate hillside area.

Interpreted Walks
A key Providence/The Plot program would be an interpreted pedestrian loop linking the D & H Depot site, the D & H Office, the O & W megalith, Parker Street Bridge, Riverside Drive, the East Market Street "restaurant row," and the Silkman House (see the interpretive site map for delineation of the route). The loop would utilize a segment of the River Trail, Riverside Drive and other residential streets in The Plot, and Market and Main streets in Providence Square. Extended walks from this site would take people along the river on Nay Aug Avenue to the site of the Von Storch colliery; up the Providence hill to Weston Park, and along the River Trail to the former Marvine site on the O & W right-of-way. A walking tour of the Green Ridge residential neighborhood could be added to these programs later.

Driving Tours
Visitors can choose to tour the Heritage Valley by car rather than rail or bus, but recalling the confusing and incoherent experience of local driving, LHVA would control the experience of driving visitors as closely as it can. Website downloads and tour-guide brochure would offer driving maps that would guide visitors into the Heritage Valley and show them preferred routes among the sites. Drivers to Providence would be directed to the D & H Depot site, so that their arrival experience would be similar to that of people stepping off the excursion train or the COLTS bus. Drivers would be invited to park on the station site and continue their visits on foot, but a driving alternative would be provided for those who prefer it.

In the driving alternative, the visitor is orientated at the station, then proceeds in his car through several blocks of Plot streets to the interpreted megalith on Dean Street. From there he drives to the Parker Street Bridge with its view of the Marvine site. Because the driver's advantage is that he can go farther than the pedestrian, and he can go where the train can't, we would then direct driving visitors to cross the Parker Street Bridge and drive out Boulevard Avenue for a close-up view of the Marvine site now undergoing reclamation. After Marvine, the driving option returns to Providence on Main Street, then climbs the steep hillside to Weston Park. From there, quaint and crooked streets of Victorian-style houses clamber back down the hill to "restaurant row" on West Market Street. The visitor can park there, in the city lot, for post-visit relaxation and refreshment.

Side Trip: Through Leggetts' Gap
Automobile visitors can enrich their Providence experience with a side trip through the old gap in the western range of mountains bordering the Heritage Valley. Up in the hills they would find several historic towns that were summer resorts for well-to-do residents. Drivers would leave Providence going west on Market Street, following signage to Routes 11 and 6 to the towns of Clark's Summit, Clark's Green, Dalton and Waverley. Leggets Gap through the West Mountains was an early access point to the Heritage Valley. Roads, the railroad, and the Interstate Highway all run through the gap on their way west. Clark's Green was an agricultural community until 1907 when the Northern Electric Railway began transforming it into a Scranton suburb. Waverley is a pretty, green town that was a summer resort for the well-to-do entrepreneurs and businessmen, and is filled with Greek Revival, Victorian and early-20th-century houses, restaurants and shops.

Station Lunch
Providence's West Market Street is a veritable "restaurant row," featuring a café and a first-class restaurant among other eateries. Visitors could be directed toward these places on ordinary days, while on high-season weekend days, one of the restaurants might provide the "station lunch" program to be delivered at the excursion station site in The Plot. Picnic tables under the covered platform described above would provide a pleasant place to sit and eat; so would Weston Park, the terrace behind the Silkman House, and the area beside the railroad bridge in The Plot.

Olyphant: Queen City of Churches

Interpretable Resources
Interpretable resources include eight architecturally interesting and active churches, several church schools, an elaborate borough hall, a compact commercial district including banks, stores, restaurants and bars, and a former hotel. The local silk mill, now adaptively reused, survives, as does an old D & H freight depot and a pair of D & H railroad bridges just south of town. The modern "Queen City" replica railroad station stands on Public Square at Lackawanna Avenue ready to accommodate Heritage Valley travelers. A highly visible and massive pile of coal waste on the west side of the river just south of town marks the site where the Olyphant Colliery stood until 1963. In short, Olyphant has retained all the essential elements of a Lackawanna Heritage Valley anthracite town,

and presents the best opportunity in the county to interpret the life of such a town in the age of anthracite. The Olyphant community is said to be well organized and capable of producing and delivering programs of various kinds.

Relationship to Thematic Structure

Olyphant's interpretation would hew closely to the Lackawanna Heritage Valley theme of People - the organic element of the anthracite industrial system. This town is clearly one of the strong, close-knit and lasting communities, centered on church and family and fraternal organizations, that characterize the Heritage Valley. Olyphant and its sister towns nurtured the spirit, they nourished human ties, and they made safe places for newcomers to sink roots. Like most of the other towns, Olyphant outlived the system that established it. This was no patch town that shriveled when the Company pulled out. People here owned their houses, and they were sustained by their churches and their community even after the jobs were gone. The longevity of the town and its institutions says a great deal about the interdependent resilience of the people of the Lackawanna Heritage Valley.

Olyphant stories would relate primarily to the "Peak Years," "Decline," and "Reclamation and Renewal" periods of Lackawanna Heritage Valley history.

Background

Although the People theme runs through every part of the Heritage Corridor, it is challenging to locate an accessible, legible site that strongly suggests the patterns of human life outside the colliery and the mill. Olyphant with its stunning complement of ethnically diverse churches and towered borough hall, its silk mill and its compact downtown, is just such a place.

Nicknamed the "Queen Borough of the Mid-Valley," Olyphant was named for the president of the Delaware & Hudson Railroad at the time when the gravity system was extended down from Carbondale, creating the opportunity for town development around new collieries. Settled in the late 1790s, Olyphant became a real place after 1858 when the D & H Company extended the Gravity Railroad to nearby Valley Junction. The borough was incorporated in 1877.

Church, Family and Children

Further supporting the "people" story in Olyphant is the visible evidence of the arrival of successive immigrant groups - ethnicities here include English, Welsh, Irish, Polish, Russian, Slovak and Ukrainian. Although similar patterns were repeated throughout the Heritage Valley, in Olyphant the emblematic churches can be seen as "watermarks" for the waves of arrivals. The town itself is an old one, first settled in 1799. When mining began here in 1858, Welsh, English and Irish came as the first miners and laborers. The Welsh Baptist Church was established for those first comers in 1858. Next, in 1861, came the Irish St. Patrick's Roman Catholic, followed by the Welsh Presbyterians in 1865. Eastern Europeans began to arrive in the 1870s - and in 1887 SS Cyril & Methodius Ukrainian Catholic Church was founded to accommodate some of them. So it went in Olyphant, through the first decades of the 20th century - people arriving with their baggage and their beliefs, going to work and establishing family lives, and building churches to house the rituals that lifted their transplanted spirits.

Although Olyphant burgeoned with the opening of its mines in the 1850s and 1860s, and it had the requisite silk mill for employing women and girls, it may have been somewhat more economically diversified than some of the other small towns. Other industries included a brickyard, a cigar factory, and a soft-drink plant.

According to the 1994 *Olyphant Development Strategy*, Olyphant has developed a specialty in weddings. If this is still true, then interpretation of the "people" story here could well focus on wedding customs and the formation of families of different types in the age of anthracite.

Olyphant may well be the site to introduce the story of child labor in the Heritage Valley. Although local histories suggest that education was valued in Olyphant borough - an ordinance required that children stay in school through age 16 - many children younger than that went to work in the collieries and the silk mills.

LHVA has already produced a well-written and highly focused tour of the Olyphant churches. The Lackawanna Historical Society sponsors an annual church tour in a Lackawanna Heritage Valley town. According to director Mary Ann Moran, the Olyphant program has been particularly successful because the community is active and cooperative, and the churches themselves are in a concentrated area.

Current Site Conditions

Of all the small Heritage Valley towns, Olyphant is the most distinct from its surroundings, and gives the strongest first impression with its skyline of varied towers and spires. To even the casual viewer, the place says "churches" and "houses." The town is compactly set inside a river curve to the west with the mountainside to the east, and there are clear gateway approaches from east and west along Lackawanna Avenue. The new "Queen

City" railroad station is prominently sited along the county rail line at Lackawanna Avenue, and most of the interesting sites are within walking distance of the station. The downtown commercial district extends along Lackawanna Avenue and adjacent side streets, and several existing restaurants could well serve touring visitors.

Olyphant's churches comprise a distinguished cross-section of regional types, and comprise the most architecturally significant group of buildings in the borough. Nine of them are clustered within walking distance of one another, and each has already been marked with an interpretive display panel. LHVA has already developed a walking tour of the churches, and a well-written map-guide brochure is available.

Unlike the Archbald interpretive site which is located outside the densely built part of town, Olyphant's interpretive program features the downtown itself. People would be driving into town and proceeding directly to the station plaza (Public Square), and they would be stepping off the train at the station plaza as well. Due to its expansive size and handsome buildings, Public Square already has a strong "sense of place" about it. Still, the Square could benefit from a streetscape program that focuses on street trees, grassy areas, plantings, signage, lighting, and outdoor seating. The handsome, mansard-roofed former Hotel Mahon building could be targeted for eventual adaptive reuse as a station café and/or bed-and-breakfast establishment.

The Lackawanna River Trail has not yet been developed through Olyphant, although LRCA has studied several alternative routes. The preferred route, according to LRCA, begins at the intersection of Lackawanna Avenue and River Street and follows the new flood protection levee along River Street northward to the Lackawanna Heritage Crossing pedestrian bridge into, then through Condella Park. An alternative route would also begin at the Lackawanna Avenue-River Street intersection, but would proceed through the borough on Susquehanna Avenue before crossing the river and proceeding into the park.

Partners and Potential Partners

Borough of Olyphant
The Borough of Olyphant could undertake the streetscape improvements on Public Square described above. The borough could also permit, and cooperate with, LHVA in developing the interpretive installation and station lunch program at the Queen City station. Members of the governing body could contribute information toward the interpretive program, and could identify people willing and able to act as volunteer docents and guides. These same people could also help identify and organize the station lunch program. The borough has supported interpretive programs in the past, and might be expected to contribute significantly in the future.

The Olyphant Churches and Civic Organizations
The Station Lunch program described in this Plan gives visitors an opportunity to enjoy local specialty food in a picnic setting. It also affords a business opportunity for organizations with experience and interest in giving church or firehouse suppers. The station lunch program would need coordination among the participating organizations and the excursion tour operator, but would be a valuable enhancement to the visitor experience, and an income generator for the providers.

Lackawanna Historical Society
LHS could participate in the development of the interpretive program for this site, and could provide training for residents who volunteer as guides and docents.

Arrival
People would arrive in Olyphant by train or bus, or by private car. All would arrive at or be directed to the Queen City Railroad Station at Public Square for reception, orientation and interpretation. Restrooms should be provided at the station. From there, visitors would go forth on foot or by car for a tour of the downtown focused on the churches. "Station Lunch" program would be available during prime seasons, and local restaurants would provide meals and snacks at other times.

- The excursion train would stop at the railroad station.
- Motorists would be directed off the Casey Highway at the Lackawanna Avenue exit. The access road goes directly to Public Square and the station.

Interpretive Installations
Olyphant's reception and orientation programming would be located at the railroad station. Other interpretive markers would be placed at stations on a walking/driving tour. Such markers already exist at the nine in-town churches; this plan recommends adding other sites to the existing program (see below). In addition, visitors

would be invited to go to the end of Hull Avenue to a vista looking downstream toward the Olyphant Colliery site, which would be interpreted there.

Queen City Railroad Station

Parking is available at the station. The interpretive installation here would be built into the platform framing without compromising the station's accessibility. Restroom facilities should be provided at the site.

The reception and orientation component would feature a large-scale, hand-drawn, colored "you-are-here-and-you-can-get-to-there" map of the area bounded Main Street, Condella Park, the county rail right-of-way, and the southern end of the Olyphant Colliery site. The map would be large-scale and eye-catching, and would include key streets, the walking/driving tour routes, and each interpreted site in Olyphant. The first text element would be a sweeping significance statement for the entire focus area; the second text element would induce visitors to embark on the walk/drive tour through town. The installation would also provide a brochure rack with site-specific brochures delineating nearby walking and driving routes, accessible sites of interest and recommendations for meals. An important brochure for this site would be the "Faith and Heritage" walking tour of Olyphant churches produced by LHVA. The rack would also contain a combined train/bus schedule and a full range of other LHVA brochures.

The interpretive theme for Olyphant is life outside the mine, with emphasis on families, women and children, and on the supporting role churches and ethnic organizations played in immigrants' lives.

The key topic presented here is the varied origins of the ethnic groups represented by Olyphant churches - and the significance of an immigrant's background to the life he made. The early arrivals were from Great Britain - England, Wales and Ireland. They had language in common with the Americans, and many were highly skilled, respected and well paid for their work in the coal field. The Welsh (Presbyterians, Congregationalists and Baptists) arrived in the Heritage Valley knowing how to dig and run coal mines. They became foremen and mine bosses - and found good jobs for their countrymen. The Irish (Roman Catholics) were running from starvation at home rather than toward prosperity in America. Many Lackawanna Irish immigrants found physically demanding jobs building railroads and excavating mine shafts. Post-1870 arrivals came mostly from eastern and southern Europe, where many had been farmers - and very few had been miners. Most fled the old countries to escape poverty and political or religious persecution: they came to Olyphant because they had been recruited before leaving Europe to work at a specific colliery. The domestic lives the immigrants made for themselves in the Lackawanna Heritage Valley differed on ethnic lines. Some came to this country determined to adapt and succeed. They learned English, if they didn't speak it already, became citizens, and looked for economic and social advancement for themselves and their children. Others, notably the Slovaks, were single men, "birds of passage," who intended to earn money, live cheaply, and return to buy land back home. Eastern European Catholics, both Roman and Orthodox, saw their churches as centers of mutual support and aid. Church-based banks, schools, service and fraternal societies provided every kind of social and economic help to newcomer families. The churches helped people adapt to life in the new world - yet at the same time they cultivated and preserved traditional culture.

A Church's Story

A substory of the church theme is a specific account of the role of one of the churches in the secular lives of its members. Research would determine the best candidate, but it might well be St. Michael the Archangel, the Polish church on the corner of Willow Avenue and Lincoln Street. For Poles, the priest was a spiritual and a community leader, and the church was the center of shared life. Polish Catholic churches were built by their congregations, with each family making a considerable cash donation. Children took on small jobs to contribute to the building fund, and adults tithed or committed themselves to giving a significant part of their income. The Polish congregation did not want a plain, affordable building - it wanted quality, a church that would remind of home, and inspire pride. Stained glass, marble and gilt are often found in the interiors of modest American churches built for Polish Catholics. After all, the church was not just for mass. Church provided schooling for children (in some cases parochial education was in the Polish language), Americanization and English language classes for adults, building and loan associations to help members buy homes near the church. Churches might even build blocks of houses near the church, then make loans so members could buy them. Polish churches also encouraged the formation - on their own premises - of a constellation of groups and societies dedicated to serving the community. They included Holy Name societies, choirs, chapel societies, alliance councils, sodalities, women's unions, Polish American Citizens' clubs, army veterans' posts, Children of Mary societies, boy and girl scout troops, Red Cross auxiliaries, and Polish relief committees. Not only did some church-related societies help newcomers obtain citizenship, others worked to preserve the Polish language and culture.

Wedding Stories
Because of its cluster of churches, more weddings, and more different kinds of weddings, are celebrated in Olyphant than perhaps in any other town. In each culture represented in the Olyphant community, a new family was created by a wedding ceremony. For each ethnic group, though, the wedding ceremony was different, and so was the family thus established. This universally engaging substory is a key element of life outside the mine, and provides a thematic link between church and family.

Another topic for the Olyphant orientation is women and children. This section would use images to offer a glimpse of domestic life - the labors and comforts of the house, and the different quality of boarding-house life. The section would reference the Olyphant Silk Mill (see below), once similar to a score of such mills in Lackawanna Heritage Valley towns, founded to employ the women and girls of anthracite-region families.

The following paragraphs identify additional sites to be interpreted with wayside exhibit stations similar to those already installed at the borough's churches.

Olyphant Borough Hall (Willow Street)
Olyphant was incorporated in 1877, about two decades after anthracite mining started and the population grew to 2,300. Namesake George Talbot Olyphant was president of the D & H Railroad in 1858, the year the company extended the Gravity Railroad to and beyond the town, inaugurating its first and major period of growth. This handsome 1912 civic building in the Flemish Baroque style is still the seat of local government.

Olyphant Elementary School (Susquehanna Avenue and Lincoln Street)
Children at School and Work
In 1912, a large and modern high school was built on Susquehanna Avenue (post card view of new school). Educators may have hoped that it would break the old anthracite-region cycle of children - especially boys -- dropping out of school at age 14.

Children's work was at issue in the Lackawanna Heritage Valley in the last quarter of the 19th century. Families needed their children's pay to keep food on the table - many widowed mothers relied on their sons and daughters for the necessities of life. In 1880, boys as young as eight worked 10 hours a day as slate pickers in the breaker, graduating at age 14 to mule drivers or door boys in the mine. Girls just a little older held jobs in the silk mill. After a Child Labor Law was enacted in 1885, children under 14 were not supposed to work in the mines, although some still did.

Olyphant was known as "progressive," which meant that children were encouraged to stay in school as long as possible. Still, few boys in this town before 1920 went to school past the eighth grade. Then, some 90% of the 14-year-old boys in the Northern Coal Field worked in the collieries. Forty percent of girls the same age had jobs.

Classical Banks (Lackawanna Avenue at Willow Street)
Buildings DO make a difference: you can recognize an early-20th-century bank by its look of massive stone stability. The biggest and most impressive building on a small-town main street is usually the local bank. Bankers in Olyphant, just like the ones in Philadelphia and New York, used Roman-style architecture to suggest to customers that the businesses inside were rock-solid and somehow rooted in antiquity. This typical pair makes an imposing statement on Lackawanna Avenue at the intersection of Willow Street. The National Bank of Olyphant (northwest corner) is still active in town, while the old Miners' Bank now houses Raymond Henry Post #327 of the American Legion.

D & H Railroad Bridges (Lackawanna River south of Public Square)
The Delaware & Hudson railroad was founded for the exclusive purpose of hauling anthracite coal from the Lackawanna Heritage Valley to New York City. The company tried to control not only the transportation of coal, but its mining and processing as well. To that end, the D & H built gravity and steam rail lines throughout the Heritage Valley, purchased coal lands and built breakers from Carbondale to Wilkes Barre. This pair of iron bridges, built around 1906, crosses the Lackawanna River on the original line of tracks that linked Carbondale and Scranton.

D & H Passenger & Freight Station (215 Delaware Avenue at intersection with North Valley Avenue)
Although the Delaware & Hudson Railroad was founded specifically to move anthracite coal, the company also ran passenger and freight trains. Although this little building has been adapted for a new commercial use, its original purpose can still be seen. Its size, shape, materials, and trackside location are clues to its former use as a train station.

Olyphant Colliery
Less than a mile south of town, on the D & H rail line, stood the Olyphant Breaker, one of the two collieries that employed most of the town's male population. The breaker, built in the 1860s, burned down in 1963.

Olyphant Silk Mill (now WEA Manufacturing, North Valley Avenue)
Ubiquitous in every Heritage Valley town, the silk and textile mills were located here to take advantage of plentiful anthracite fuel, railroad transportation for raw materials and finished goods - and most important, a ready-made labor force in the wives and daughters of the men who worked in the mines. The Olyphant Silk Company's brick mill, built around 1875, still stands on North Valley Avenue next to the railroad, although it was last used for textiles (parachute cloth) in the 1940s. Many Horgan photographs, at least one postcard, and supporting information can be found to show visitors something about the working lives of women and girls. (The WEA Manufacturing Company is a pioneer in the development of DVD video technology.)

Ferguson Theater (Delaware Avenue)
Good-sized Heritage Valley towns, like Olyphant, were not entirely given over to work, church and home. Early in the 20th century, Olyphant was a bustling place, with shops and stores, hotels and restaurants - and the handsome Ferguson Theater for live Vaudeville performances as well as early motion pictures.

Walking Tours
LHVA has already produced a well-written and highly focused tour of the Olyphant churches. The Lackawanna Historical Society sponsors an annual church tour in a Lackawanna Heritage Valley town. According to director Mary Ann Moran, the Olyphant program has been particularly successful because the community is active and cooperative, and the churches themselves are in a concentrated area.

The "Faith and Heritage" map-guide produced by LHVA could be revised as a pedestrian/driving tour, adding further thematic focus and the seven sites described above to the route.

The Lackawanna River Trail is complete from Mellow Park , north of the densely built part of Olyphant, and runs through Jessup to terminate at the trailhead at the end of Laurel Street in Archbald. One of the options we would like to offer visitors is the possibility of disembarking the train at one interpreted site, walking the river trail to the next site, and picking up the train there. The Olyphant-to-Archbald leg of the trail is the only place where that option currently exists.

Station Lunch
Olyphant, with its full complement of churches and its interpretive focus on people and their lives outside the mines, could be the best place in the Heritage Valley to develop a "railroad station lunch" program as an enrichment for the visitor experience. One thing people look forward to eagerly when they visit new places is an opportunity to sample regional food specialties. Unfortunately, many of the places with the strongest reputations for cuisine have few restaurants that serve specialty cooking. The Lackawanna Heritage Valley is no exception. The hint of special food is everywhere, but the fact of it is virtually nonexistent outside the home. Unless you go to a church supper, it is not likely that you'll sample halubkis, pierogies or chicken paprikash. Unless you're on Commercial Route 6, even the McDonald's are thin on the ground. Further, this interpretive plan recommends getting people out of their cars and onto a train - so for several hours, usually over a mealtime, they are in our hands. Our visitors must be fed. Feeding them may prove to be a good economic benefit to one or two communities with the energy to run a "station lunch" program. What we envision is church volunteers providing locally prepared box lunches (featuring specialty foods) to sell visitors at a participating local station stop. People could eat in a park, at the station, or aboard the train. The logistics of "station lunch" would require some planning (for example, the church group on duty for a particular day would have to know, preferably in advance, how many visitors they could expect to feed). Preparation and pricing would have to be worked out. Still, the opportunity to taste local cuisine would add a distinctive element to the Lackawanna Heritage Valley program for the visitor, and a potential economic opportunity for churches and/or church members. A single organizer, or organizing group, could work with any interested church group to plan and coordinate the program. The Lackawanna Avenue restaurant Molly Maguire's, has expressed an interest in providing Station Lunch, too. Perhaps the best place for people to eat their box lunches would be in the Queen City Station itself. A streetscape plan for Public Square should include a shady open space with tables where people can sit and eat in good weather. Condella Park is a picnic possibility for drivers, but too long a hike for those who have come by train.

ARCHBALD: GRAVITY SLOPE COLLIERY
JESSUP: HERITAGE CENTER

Interpretable Resources

Interpretable resources are concentrated on the south end of town. They include the Gravity Slope Colliery remnants and the Cogeneration Plant, both accessible at the foot of Laurel Street. Other resources: Maslar Park, and several miners' houses on Laurel Street; the LHVA trailhead at the foot of Laurel Street. Also of interest is the 19th- and early-20th-century century village, particularly St. Thomas Aquinas Church, the remnant of the White Oak culm pile, and planes 21, 26 & 27 of the Gravity Railroad which survive in good condition. Some distance west of town, the Archbald Pothole State Park offers a satellite attraction.

Visitors following the driving tour or hiking or biking the River Trail would encounter the borough of Jessup, currently noted as the site of the popular (30,000 visitors per year) St. Ubaldo Festival in late May. A Jessup Heritage Center is currently in the planning stage. Jessup is also the place, in the mid-19th-century, where an unusual labor situation was envisioned by the retired judge who founded the town. Also in Jessup is the archaeological site of the Dolph-Sunnyside Colliery and patch town that might be an appropriate pedestrian destination.

Background

Archbald, very sparsely settled at the end of the 18th century, flourished after 1843, when it became the terminus of the D & H Gravity Railroad. After that first extension of the anthracite railroad south of Carbondale, mine workers and their families quickly settled around the collieries of Mayfield, Jermyn and Archbald. Archbald, at the end of the line until 1859, flourished as the local commercial center and one of the Heritage Valley's largest towns. Interpretation at Archbald, though, would focus on a later era.

One of the two major challenges to interpreting the Lackawanna Heritage Valley is the absence of visible relics of the collieries. Most of the few sites inventoried in 1991 are gone now, and many mountainous acres of diagnostic coal waste have been leveled and built upon. Here and there one comes upon a puzzling structure, or a suggestive vacancy in the landscape: the trained eye sees the evidence of an old colliery in such clues. Unfortunately, most of these suggestive survivals are either inaccessible or too heavily altered to be interpretable to a general audience.

Archbald offers a unique opportunity to interpret a breaker site from the golden age of the anthracite industry. The D & H Canal Company's Gravity Slope Breaker operated at the south end of Archbald, in the part of town known as Dark Valley. Coal mines had been worked along White Oak Creek on the north side of Archbald since 1843, their coal shipped out unsorted on the newly extended D & H Gravity Railroad track. In 1859, the D & H built the first breakers north of Scranton, one in Carbondale and the other in Archbald. The old White Oak breaker and its massive culm pile - said to have been the largest in the state of Pennsylvania - loomed over pristine Thomas Aquinas Church on the north side of town. Although the culm pile has been diminished by reclamation efforts in the 1920s, it is still a breathtaking sight, flanking the Salem Road entrance to Archbald just west of the D & H railroad tracks.

By the middle of the first decade of the 20th century, new mines had been opened in the Dark Valley section on the south side of Archbald, and the output grew to be too much for the old breaker to handle. Additionally, breaker technology had made tremendous advances over the decades, and the not-so-very-old White Oak was essentially a dinosaur. The Gravity Slope breaker, opened in 1912, was a huge gargantua of red-painted wood, rising some fourteen stories. It used the modern "Chance cone" method of separating coal, and processed culm from the White Oak pile as well as coal from the White Oak and Gravity Slope mines after the old breaker was closed in 1913. At one time, 1700 men - and 120 mules -- worked at the Gravity Slope, which ran 24 hours every day of the week. The colliery workers were of mixed ethnicity - mostly Lithuanians, Welsh, Poles, Germans and Italians. The largest number of men counted themselves "American," which probably meant that they were one generation removed from immigration. Every second week, the men from the five Archbald collieries - totaling more than 3000 - gathered at the Gravity Slope to await the arrival of the railroad car carrying their pay. The breaker and its ancillary buildings stood along South Laurel Street between the river and the D & H tracks, behind a row of very small miners' houses, and its two culm piles and a rock pile rose high beyond the tracks.

The Gravity Slope Colliery was the center of activity in Archbald for thirty years. In 1942, though, the conveyor to the top of the breaker collapsed, and the breaker was permanently closed. The mines continued to operate until 1955, their coal shipped out to the Powderley Breaker in Carbondale or the Marvine Breaker in Scranton. In 1955, water seeping into the mines from the abandoned Riverside works overwhelmed the D & H pumps, and in October of that year the last mines in Archbald closed.
In 1974, contractors began removing culm from the northernmost of the two Gravity Slope piles, trucking it to

Olyphant (or Marvine?) to be processed. A year later, the project was shut down due to complaints about dust from the trucks. The culm piles still exist, and command magnificent views of Archbald and the Lackawanna Heritage Valley from their summits.

Today the Dark Valley section of Archbald is a verdant and mysterious place, tucked into an elbow where Laurel Run flows into the Lackawanna River. Laurel Street runs south from the center of town, leading toward a wooded spot overlooking the river. The first landmark glimpsed enroute is a dramatic pair of spiral smokestacks at the cogeneration plant (CoGen). ("Cogeneration" means the simultaneous production of two or more kinds of energy from the same source.) This facility itself is an interpretable resource: built in 1987 atop the Gravity Slope culm bank, it was designed to produce electricity, steam and hot water by burning the 2 ½ million tons of high-quality anthracite left in the pile. The plant manager calls the operation "a marriage between business and conservation." In 1996 the plant stopped processing anthracite, and was scheduled to be dismantled and shipped to China. Instead, Pennsylvania Gas and Water and PEI bought it and converted it to a methane-burning operation, running six miles of pipeline from the Keystone Sanitary Landfill in Dunmore. The plant sells electricity to the Pennsylvania-New Jersey-Maryland power grid, and supplies steam to its industrial tenants in the adjacent power park. It also supplies hot water to a tenant who commercially grows Christmas cactuses in an array of greenhouses that stand next to the plant. The cogeneration plant is thematically linked to the Gravity Slope colliery by proximity, and more significantly by a mutual relationship to anthracite, power and steam. It is also relevant to the Land theme through the part it plays in environmental reclamation. Sustainable, it makes power from landfill gases that would otherwise pollute the air; it recycles water - and like the collieries before it, this plant sends energy eastward to heat and light the homes and industries of the American northeast. Staff at the cogeneration plant are knowledgeable and articulate, and are willing to provide process tours for LHVA visitors.

More mysterious looking by far, though, than the modern CoGen plant are the ruins in the woods. Difficult to see at first, then intriguingly intact, four dark red brick structures stand behind the houses at the end of the street. So unexpected a presence in the suburban backyards, these buildings were an enigma until research determined that they were remnants of the Gravity Slope colliery. The northernmost was the fan house and electrical substation - an array of wooden poles still stands at the back. The second and largest was the shifting shanty, its locker room in the center, with a shower on each side. Inside, the old boiler that heated water for the miners' showers is still, most poignantly, in place. Next to the south is the oil house, where oil to lubricate the colliery's engines and machines was stored. The final building is a relatively stable ruin the original use of which is not known. Good sized buildings in their own right, when they were in active use they were dwarfed in relation to the breaker, mine openings and other colliery features. We propose that this site be selected to interpret the layout and operations of a great 20th-century colliery - the Heritage Valley's Industry theme is most clearly illustrated here, with historical context and modern reclamation suggested by interpretable resources. Programs could take people on foot into the town. Completed and planned segments of the river trail link Archbald with Jessup and Olyphant to the south and Jermyn to the north. This interpretive focus offers a good opportunity for visitors to disembark the train, enjoy the program and the town, and walk along the river path to the next station stop. The Gravity Slope site is also a great fishing spot - the river here is classified as a Grade A trout stream.

Jessup's beginnings are tied to the Lackawanna Railroad, a local anthracite line formed by Judge William Jessup in the late 1840s. Judge Jessup had a visionary plan for his colliery and the town he would build to serve it. To that end he formed an alliance with the Mexican general, Santa Anna, shortly after the 1836 massacre at the Alamo. Jessup persuaded the general not only to invest in his railroad but also to supply him with Mexican laborers to operate his works *under an involuntary system of peonage.* This plan, it should be noted, was contemporary with the controversial use of coolie labor - also involuntary -- in California on railroad building and in other hard-labor situations. It was also contemporary with Southern slavery and the rise of the abolitionist movement in the American Northeast. It would be interesting and instructive to contrast the labor system contemplated for Jessup with the traditional Lackawanna Heritage Valley system comprising contract miners who hired laborers to achieve their production quotas. (Coincidentally, the Dolph-Sunnyside Historic District, a Jessup archaeological site, is the locus of a former patch town. This was a settlement wholly owned by the colliery for whom the residents worked. Patch towns were rare in Lackawanna County, and represent yet another labor system that might be interpreted and compared to the regional norm in the heritage center.) Judge Jessup built a hotel and some 50 houses in anticipation of the Spanish-speaking labor force. The historical site that best commemorates this unusual land and labor scheme stands today at 801 Church Street. An abandoned church, the site was first developed in 1854 as a hotel and shortly afterwards rebuilt as a Mexican Catholic church. Due to the sudden and widespread availability of Irish labor, however, the Mexican plan was never implemented, and in 1887 the church was again rebuilt and converted to serve an Irish parish. It is the proposed site of the Jessup Heritage Center.

Jessup is perhaps best known today as the site of the Saint Ubaldo festival, a week-long celebration started in 1910 by immigrants from the Italian town of Gubbio in the Umbrian region near Perugia. (Most of Jessup's Italian community descends from these Gubbini.) The festival, which draws some 30,000 participants annually, honors a bishop of the Middle Ages, Ubaldo, who is said to have saved Gubbio from sacking at the hands of Frederick Barbarossa and the Holy Roman Empire. Festival events are very traditional, and include a procession during which the ceri, a likeness of the saint is carried.

Relationship to Thematic Structure

The interpretation at Archbald would restore the colliery story to the former anthracite town, illuminating an important aspect of the Heritage Valley's Industry theme. Nowhere else can residents or visitors find a three-dimensional explanation of a colliery or a coal breaker. Here at the site of the Gravity Slope colliery, interpretation will bring to life this critical aspect of the anthracite industrial system.

Archbald stories come primarily from the historical era of "Peak Years and Consolidation," while the adjacent CoGen Plant illustrates the age of "Reclamation and Renewal."

Interpretation at Jessup focuses on the theme of People during the "Anthracite Comes of Age" period. It would present the story of Judge Jessup's peculiar labor arrangement with the Mexican general. Although the planned peonage never actually came about, this site provides a good opportunity to compare and contrast labor systems employed by various industries and enterprises in the Lackawanna Heritage Valley and elsewhere in the United States.

Current Site Conditions

Archbald was identified as a Key Interpretable Place because of the four brick structures on Laurel Street that are the surviving remnant of the 1913 Gravity Slope Colliery. Having seen many breaker sites, we are persuaded that this is the best place in the Lackawanna Heritage Valley to provide a comprehensive interpretation of the workings of a major colliery.

It is worth note that a good many Archbald residents remember the borough's colliery days, and are articulate and willing to talk about them. Nothing populates and animates the past of a place for visitors better than the first-hand accounts of people who were there. Add thematic focus, a few photographs and a well-drawn map, and the remembered past can be shared with strangers who, before, could not have begun to imagine it. The Archbald interpreted sites would gain much power from first-hand programs delivered by residents who remember and are willing and able to share. Such residents are a key resource for this town. A training program delivered by the Lackawanna Historical Society can establish a cadre of resident interpreters that would give the Archbald site the kind of authenticity so much admired at the Lackawanna County Coal Mine Tour.

Archbald's key interpretable sites are at the south end of town, in the section known as Dark Valley, at the end of Laurel Street past Laurel Run. The old D & H Railroad, now the County Rail Line, parallels Laurel Street some distance to the east. After Laurel Street crosses Monroe, it runs past Maslar Park, a recreational area at the edge of the woods with a ball field and picnic area. Past the park, the street crosses a brook - Laurel Run - then becomes more picturesque and wooded as it continues south along the east bank of the Lackawanna River. Several small, older houses line the east side of the street - two or three of them appear to be mid- to late-19th-century miner's houses. Barely visible beyond the backyards, through a light scrub of laurel and small trees, stand four abandoned brick buildings - the surviving remnant of the 1913 Gravity Slope colliery that dominated Dark Valley. The buildings are very distinctive, instantly recognizable as early-20th-century colliery types, dark red brick with corbelled cornices and metal windows. The two largest are in fair condition, the third is more deteriorated, and the last and smallest is a stable and compact ruin. The northernmost building was the fan house and electrical substation - a field of old wooden poles with insulators still in place stands behind the building. Next, the largest building was the shifting shanty, with locker room at the center and a shower room at each end. The shifting shanty has been altered on the west side (not visible from Laurel Street) with big garage doors. The third and last complete building was the colliery's oil storage shed. South of the three buildings stands the ruin, now the tall foundation with two partial walls. Its original use is not known. A right-of-way runs eastward between two Laurel Street house lots to the Gravity Slope structures, the railroad tracks, and a paved road that serves the CoGen plant.

Just beyond the brick ruin, beyond the foot of Laurel Street, is the trailhead for the Lackawanna River Trail segment that runs south through Jessup to terminate at Mellow Park in Olyphant. An LHVA sign marks the trailhead, and mentions the site of the Gravity Slope Colliery, although it makes no reference to the brick structures. An unpaved parking area near the trailhead can accommodate six to ten cars.

From the Gravity Slope site, indeed from the approach along Laurel Street, an intriguing landscape feature is the pair of tall smokestacks atop the cogeneration plant. The plant sits on a flat terrace partway up the side of what was once the Gravity Slope culm bank, behind and above the spot where the breaker itself stood. It is possible to walk to the plant entrance from the rail line or the trailhead, although it is a bit of a hike. The plant is very accessible by car.

The densely built part of Archbald is approximately half a mile north of the Dark Valley section. The 1858 Italianate-style St. Thomas Aquinas Church on Church Street, serving an Irish Catholic congregation, is a key landmark here. The borough hall stands across Church Street from St. Thomas Aquinas. Across the Salem Road Bridge (closed for repairs now; use Monroe Street Bridge), on Main Street, stands St. Luke's German Lutheran church and several restaurants. Some four blocks from the church, on the railroad tracks at Pike Street, is a modern passenger station, referential in design. Parking is available at the station.

Jessup is a typical Heritage Valley town with a small commercial district featuring brick and frame business blocks dating principally from the late-19th and early-20th centuries. Several former miners' saloon-hotels are among its more distinctive features. A downtown revitalization plan calls for the demolition of several of the borough's older and more interesting buildings in order to build a senior residence and to provide parking. The most distinctive and interpretable aspects of the Jessup story - the plan to provide peon labor for the colliery, and the heavy immigration from a single Italian town - are not legible on the landscape, but would require traditional interpretation, perhaps in the planned Heritage Center.

Partners and Potential Partners

Borough of Archbald

The Borough of Archbald is in the process of acquiring the three Gravity Slope auxiliary buildings that form the heart of the Dark Valley interpretable site. The borough also plans to create a small municipal park in the vicinity of the trailhead. Municipal officials welcome the development of LHVA programs around the colliery buildings, and they maintain that there would be adequate parking at the site. This plan recommends that LHVA work with the borough to assist them in acquiring the structures, and in accomplishing their adaptive reuse in a manner that would be compatible with the interpretive program. (It is important, for example, that the street side of the buildings not be over-restored, that they not be fenced, and that the understory rhododendrons and laurel not be thinned too much).

We found, during field work, that the Archbald officials we met know their local history, have personal recollections of the Gravity Slope colliery, and are willing to share with outsiders. LHVA program developers should explore the possibility of the borough itself recruiting residents to participate in the "immersion experience" at the Dark Valley park, and to serve as guides and docents for more formal interaction with visitors.

Borough of Jessup

The Borough of Jessup would develop and operate the Jessup Heritage Center interpreting local cultural and industrial history. It would continue to host the St. Ubaldo festival, which could be actively promoted as a heritage event. The borough is currently engaged in a Church Street revitalization program that includes sidewalk and façade improvements, a pedestrian link to the River Trail, a community center and several youth-oriented recreation facilities. It is recommended that Jessup inventory its historic structures that predate 1950 and plan to preserve them for adaptive re-use.

Lackawanna Historical Society

LHS collections would provide some primary and secondary research materials for interpreting the Archbald site. The LHS could also help the borough recruit resident interpreters, and provide their training.

PA Anthracite Heritage Museum

The Anthracite Museum owns the magnificent Horgan views of the Gravity Slope colliery and details of its structures that would be the foundation of the interpretive installation. The Anthracite Museum can supply research and illustrative material, and scholarly review of the interpretive media and materials, especially as to technical aspects of such colliery functions as ventilation, material handling, power generation and transmittal.

St. Thomas Aquinas and St. Luke's churches

The Station Lunch program would provide picnic lunches of a quality equal to that of church suppers and picnics. The program would afford a business opportunity for the two local churches. Someone, perhaps a church auxiliary member with administrative experience and interests, would have to organize the program and coordinate it with the excursion tour.

Lackawanna Heritage Valley Authority

LHVA already owns the smallest colliery remnant, the stabilized ruin recommended as the site of the interpretive installation. It also owns an undetermined amount of land, which, though overgrown, might be prospected for additional colliery-related structures and artifacts. This looks like a rich field for archaeological exploration, in which some interpretable material is clearly visible.

Arrival

People would approach Archbald by train or bus, by private car, or on foot. It is even possible that, during water releases into the Lackawanna River, visitors would arrive by kayak or canoe. All arrivals would be directed to the Dark Valley site for orientation and interpretation. From there their routes would be carefully designed so that they move among the Archbald sites in a direct and visually interesting way.

- The excursion train would stop not at the railroad station, but near the right-of-way path leading from the tracks to Laurel Street.
- Motorists would be directed off the Casey Highway at the Jessup exit, proceeding along Route 247, Moosic Lake Road. Signage would direct them along an interesting route through Jessup. Motoring tourists would leave Jessup the back way, along Breaker Street. Crossing the river on the Depot Street Bridge, they would go through Riverside and from there join Main Street to proceed north to Monroe Street into the Dark Valley section of Archbald.
- Visitors could get off the excursion train at the Jessup station and walk north along the Lackawanna River Trail to Archbald where they would arrive at the trailhead and the Gravity Slope interpreted site.

Interpretive Installations

Archbald would have one primary interpretive installation, and three secondary interpreted sites. In addition, Archbald Pothole could be interpreted as a geological phenomenon related to the far more ancient formation of anthracite coal. In Jessup, a heritage center comprises a complementary interpretive site. Also in Jessup, a former patch town and colliery site, could be pointed out and interpreted on the driving route into town.

The primary interpretive installation at Archbald, the Gravity Slope Colliery site, would be a satellite of the PHMC Anthracite Museum.

Gravity Slope Colliery Remnant

Parking is available at the foot of Laurel Street near the trailhead. The primary interpretive installation here would be built into the ruin of the southernmost and smallest of the colliery buildings. Two partial walls stand on a handsome arched foundation of poured concrete. New construction would stabilize most of the remaining walls and provide a light roof and surfaces for good-sized exhibit panels and text rails. (The rest of the brick could be utilized to restore the walls of the other buildings.) The new elements would stand away from existing fabric, and be dark in color so as to appear to recede. The ruin would be stabilized, but its appearance would be little changed. Restroom facilities should be provided somewhere on this site - possibly in conjunction with the borough facility planned for the shifting shanty.

This site is the central feature of the visitor's experience of Archbald, and every effort would be made to enhance and enrich its appeal. The borough has expressed interest in creating a small community park here, and the park could be the focus for planned high-season weekend "encounters" between locals and excursionists. Interested members of church and community organizations - older people who remember earlier times and are willing to share their recollections - would be given some interpretive training, and asked to volunteer at times when excursion trains are expected. Excursionists would "meet" the locals as if by chance, and the stories told at the park would develop the Archbald themes in interesting ways. Because women would be among the volunteers as well as among the visitors, women's stories would be shared, too. The experience would be truly authentic for the visitors, and stimulating, too, for the resident volunteers.

The reception and orientation component for the Gravity Slope installation would feature a large-scale, hand-drawn, colored "you-are-here-and-you-can-get-to-there" map of the area bounded roughly by Archbald Pothole State Park to the north, Business Route 6 to the west, Jessup to the south and the Casey Highway to the east. The map would be large-scale and eye-catching, and would include key streets, routes and sites in and around Archbald. The first text element would be a sweeping significance statement for the entire focus area; the second text element would guide visitors to interpreted sites, walks and drives in the immediate vicinity. The installation would also provide a brochure rack with site-specific brochures delineating nearby walking and driving routes, accessible sites of interest and recommendations for meals. The rack would also contain a combined train/bus schedule and a full range of other LHVA brochures.

The interpretive theme at the Gravity Slope installation is the industrial component of the anthracite-railroad system that dominated life until the middle of the 20th century. Exhibitry here would illustrate the Gravity Slope at the peak of its productive life, using large-scale Horgan photographs and a Sanborn atlas map of the site to explain the way the colliery worked, from extraction through processing at the breaker to loading on railroad cars for distribution to market. Attention would be drawn to the role of steam power in colliery operations - powerful steam engines drove almost every part of the process, from pumping water from the mines to moving the long conveyors that carried material from the mines to the top of the breaker and to powering the breaker apparatus. Steam also fired the locomotives that carried off the sorted coal. (In 20th-century collieries like the Gravity Slope, electricity was used for lighting, ventilation, and other operations that required only moderate power.) Viewers, looking at the surviving brick buildings, then at the photograph of the whole colliery, would absorb by comparison a sense of the gargantuan scale of a state-of-the-art coal breaker. Diagrams would illustrate the way such a breaker functioned, using the chance cone method of screening and separating coal. Because there is a human component to every industrial process, other images here would illustrate colliery workers on the job and at play. One memorable Horgan picture shows hundreds of miners and their families awaiting the arrival of the railroad pay car.

The remnants of the Gravity Slope colliery are:

Power Plant and Fan House
The 1912 Gravity Slope utilized electricity to run ventilation equipment and ancillary, remote functions, the most important of which was lighting in the mines and the breaker. Collieries used massive stationary steam engines to provide power to drive hoist engines and pumps, turn fans, and crush, shake and sort coal in the breaker. As collieries grew larger and more technologically sophisticated, centralized power houses were connected to the breaker, a great machine that looked like a building. The wooden poles around the Gravity Slope power plant carried electrical wires to every part of the Gravity Slope operation.

Large fans with wooden vanes were used to ventilate the mine workings. Fan houses like this one were located over the heads of ventilation shafts.

Shifting Shanty
The shifting shanty is the largest of the remnant structures. Miners arrived at work in street clothes, coming to this building to change before going below. Each man hooked his clean clothes to his own pulley and chain, which he then hauled up and locked to a bar at the ceiling. The men were black with coal dust when they came out of the mine: this building has shower rooms at each end where they washed before dressing. An early boiler survives at one of the shower rooms.

Oil House
The smallest complete remnant is the oil house. Here was stored the oil needed to lubricate the colliery's equipment and machines.

Unidentified remnants
The smallest and southernmost remnant is a partial ruin. Its original use is yet to be determined. In addition, there is a massive concrete structure which is the base of a conveyor. A great deal more will be found in the weeds and underbrush; detailed photograph and insurance map information would help identify remnant structures as they are found.

Accident at the Face!
People are accustomed to hearing that life in the mines was hard - that the men worked in the dark, worked too hard for too little money; had no kind of security. People understand how operators were businessmen committed to profit. People can understand - intellectually - why mine workers organized and went on strike. But none of this information would give visitors a single moment of instinctual, visceral knowledge of the quality of a mine worker's life. The idea of *danger*, communicated well, would short-circuit people's brains and deliver that moment of awful illumination when for an instant the casual visitor glimpses the miner's world. The way to do it is to tell a short, dramatic, true disaster story that happened right *here* at the Gravity Slope Colliery in Archbald, Pennsylvania. Right here where the visitor stands at this moment.
The Gravity Slope wasn't a particularly dangerous colliery, but like all the others, it did experience accidents. The most common kind, according to the Bureau of Mine Inspectors reports, was a rock fall at the coal face. These happened several times in the early years of the Gravity Slope. Using the mine inspectors' information, augmented by newspaper reports and any other accounts to be found, this exhibit element would be written (not quoted) as a short and dramatic story about such a disaster. People would be mentioned by name, family situations would be imagined, Thomas Horgan photographs would be shown. Nothing would be said about long hours or terrible working conditions, but no one leaving the Gravity Slope installation would have any doubt about the kind of prospect a coal miner faced each and every day of his working life.

PEI Cogeneration Plant

The cogeneration plant houses a fascinating process, staffed by knowledgeable people who explain it well. Outside features include a jet engine adapted for use as a turbine, a water recycling unit, "the Big Flame," and the remains of the great culm pile itself. Inside the control room, a bank of computers with easily comprehended graphics constantly monitors the energy production process. Process tours could be made available to visitor groups.

An interpretive panel in the Gravity Slope installation would be devoted to the cogeneration plant. Many theme elements link the Gravity Slope and the modern plant: each produces or produced energy for the homes and industries of the American northeast, each was (originally) dependent on anthracite coal, and each featured a steam-related process. The mammoth colliery was powered by enormous steam engines, and it produced coal to make steam. The cogeneration plant, too, used anthracite to make steam, although it was converted in 1998 to use methane gas piped from the Keystone Landfill six miles to the south. The cogeneration plant functions like the colliery power plant in supplying energy to the new industrial installations on the reclaimed coal lands just up the hill.

Exhibitry here would explain what goes on in the cogeneration plant, and would connect its presence to the larger issue of environmental reclamation of coal-scarred Heritage Valley land. It would also show visitors how to get to the plant, and let them know that process tours are available.

Archbald Station

The borough's railroad station is new, its referential design similar to that of the Olyphant station. It is located along the tracks at Pike Street, more than half a mile from the Gravity Slope interpretive installation. Although the regular excursion train stop would be at the Gravity Slope site, an orientation map should be provided here as well. The station could well be the site for Archbald's "station lunch" program, described below.

St Thomas Aquinas

This Italianate-style Irish Catholic church, built in 1858, is the borough's most visible landmark. It is important as a community element, and for its relationship to the White Oak colliery, which was located immediately northeast along the railroad tracks at White Oak Run. Interpretation here would feature a Horgan photograph of the church with the colliery and culm pile in the immediate background, and text would deal with the organization of a typical Lackawanna Heritage Valley anthracite town developed by the D & H, the original coal-railroad conglomerate. Although Archbald interpretation focuses on Industry rather than on People, it might still be appropriate here to reference the role of the Catholic church in immigrant families' lives.

Archbald Pothole

Archbald Pothole State Park is a satellite destination to be marked on Heritage Valley maps as a destination for automobile tourists. A short driving route from Archbald to the park would be mapped. During the glacial period, ice at Archbald is said to have been 2000 feet thick. As it melted, rocks whirled around in depressions to create potholes like this one. Archbald's great pothole was "discovered" in 1884 by miner Patrick Mahon (see mention of Hotel Mahon in the Olyphant text section above). The giant formation, 38 feet deep and 42 feet across, was a popular tourist destination in the late 19th century. Interpretation here would deal with the geological formations in the Lackawanna Heritage Valley (including anthracite coal). It would also cite the awe with which Victorians viewed the wonders of the natural world. Geology was a powerful idea for them, and most made excursions to see and admire. Such natural features as this pothole had a strong appeal for people who felt hemmed in and diminished by the burgeoning of the industrial world. Archbald Pothole is the second-largest glacial pothole in the world; the largest on the American continent. It is a Pennsylvania Outstanding Geological Feature, and a potential National Natural Landmark.

D & H Gravity Railroad Plane No. 21

We have not seen this feature, but have been told that it survives in legible and interpretable condition. It lies at the south end of town, not far from the Gravity Slope site. This plane was built during the 1841-44 expansion during which the company extended the Gravity Railroad, building both "light" and "loaded" tracks south from Carbondale to access new coal mines at Archbald. Plane No. 21 is on the light track. There are three places in the Heritage Valley where the Gravity Railroad could be interpreted: Plane No. 21, the Valley Junction site on the Lackawanna River Trail, and Carbondale. Due to its proximity to an Archbald colliery, if Plane No. 21 is accessible and legible, this may be the best place for an interpretation of the way the Gravity Railroad worked.

Jessup Heritage Center

The borough of Jessup is exploring the possibility of establishing a heritage center in a historic building on Church Street, which is also State Route 247. The building itself is highly significant (see above), and several

elements of Jessup's history are best interpreted in a museum setting (see also above). The feasibility study completed in March, 2003, explored local interest in topics the heritage center might interpret. These include the anthracite industry, local patriotism, home wine making, the D & H Gravity Railroad, Saint Ubaldo, local sports, local religious denominations, the textile and manufacturing trades and the temperance movement. We suggest here that the Jessup Heritage Center develop thoughtful exhibitry based on the borough's own unusual past, particularly the labor arrangement the founding father attempted to arrange with the Mexican general, Santa Anna. This story would provide a fascinating "opener" for an interpretation of labor practices in the Lackawanna Heritage Valley anthracite industry, and a comparison between them and other industrial labor styles over time and around the world. Exhibitry might also be developed on the Gubbio Italians and the transplanted traditions they practice in Jessup as a strong local example of long-lived cultural connections between the old world and the new. We further observe that the building selected for the heritage center is a fine example of an 1880s Stick-Style church, perhaps the most historically significant and among the most architecturally interesting structures in the borough. We suggest that the borough insist on uncovering and repairing the building's original clapboard siding and wood trim rather than cladding it in vinyl as recommended by the feasibility study.

Dolph-Sunnyside Colliery Archaeological Site

[Note: this site may be too fragile for use by the visiting public. LHVA should get an opinion from the State Historic Preservation Office at PHMC before any further planning is done.] Archaeological reconnaissance for the Industrial Highway located the Dolph-Sunnyside site out Sunnyside Road on Grassy Creek. This is the abandoned site of one of the Heritage Valley's rare company-owned patch towns with colliery features and the foundations of workers' houses, sited in a small knoll through which flows Grassy Island Creek. The site was occupied between 1884 and 1952. Interpretation here would explain the patch town operation, in which every man worked for the company, lived in company housing, and fed and supplied himself and his family from the company store. As the site was associated with independent coal companies, not the D & H or another anthracite-rail monolith, interpretation can also explain the relationship of the small company to the great Heritage Valley anthracite-industrial system.

Interpreted Walks

Gravity Slope to St. Thomas Aquinas: Visitors would be encouraged to walk from the Gravity Slope site northward along Laurel Street, past Maslar Park, to St. Thomas Aquinas on Church Street. From there they can see the White Oak Colliery site, and the mammoth culm pile that survives it.

Jessup to Archbald: Train passengers might debark at Olyphant or Jessup. At Jessup they might visit its Heritage Center on Church Street. From there they could take the borough's pedestrian link to the River Trail and from there walk north approximately a mile to the Gravity Slope site at the trailhead in Archbald. This is the only place along the river where Heritage Valley excursionists can walk between one interpreted place and the next one up the line.

Driving Tours

Visitors arriving in private cars would exit the Industrial Highway on Route 247 and drive through parts of Jessup enroute to Archbald. The LHVA brochure would include this route as well as instructions for a visit to Jessup.

The only site-specific excursion from Archbald leads to the Archbald Pothole State Park. No interpreted sites are located along the route.

Driving visitors would leave Archbald on Salem Road, then take the Industrial Highway north to Carbondale.

From Archbald, drivers might choose to take a side trip to *Varden Village* in South Canaan Township. Drivers would take Salem Road eastward, past Route 6 and over Moosic Mountain. (Small roads from this point must be identified and mapped.) After bearing east and north through several V's, one comes to Route 196 at the village of Varden in South Canaan Township. There stand 6 historic buildings including a 19th-century general store and several houses of similar period. Approximately a mile away along a scenic road on Route #63017 stands a rubblestone-wall octagon school house built around 1830 and in use as a school until 1900. This rural community is interesting to contemplate because the Lackawanna Heritage Valley was completely absorbed by the anthracite industrial system. It had to be provisioned from outside: the rural countryside beyond the Heritage Valley, in and around places like this village, engaged in the business of provisioning the great Lackawanna industrial system.

Canoe and Kayak Launch

Small craft manned by experienced kayakers and canoers can be launched at Maslar park during water releases from Stillwater Dam above Simpson. (Because Archbald is at the crest of an anticline, there are significant drops

and rapids between here and Mellow Park in Blakely, where beginners can launch). From Archbald canoers and kayakers begin a 14-mile course that ends below Steamtown at the convergence of Roaring Brook and the Lackawanna River. Alternatively, boaters can get out of the river at a city-owned site at the foot of Albright Avenue not far from the former Scranton Lace works.

Station Lunch
St Luke's German Lutheran Church organizes regular church suppers, and might be the backbone of an excursion box lunch program for Archbald. Picnic tables at the Gravity Slope site or at Maslar Park would provide visitors pleasant choices for a meal and relaxation. There are several restaurants on North Main Street as well, a short walk from the Laurel Street site and Maslar Park.

CARBONDALE
Interpretable Resources

City Hall, the D & H Site/Ben-Mar Restaurant, Memorial Park and Church Street, Maplewood Cemetery, Racket Brook falls, Lincoln Avenue, Dundaff Street Industrial District, Our Lady of Carmel and West Side, Coal Brook Breaker and Colliery Site, and Gravity Railroad R. O. W. Carbondale has a half-dozen traditional and distinctive businesses visitors would enjoy. The Ben-Mar site is the nexus of several existing and proposed trail systems. A modern and functioning railroad station stands on the west side of the river, opposite the head of Sixth Avenue.

Background
The first town in the region was at Carbondale. Coal was mined here first. During the War of 1812, Great Britain, the principal supplier of the coal used by the United States' young industries, cut off exports. The need for a new source of fuel moved Philadelphia merchants William and Maurice Wurts to acquire large tracts of anthracite coal lands around what is now Carbondale. In 1815 they hauled out the first 800 tons by sled across Moosic Mountain. Overland transportation was expensive and inefficient, so the Wurts brothers began working on an alternate method. In 1823 they began improving the channel of the Lackawaxen River, and they formed the Delaware & Hudson Canal Company to build a canal from tidewater on the Hudson River to the mines at Carbondale, its purpose to transport coal to markets in and around New York City and to New England via barges across Long Island Sound. A few years later, the brothers decided to build a railroad instead of a canal to accomplish the mountain crossing between Carbondale and Honesdale, using ascending and descending inclined planes to move the engines up and down the slopes. Although they had intended to use a steam locomotive to pull the ascending cars, the slope was too steep and the engine was abandoned in favor of mules. The D & H Gravity Railroad was the one of the first anthracite railroads in the United States (the first was built by the Lehigh Coal & Navigation Company between Summit Hill and Mauch Chunk in the Middle Coal Field that fed to Philadelphia via the Schuylkill River navigation system). The D & H system was arguably the most powerful entity in the Lackawanna Heritage Valley during the developing years of the anthracite economy, because it owned and controlled the anthracite from mine to market. Although the corporation is defunct, the D & H trackage is currently operated by the Lackawanna County Rail Authority. It is said to be the oldest continuously operating railroad system in the nation.

By 1832, Carbondale was the largest and most important town in the Heritage Valley -- nearly 2000 people lived there, while just five years earlier the place had been nothing but pine forest. The D & H established its shops and regional offices in Carbondale, boosting the town to a level of significance it would maintain for several decades. Even though Scranton with its iron and steel surpassed Carbondale after the Civil War, Carbondale remained a transportation hub throughout the anthracite era, and its prosperity declined with that of the D & H after that era ended.

Relationship to Thematic Structure
Carbondale, nestled between steep ridges at the north end of the Heritage Valley, where the anthracite story first began, balances the three themes of Land, Industry and People. The Land theme develops the complex inter-relationships among people, the resource of coal, and the landscape that both produced the coal and challenged, then accommodated its transport to market. As the birthplace of the D & H Gravity Railroad Carbondale is the place to show how human enterprise and industry matched the challenge the land forced on those who would capitalize on coal.

Current Site Conditions
At the north end of the Lackawanna Heritage Valley proper, Carbondale is both the effective terminus of the Heritage Valley program and a potential upper gateway at which visitors encounter the LHV. Carbondale serves as the link between the Lackawanna Heritage Valley and the Delaware & Hudson Heritage Corridor. (The D &

H Corridor follows the line of the gravity railroad and anthracite canal through Honesdale and Hawley to Port Jervis and, finally, to tidewater at Kingston, New York.) As a terminus and gateway, Carbondale must be developed as an attraction strong enough to draw people to the end of the railroad or driving excursion, and to make them get off the train or out of the car when they've arrived. The city's "pull" must be sensed by visitors at the southern orientation program in Scranton, and would comprise such attractions as restaurants and traditional businesses, strong architectural character, beautiful and serene natural spots, and an interpretive program that people find both fun and interesting.

Carbondale is a highly legible small city, its physical setting made clear by the way the eastern and western hills converge to bracket it. Moosic Mountain, separating the Heritage Valley from the Lackawaxen River, was the essential challenge that had to be addressed before the anthracite potential could be realized. That challenge is clear and easy to explain when viewed from nearly anywhere in Carbondale.

It is also easy to explain Carbondale as a town in which the dominance of the founding coal-and-railroad company was balanced by the influence of the human community. Much larger than the other Heritage Valley towns, Carbondale's central landmark is its towered city hall, proud symbol of representative local government. The sizable downtown features churches, theaters and other places of entertainment as well as stores, banks and other commercial services. The city's residential districts range from distinguished Victorian streets to neighborhoods of miners' and workers' houses. The D & H Company and its railroad, once so powerful here in Carbondale, needs interpretation today - most rail-related sites are gone.

Because of Carbondale's legibility, and because of its location at the northern end of the Lackawanna Heritage Valley, we would recommend developing an orientation and context-setting program here, a program that parallels the one offered in Scranton at the southern gateway to the Heritage Valley.

Despite Carbondale's extraordinarily high level of historical significance, and the high quality of its architectural resources, the city itself is fatigued-looking. Priority given to site and streetscape improvements in key places would make the place more attractive to visitors. Such initiatives should include a general cleanup of the site behind the Ben-Mar Restaurant including Racket Brook Falls and Maple Wood Cemetery; path marking and tree planting along the pedestrian route between the Pioneer Railroad Station and City Hall; establishing visitor parking and planting trees along North Main Street itself.

Partners and Potential Partners

City of Carbondale

The municipality has received a Penn DOT grant for streetscape improvements including lighting, sidewalks and benches between the Pioneer railroad station and City Hall, and at the entrance to the Carbondale Industrial Park on the west side of the river. Street trees, especially on Main Street, would add to the attractiveness of the street - and to the comfort and pleasure of pedestrians exploring the town. In addition to its streetscape program, the city could cooperate with the LHVA program by identifying sites for visitor parking. It could take the lead or assist others in acquiring rights to and/or cleaning up such key parcels as the land between the Ben-Mar Restaurant and Maple Wood Cemetery, and the John Street lane that runs along the west side of the cemetery. The City owns City Hall and Memorial Park, the site of one of the key interpretive installations recommended below. It also houses the Carbondale Historical Society, which operates a research library and plans an exhibit that would be open to the public. The City of Carbondale would be the appropriate agency to negotiate with the City of Scranton for the return of the Pioneer, the Gravity Railroad passenger car currently on display in Nay Aug Park. Maple Wood Cemetery, a site of major historical significance for the City of Carbondale as well as for the Lackawanna Heritage Valley as a whole, is in deplorable condition. Although it is not city property, the city could organize local churches to sponsor clean-up and maintenance activities there.

Carbondale Historical Society

The Carbondale Historical Society occupies space on the third floor of City Hall where it maintains a collection of books, maps, documents and artifacts. The society owns one of the major collections of documents and artifacts relating to the D & H Gravity Railroad, and plans an exhibit on the subject. The historical society should be involved in the development of all the Carbondale interpretive installations, and should take the lead (perhaps with help from the Lackawanna Historical Society) in recruiting and training docents and guides.

Carbondale Chamber of Commerce

The Chamber is an active organization with energetic leadership located in the 1903 Pioneer Bank Building on North Main Street. It is interested in economic development through heritage tourism. The Chamber plans to open a café-gallery in the ground-floor front of its building, and would be willing to host the Carbondale LHVA orientation program in ground-floor space to the rear.

The Anthracite Historical Discovery Center

This non-profit organization owns a large building at Seventh Avenue and the county rail tracks. It plans to create an interactive learning center for children based on the anthracite theme. The building is on the site of the first underground mine in Carbondale. This report recommends that LHVA offer technical assistance to the Discovery Center to help it clarify the thematic focus of its program, to lay out a set of programs that complement regional educational curricula, and to establish itself as a resource for the school systems. The existing "community center" and local cultural programs the Center's building shelters should be continued and expanded, with LHVA helping as it can, in cooperation with the other entities involved. Care should be taken that the programs at this site are developed with the regional educational system in mind, and that they do not attempt to duplicate those of the Anthracite Museum or other Heritage Valley institutions.

Lackawanna River Corridor Association

In September, 2003, LRCA revealed concept sketches for a major new Carbondale attraction at the historic D & H Gravity Shop site behind the Ben-Mar Restaurant. The development would comprise elements on both sides of the Lackawanna River. On the site of the historic machine shops, behind the Ben-Mar Restaurant, a set of historic-referential commercial buildings would face each other across a channelized Racket Brook. A pedestrian bridge would cross the river to the former Roundhouse site where the Pioneer City Community Festival Center would adjoin a commercial complex utilizing both new and historic structures.

While the LRCA concept does not include the interpretive elements recommended in this report, it is not incompatible with the interpretive program. We support the development of a park-like setting and a well-designed and history-compatible attraction on the Gravity Shops site. We strongly suggest that Racket Brook not be channelized, but rather celebrated as a beautiful feature of the site. New buildings could include space for the LHVA welcome and orientation program, as well as for the Carbondale Historical Society's long-planned major exhibit on the Gravity Railroad.

Traditional businesses

One of the interpretive goals for the Lackawanna Heritage Valley is to put people in touch with the authentic. There are several ways to do it, and no available source of "spirit of place" should be ignored. Sometimes a shopping experience touches a visitor who has been unmoved by the most carefully crafted interpretive strategy. In this era of monster malls and declining Main Streets, it is worth noting that in Carbondale quite a few traditional retail businesses survive and flourish. There are enough of them, in fact, to comprise an activity most visitors would enjoy. Many of the following are on Salem Street near Main. They include:

A barbershop. Galati's Barbershop on Salem Street is an old-fashioned shop at the sign of the spiraling barber pole. The interior is small-town traditional, and the haircuts are, too.

A bakery. Barbour's Bakery on Salem Street offers a sumptuous array of regional specialties including Welsh meat pasties, hot cross buns at Easter, a pastry known as Lafayettes, soda bread, cookies, and any number of other unique, delicious and traditional foods. (NOTE: According to the Historical Society, Carbondale's Welsh Presbyterians paid for their church by selling pasties. Miners bought them every day. The church still makes and sells these delicious and historic local delicacies.)

An old-fashioned luncheonette. Fine and authentic restaurants abound in Carbondale. One mentioned often is the Carawanna Restaurant. No one could say how long it has been in business, but it features the regional favorite known as "Texas hot," or "Coney Island" hot dogs and other old-fashioned fare.

A store chock-full of antiques. Ron Kanosky's antique shop is intriguingly jammed with "stuff," some of it quite good and some very ordinary. It is the kind of place where, in one's hopeful imagination, that perfectly unaltered little Rococo Revival chair might be hiding.

An Italian market. Talarico's on Main Street caters to Carbondale's long-established Italian community. It looks and smells perfectly old-world, and offers special meats, cheeses, oils, olives and other ingredients for Italian cookery.

A pizzeria. The Royal makes the prized Heritage Valley specialty known as Old Forge pizza. (New Yorkers call the square-sliced, puffy-crust pie Sicilian, but Old Forge fans say theirs is different.)

A Bed-and-Breakfast Inn. Heritage House on the Park is a three-room B and B overlooking Memorial Park. It is the only inn of its kind in any of the Key Interpretable Places covered in this Plan. The owner is a former director of the Chamber of Commerce, and is the leading force behind the developing Anthracite Historical Discovery Center.

Arrival
Visitors would arrive in Carbondale either via the excursion train or in private cars.

- The excursion train would stop at Pioneer Station on the west side of the river opposite the head of Sixth Avenue.
- Visitors touring in private cars would leave the Casey Memorial Highway at exit 6, then drive north on Business Route 6 to Cottage Street and thence to the City Hall area at the center of Carbondale.
- There would be no significant pedestrian arrivals, as the Lackawanna River Trail has not yet been established between Jermyn and Fell Township.

All visitors would be directed to the welcome and orientation facility at the Pioneer Bank building on Main Street near the city hall. Parking is plentiful in downtown Carbondale, and lots should be identified and established for Heritage Valley visitors. Signage should direct them from parking to the Pioneer Bank facility.

A streetscape plan should be made for the route rail excursionists would follow from Pioneer Station to the Pioneer Bank. Discreet and attractive directional signage to the Heritage Corridor orientation, and wayside interpretive stations for Trinity Church and the Lackawanna River would be part of the streetscape plan. Trees should be planted along the route. The path would jog around Trinity Church, then cross the river on the Sixth Avenue Bridge, then turn left on Main Street at City Hall. The Pioneer Bank stands a few hundred yards to the north.

Interpretive Installations
There would be interpretive installations at the railroad station, the welcome and orientation facility, and at two key and one secondary interpreted sites in Carbondale. The interpretive installations are:

- City Hall site: the town core around City Hall and Park Place along Main Street and the adjacent side streets. This core would include the orientation facility at the Pioneer Bank, and the series of church buildings on Church Street.
- D & H site: the constellation of sites around the Ben-Mar Restaurant, including Maple Wood Cemetery and Racket Brook Falls, the vista across the river toward the D & H Roundhouse site, Gravity Park and monument.
- Industrial site: secondary installation to be located at Dundaff Street to interpret the proposed Carbondale Industrial District and the former D & H Roundhouse site.

There would also be an interpreted vista at Lincoln and High streets opposite the E. E. Hendricks mansion, interpreting Hendricks, the Gravity Railroad track, and the vista over the town of Carbondale toward the west side of town.

Welcome and Orientation
All visitors would be directed first to the reception and orientation center in the 1903 Pioneer Bank building on North Main near the corner of Salem Street. The Chamber of Commerce operates the building, and plans a café-art gallery in the front part of the space. Signage outside the building and in the front windows would indicate the presence of the Heritage Valley orientation within. The café and the LHVA orientation could mutually reinforce each other, as Heritage Valley visitors would appreciate food and restroom facilities, and café patrons could encounter the orientation installation by chance, and become interested in touring the rest of the Heritage Valley.

The "local" reception and orientation component would focus on the northern part of the Heritage Valley, from Archbald to Carbondale, the area controlled by the Carbondale-based D & H Gravity Railroad. Like the orientation components at all the sites, this one would feature a large-scale, hand-drawn, colored "you-are-here-and-you-can-get-to-there" map of the area bounded roughly by Archbald to the south, Simpson to the north, Waymart to the east, and the westernmost extent of Carbondale to the west.

The map would be large-scale and eye-catching, and would include key streets, routes and sites in and around Carbondale. The first text element would be a sweeping significance statement for the entire focus area; the second text element would guide visitors to interpreted sites, walks and drives in the immediate vicinity. The installation would also provide a brochure rack with site-specific brochures delineating nearby walking and driving routes, accessible sites of interest and recommendations for meals. The rack would also contain a combined train/bus schedule and a full range of other LHVA brochures.

The "gateway" orientation element here at Carbondale would be similar to the one presented at the Scranton gateway. It would utilize a combination of interpretive media, perhaps including a brief audiovisual program designed to present the Heritage Valley story linking interpretive themes to the sites people can visit, a relief map or diorama designed to display the burgeoning of the Lackawanna Heritage Valley, and a graphic presentation of the "tracks" which visitors can follow to tour the Heritage Valley.

City Hall and Downtown

This interpretive installation would be located near the front of City Hall, perhaps in Memorial Park. If it is in the park, the installation could be designed to resemble a traditional band shell with seating. Interpretive panels would be fitted between the posts, with a text shelf below. Carbondale's interpretation would create a sense of balance or equipoise between Company (the D & H) and Community (the civic and social life signified by City Hall and its surroundings.) Thus, the same overall theme statement would open the exhibit elements here and at the Ben-Mar site. Images from a walking tour brochure would pique visitors' interest in seeing nearby churches, commercial buildings and the residential district on and around Lincoln Avenue.

Here the visitor is invited to consider the elements that make a living community: municipal government providing infrastructure, schooling and services; churches for spiritual life and fellowship; downtown stores, theaters and meeting halls for commercial and social life and entertainment.

Streetscape improvements along Main Street would feature the planting of shade trees, and the creation of parking for visitors.

Lincoln Avenue Vista

Carbondale's architecturally distinguished residential district climbs the eastern hillside beyond the public park opposite City Hall. Lincoln Avenue would be the spine of a walking tour of this district. About five blocks above the park, on the north side of Lincoln Avenue, stands the handsome A. J.-Downing-style Gothic Revival estate of E. E. Hendricks, the mid-19th century Carbondale industrialist who developed perforated screening for use in the breakers and for other colliery operations. A marker here would illustrate and interpret the Hendricks estate and the light track of the gravity railroad that ran past it to the east. As the spot also commands a dramatic vista of downtown Carbondale, the wayside would also interpret the view. The vista graphic might be an enhanced aerial view with directional arrows and color-keyed identification of City Hall, the D & H nexus, the river and the roundhouse site. As the west side of the city is clearly seen from here, the long-lived and devastating mine fire could be mentioned here.

Ben-Mar Restaurant/ D & H Complex

This site is no longer legible as the seat of Company operations, and thus requires visual enhancement and interpretation to bring out its significance. An enlarged detail from the 1890 Birds Eye View would identify the Ben-Mar building as the former D & H office: this building was the company "façade," the face it turned south toward the town, the screen it placed between the town and the heavily industrialized landscape of tracks and sidings, car houses and machine shops that were the core of the company's operation. Although only the office building survives of the once-great transportation nexus, this site is still a gateway to several of Carbondale's points of interest.

Behind the Ben-Mar, a wide and deep paved parking lot fades off into a weedy fringe area where the D & H machine shop and car barns stood. A short distance into the weeds one comes to the falls of Racket Brook creek tumbling down from the hill running up to the cemetery. The brook was formerly channelized through the machine shop, but today it seems wilder and more natural.

View to the Roundhouse Site

Beyond the brook, in the direction of the river, a large concrete structure, a remnant of the D & H operation, stands mysteriously in a small woods. This structure, like the "megalith" in The Plot, could be developed as a vantage point overlooking the D & H Roundhouse site on the west side of the river. A large-scale historic map and photograph from a similar vantage point would give the visitor the urban archaeologist's privileged understanding of the full extent of a once powerful and complex system that has left many traces of itself as it sank into abandonment and disuse.

The weedy fringe behind the Ben-Mar leads to two undeveloped paths, both of which would make fine walks for residents and excursionists alike. The first of these is now an uphill scramble alongside the creek to achieve the Maple Wood Cemetery, described below. The second walk proceeds up John Street, an unpaved, rural-looking thoroughfare that runs through light woods along the west side of the cemetery. John Street follows the former route of an old D & H siding that ran from the car houses north to the top of the cemetery, then crossed the river on a bridge and ran north to the mammoth Coal Brook Breaker, a company colliery with mines.

Racket Brook Falls

Behind the Ben-Mar restaurant, between the building, the river, and Maple Wood Cemetery, stood a complex web of sidings and D & H car houses and machine shops. Racket Brook was formerly channelized into a race that ran through the machine shop, flowing into the Lackawanna River at the west end of the complex. Today, with the buildings removed, the spot is appealing - a pristine waterfall in a junkyard. Interpretation on the site can describe the D & H machine shop operations, while the site itself might easily be upgraded into a serene and lovely in-the-city natural spot, with a trail along the brook, up to the side entrance to Maple Wood Cemetery.

Maple Wood Cemetery

This park-like cemetery displays many fine 19th-century gravestones and monuments, and contains the grave of William Wurts as well as the D & H officers for whom were named the Heritage Valley towns of Throop, Jessup, Simpson, Jervis, Jermyn, Fell and others. Many graves mark the burial sites of men and women born in Wales and Cornwall. Catholic burials are supposed to be at the southern end of the cemetery (originally separate), with Protestant burials to the north. We did not see any recognizably Catholic gravestones, however. Maple Wood Cemetery is a beautiful place, and its high points command sweeping views of the old Carbondale Yards and the west side of town. The cemetery is neglected looking at present, though, and many of the gravestones have been knocked down. The City has cleaned up the cemetery in the past, although as no one seems to know who is in charge of the place, clean-up improvements have not been sustained. An effort should be made to identify the cemetery's owners, and failing that, a civic-type group might be formed to champion and maintain it. Perhaps a community clean-up day could be scheduled, with entertainment and refreshments. Eagle Scout projects could be encouraged there as well. A special-event cemetery tour could feature both 19th century funerary architecture and the local history represented by the people buried here.

Gravity Park

The gravity railroad began its mountain crossing at the D & H nexus behind what is now the Ben-Mar restaurant. From there it crossed Racket Brook then ran between the brook and Canaan Street up the hill and out of town. Just across Belmont Street from the restaurant a monument to the gravity railroad stands in a small park. Here began Incline Plane No. 1, at the top of which stood a stationary steam engine that pulled loaded coal cars up the gentle grade to the steeper Plane No. 2, and so on. NOTE: The "Pioneer," a passenger car built for and used for excursions on the gravity railroad, is displayed with very minimal interpretation at Nay Aug Park in Scranton. Labeling identifies it as belonging to the City of Scranton. The city of Carbondale might wish to negotiate for the return of the "Pioneer," citing plans for creating an interpretive display around it here at Gravity Park.

Carbondale Industrial Historic District

This secondary interpretive installation is provisionally recommended based on the 1991 Industrial Sites Survey accomplished by Dan Perry. Perry identified three industrial districts in the Heritage Valley with potential National Register eligibility, and one of these was the Carbondale area between Dundaff Street and the Lackawanna River.

This street contains what is to our eye the richest and most interesting concentration of industrial buildings in the Heritage Valley. Several of them appear to date from the 1870s and 1880s. The buildings include a silk throwing mill, and the E. Hendricks factory where perforated screens for breakers were fabricated.

Behind the industrial buildings lies the 19th century D & H Round House site and Carbondale Yards, an intensely developed railroad yard that once stretched from Dundaff Street all the way up to the breaker. The yards area was dominated by the round house itself, which anchored a string of buildings along the river that included passenger depots, a saw mill and mill pond, group of company-owned miners' houses and, northwest of the pond, the massive Coal Brook Breaker. None of the D & H structures remain today.

This site is recommended for a secondary-type interpretive installation - a wayside station - rather than a more highly developed treatment because no D & H sites remain, and because Dundaff Street is not within easy walking distance of the other Carbondale sites.

Walking Tours

Lackawanna River Trail

The route preferred by LRCA for the Lackawanna River Trail, beginning at Pioneer Station, would cross the river on the Sixth Avenue Bridge, turn left at Main Street and proceed to the Ben-Mar restaurant. There it would veer

left onto John Street and the OSC rail corridor, skirting the western edge of Maple Wood Cemetery. The route would then cross the "1909 Bridge," a former D & H railroad bridge, to the west side of the river, then continue north through the Carbondale Yards Industrial Park to the Morss Street Bridge in Simpson.

Walkers on this route would encounter the LHVA major interpretive site near the Ben-Mar restaurant. Directional and interpretive signage would allow pedestrians to explore Racket Brook Falls, John Street and Maple Wood Cemetery, with its interpreted vista of the D & H round house and Carbondale Yards site. If it is used as part of the River Trail, the "1909" railroad bridge should be identified.

An alternative route for the River Trail diverges from the preferred alternative at the Ben-Mar, following Belmont Street to Simpson.

Downtown Carbondale

The first leg of this walk links the Pioneer Railroad Station, the Community interpreted site at City Hall and the park (after encountering Trinity Episcopal Church along the way), and the orientation center in the Pioneer Bank at the corner of Main Street and Salem Avenue. From there, the route turns onto Salem Avenue, passing several of the traditional retail shops cited above, to Church Street, where a wayside would identify the three big churches and touch on their roles in the life of the community. Pedestrians would then walk north on Church Street, turn right and climb up the hill five blocks on Lincoln Avenue to High Street where they encounter the interpreted view across the city, and the Hendricks estate. Jogging across a block to Garfield Street then turning downhill, pedestrians would encounter the Ben-Mar site.

At Ben-Mar, further options would allow pedestrians to explore Racket Brook Falls, Maple Wood Cemetery, and the vista across the river to the round house site.

Driving Tours

Simpson

From Carbondale, a short driving tour would take excursionists north on Belmont Street (Route 171) to Simpson, where brochure-interpreted sites would include the lemke vernacular Russian Orthodox Church, the industrial site known as Doyle & Roth where the late-anthracite story of the Blue Coal takeover and bankruptcy could be told, and the Simpson Breaker.

D & H Corridor

The most appealing side trip from Carbondale would take visitors over Moosic Mountain on Route 6, parallel to the track of the D & H Gravity Railroad and into the D & H Heritage Corridor. While still in Lackawanna County, however, the site of the Racket Brook Breaker would be identified, and for those who would like a walk, a trailhead would be created for a path to Shepherd's Crook, the scenic hairpin turn on the gravity railroad a few miles out of Carbondale. The D & H Corridor begins along Route 6 at Waymart (where a Gravity Railroad depot is under restoration). It continues to Honesdale (rail excursions along the Stourbridge Line to Lackawaxen PA), then on to Port Jervis on the Delaware River, and from there north to Kingston on the Hudson. This heritage corridor is thematically identical to the Lackawanna, and has a number of D & H-related sites and attractions, along with canal towpaths and other hiking trails. This tour is adequately presented in a brochure produced by the D & H Transportation Heritage Council.

Station Lunch

Carbondale has already produced a box-lunch event, catered by the Ben-Mar restaurant and held at Pioneer Station. The station was set up with tables and attractively decorated, and the event was highly successful. Carbondale contacts believe that St. Rose of Lima, and possibly some of the other churches as well, could be organized for the station lunch program; if not, then one of the many restaurants or markets could do so.

Appendix D

LACKAWANNA HERITAGE VALLEY
Comprehensive Education Plan

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INTRODUCTION

Since 1998, the Lackawanna Heritage Valley (LHV) has placed an increasingly important value on the role of education. In an effort to foster an awareness, understanding, and pride in the area's rich history, resources, culture, and people, the Heritage Valley has built a wide range of partnerships throughout the region. By joining with schools and universities, historical sites and arts agencies, community organizations and governmental entities, LHV brings the stories of the region to life through education and interpretation. By commemorating the region's historic role in the industrial development of the nation, the Heritage Valley employs unique resources to define Northeast Pa's past and promote its future through the next generation of citizens.

The major heritage resources of the Valley include the Lackawanna River and the string of small towns and older neighborhoods that grew up along its banks. Mining, industry, commerce and railroads have shaped the region. The "main streets" of Valley towns are quieter now, but they once hummed with shopping and socializing as residents patronized local stores and attended the churches and social clubs that have been a fixture of community life. Other heritage resources of the Valley include the historic cores of the towns and their older neighborhoods of workers' housing as well as grander structures; historic coal breakers, mill buildings and railroads, and the less visible but equally important cultural and ethnic resources of the Valley - the people. Language, food, religious practices, customs and traditions brought from many countries are alive and well in the Lackawanna Heritage Valley.

Identifying the Valley's resources is a strong component of the work being done by the Lackawanna Heritage Valley Authority. Cultural, folklife and natural resource surveys have confirmed the breadth and quality of heritage resources in the Valley.

Since ostensibly completing the bricks and mortar phase of its 1991 Management Action Plan, the Lackawanna Heritage Valley Authority moved into an aggressive posture to develop a comprehensive education initiative that would cultivate a new generation of historians, environmentalists, teachers and citizens.

PARTNERSHIPS

An integral aspect of the Lackawanna Heritage Valley's ability to have a significant impact on heritage interpretation, education and promotion is the development of "Partnerships." LHV works in conjunction with area historical sites, regional organizations, educational institutions, community leaders and governmental units. Through cooperative agreements, LHV is able to develop concepts, promote ideas, extend the scope of projects, widen the reach of potential audiences and contract with experts to ensure the integrity of heritage initiatives. Partnerships are the cornerstone of LHV's progress over the past decade. Out of partnerships, various subcommittees have grown that work to design and implement many of the programs of the Heritage Valley. Monthly meetings are held at the LHV offices, and community programs are developed and nurtured. LHV ensures, through the inclusion of these groups that effective projects are designed and implemented for the benefit of all.

In an effort to ensure that the educational initiatives of the Lackawanna Heritage Valley are in line with national and state standards, the organization works extensively with the Northeastern Educational Intermediate Unit (NEIU). NEIU is an educational service agency for the Pennsylvania Department of Education. The NEIU supplements and supports local school districts in their efforts to educate all students. Other aspects of their mission include:

- Influencing policy
- Securing resources to facilitate sound decision making
- Providing external accountability processes
- Stimulating ideas for practice.
- Improving the quality of programs, products and services of the school
- Increasing school productivity

NEIU also provides special services to schools in their designated region. These programs include professional development, technological innovations, parent, student and school services, and school management and consulting advice.

LHV tries to insure the educational integrity of its programs by inviting a wide cross-section of representatives to join the LHV "Educational Alliance." Each quarter, the alliance discusses projects under development, generates ideas on how to enhance the educational value of heritage projects and shares ideas on how the member

organizations might work cooperatively to interface various initiatives into a unified thematic structure. The make-up of this dynamic group includes area universities and colleges, teachers, heritage site education specialists and community leaders.

Through the programs developed by the Lackawanna Heritage Valley, more than 40 partnerships have been developed that regularly work together to produce educational projects.

STATE AND NATIONAL STANDARDS

In law passed by the state legislature, and enforced by the Pennsylvania Department of Education, the content of all educational initiatives must contain prescribed academic standards to ensure that projects and programs will have substantive educational value. Unless the Lackawanna Heritage Valley produces projects that address these academic standards, there would be no reason for school district administrators and teachers to embrace LHV's innovative educational efforts. To this end, the Pennsylvania Standards for Academics are an integral component of the educational plan implemented by the Heritage Valley.

Currently, the LHV educational plan includes pre-kindergarten through adult audiences. The standards that are referenced are generally directed to students and educators working in grades K-12. These standards, however, are appropriate for all demographics. The inclusion of national and state curriculum law, in the educational initiatives developed by the LHV, ensures that the programs are based on high-level instruction and content and are appropriate as significant learning experiences for vast audiences.

The various programs developed and implemented by LHV generally concentrate on the teaching of regional heritage and culture. Standards addressed in these various areas are derived from the Academic Standards for History, Geography, Civics and Government, the Standards for the Arts and Humanities, the Standards for Environment and Ecology and the Standards for Reading, Writing, Listening and Speaking.

The content for the standards for the LHV programs that encompass history includes historical analysis, Pennsylvania history, United States history, and world history. Programs created by LHV encourage students to learn chronological thinking, historical comprehension and interpretation, and historical research. In addition, the study of Pennsylvania history includes contributions of individual and groups, influences of continuity and change, and instruction of conflict and cooperation among groups. The historical references to world and national history integrate the immigrant experience in the Lackawanna Valley with the world and national timeline in which local experiences occurred.

The Civics and Government Standards include such content as the principles and documents of government, the rights and responsibilities of citizenship, the nature of government in the region and international relationships. This global content is regionalized with the stories of local people and industry as it relates to the development of government in the nation and region.

The cities and towns of the Lackawanna Valley are the focus for the implementation of the standards for geography. Geography Standards are integrated in terms of learning place, region, population, culture, economic and political activities and the impact of systems on people and the areas in which they settle.

Writing and research are integral in all LHV initiatives. Integration of the Reading, Writing, Listening and Speaking Standards are evidenced in the Heritage Valley programs as students and educators apply literacy skills in the execution of various projects. Presentation skills and comprehension levels may also be enhanced.

The Arts and Humanities Standards include activities that engage the students and teachers in learning the application of the arts as well as aesthetics. Local cultural institutions are used to fully involve the students and teachers in the understanding of the region.

The Academic Standards for Environment and Ecology are applied in the context of students learning about watersheds, wetlands, renewable and nonrenewable resources, environmental health, agriculture, ecosystems, animal life, and environmental law and regulations. In addition to meeting the standards, these programs reflect the importance of preservation and conservation, a key aspect of the goals of the LHV's mission in regard to the environment.

CURRENT PROGRAMMING

As previously stated, all educational programs and projects of the Lackawanna Heritage Valley are designed following standards based content. The following examples are annotated descriptions of such programs.

With a goal of merging multi-faceted, independent programs into a single, marketable concept, the Heritage Valley developed the "Young People's Heritage Festival" (YPHF). This project allows LHV to utilize the title as an umbrella under which all educational projects are encompassed. Individual projects, designed with the purpose of addressing the overriding LHV themes of Land, People, and Industry, are geared toward specific demographically targeted audiences to ensure age-appropriate content.

"Living Legacies" encourages elementary, middle and high school students to write and produce their own radio program based on the history of the region. The productions are judged by a group of educators and broadcast professionals. The best of the submitted entries in the various age group categories are then awarded prizes, and their programs are broadcast on a local radio station. This endeavor generates programs on Scranton's Luna Park, the Gravity Railroad, the vaudeville circuit in Scranton, the canals and oral histories by area coal miners. In recent years, the project has expanded to allow for the use of other creative media forms to afford students the opportunity to express their interest in local history. These forms include video, photography, art, playwriting and dance. The concept is progressing to the point where the LHV is experimenting with a group of students who are developing plays for public presentation. The young thespians, called the "Past Players" are currently involved in a living history production in partnership with the Lackawanna Historical Society.

Educators and students "experience" history in the classroom with **"Traveling Trunks."** Steamer trunks, filled with historical artifacts from various regional museums, are delivered to the classroom with the cooperation of the NEIU. A curriculum guide, aligned to the Pennsylvania Academic Standards, allows the teacher to take full advantage of the educational aspects of the trunk through various in-class exercises. The students have the opportunity of touching and examining these pieces from the Lackawanna Valley's past. Strands of lace present the region's history in the needle trades. A duplication of a coal miner's work certificate signifies the rich heritage of the region as the world's #1 producer of anthracite. A trolley conductor represents Scranton as the first city in the United States to have a commercially viable electric streetcar system. In addition, a series of videotapes, books and other hands-on items make the traveling trunks a unique classroom educational experience. There are currently eight trunks traveling throughout regional school districts. The trunks are booked for classroom use through the 2004 school year.

The region has a vast and proud history of railroading. The first running of a steam locomotive took place in Hawley, Pa with the Stourbridge Lion in 1829. The Scranton Brothers manufactured T-rails at the Iron Furnaces in downtown Scranton, which allowed the United States to move away from its dependence on coal from Great Britain. The moving of coal to market from down in the valley to the canal system was accomplished through a series of tracks and planes of the Gravity Railroad. And, of course, the placement of Steamtown National Historic Site in downtown Scranton validates the region's railroading history.

An LHV educational program that highlights the importance of the railroading industry on the region and the nation is the **"Heritage Express."** This rolling classroom takes nearly 500 fourth graders on a unique educational field trip and works to provide an understanding of the railroad's importance to various small towns throughout the Lackawanna Valley. The train departs Carbondale's Pioneer Station for a daylong adventure in the region's heritage. During the journey, students learn about local history as they travel through the towns along the train route. The trip also provides a special glimpse of the industrial heritage that is the foundation of the Lackawanna Valley. Musicians provide songs of the railroad era and students encounter actors in period costumes who weave stories of the region's rich history. Once the train arrives in Scranton, the students' tour the Steamtown National Historic Site to learn about the important role that rail transportation played in our area. The students also participate in an educational presentation at the Electric City Trolley Station and Museum.

Environmental issues have always played a major role in Heritage Valley initiatives. The centerpiece of the valley is the Lackawanna River. How we protect and conserve this vital resource is essential to the valley's future. The educational projects that revolve around the environment are the Environmental Fair and the Environmental Career Forum.

The Lackawanna Heritage Valley **"Environmental Fair"** literally lets grade school students get their feet wet in the field of nature study. Held each October at the Heritage Valley Center in Mayfield, the event has gained a reputation for providing exciting, hands-on activities that increase environmental awareness and promote good stewardship of natural assets. The success of the event can be seen in the response to the program. This year, 1158 area grade school students, 12 schools, 4 counties and 40 exhibitors participated in the event. During the day long fair, the students have the opportunity to clean-up an "oil spill," observe live raptors, examine zebra mussels, learn about worm composting, and wade in the Lackawanna River to study macroinvertebrates.

High School juniors interested in the field of environmental studies test the waters with the interactive **"Environmental Career Forum."** The program, held each year during Earth Week, features experts speaking on a wide range of topics from biology and zoology to nature study and water quality. The speakers, representing a variety of non-profit, private sector and governmental agencies, discuss specific jobs, daily responsibilities and duties and necessary qualifications for certain positions. Students are informed of specific details about various environmental programs offered through regional colleges and universities.

A new initiative of LHV over the past two years has been a master's degree-level course developed through the educational initiative of the Heritage Valley and offered for credit through the Northeast Educational Intermediate Unit (NEIU). *Using Community Based Primary Resources to Enhance Classroom Instruction* is the official name for this 45-hour course that is commonly known as **"Museums as Classrooms."** The belief is that teachers learn best through hands-on experience. Museums as Classrooms provides focused instruction for teachers on area history, and creates an important framework for teachers to address local heritage sites and resources in their own classroom. Additionally, the program fulfills Pennsylvania Department of Education continuing education credits for teachers to receive permanent teaching certification and recertification. The goal of the course is the integration local history into the school district curriculum.

Partners in the course include the Lackawanna Historical Society, the Electric City Trolley Station and Museum, Steamtown National Historic Site, the Everhart Museum, the Anthracite Heritage Museum and the Lackawanna County Coal Mine Tour. Teachers get an in-depth, behind the scenes perspective from educational specialists at each local attraction. The study sessions represent various aspects of regional heritage that best serves to document the work of thousands of area residents who labored in the mines and factories and on the railroads, thus making great contributions to this nation's industrial growth.

Providing essential classroom materials is one of the most important factors in integrating educationally based content into area schools. There is an influx of new teachers into the 20 school districts within the Lackawanna Heritage Valley service area. Many of these teachers are not area natives and have little knowledge of the region and its history. LHV has made a concerted effort to ensure that these teachers have the tools necessary to teach the children about the various heritage attractions. **"Curriculum Guides"** provide lesson plans, pre- and post-visit activities, a glossary and other essential materials that contribute to a solid educational experience for both teacher and student. Thus far, guides have been developed for Steamtown National Historic Site, Lackawanna Trolley Station and Museum, the Catlin House, Lackawanna Coal Mine Tour and the Anthracite Heritage Museum. Working in partnership with NEIU, LHV has sponsored Curriculum Day teacher workshops that provide a full day of training for teachers on how to utilize a particular guide. Content of a typical workshop includes a tour of the site, historical background, Pennsylvania Standards integration, the use of multiple intelligences, training on the activities in the guide, and integration of the Arts.

The importance of regional **"Conferences"** for students, educators and community heritage specialists is exemplified in such substantive efforts as the "Great Strike of 1902." This academic conference, held in conjunction with area colleges and the Pennsylvania Historical and Museum Commission, commemorated the 100th Anniversary of the 1902 Anthracite Coal Strike. Nationally recognized guest speakers, living history enactments, special hands-on activities, seminars on regional history, and opportunities for teachers and students to learn are components of such conferences sponsored and/or supported by the Heritage Valley on a regular basis.

EVALUATION

Each of the educational projects developed by the Lackawanna Heritage Valley incorporate a qualitative and quantitative "Evaluation" process to ensure the integrity and usefulness of the undertaking. Pre- and post-evaluation forms are created under the
supervision of curriculum specialists at NEIU. The results are collated and reviewed by
the Educational Alliance and specialists at LHV. In addition, LHV has employed various other means of evaluative procedures including focus groups and formative and summative evaluation in developing and assessing various projects.

The LHV educational programs are outcomes based. Each project has a quantifiable product that is developed through partnerships. From Curriculum Guides helping teachers to prepare students for heritage site visits to Traveling Trunks bringing historic artifacts into a hands-on classroom situation, the projects promote the partner organization and help to serve their missions and reach their educational objectives.

These projects also encourage students and the public to better understand the concept of the Lackawanna Heritage Valley Heritage Area.

PLAN PROPOSAL

Overview

In the area of education, the Lackawanna Heritage Valley acts as a facilitatory in building alliances between groups with similar goals and missions. In that role, LHV will continue to lend support and assistance in creating unique education initiatives. Educational programs for public and non-public schools, colleges and universities, and adult audiences will enable the LHV to further the importance of local and regional culture and heritage. The Heritage Valley will also develop educational programs that explore connecting themes, expand the scope and sequence of the theme, and provide articulation and coordination of interpretive scenarios for designated educational projects and audiences.

The primary distribution point for all K-12 institutions in the Heritage Valley Corridor is the Northeast Educational Intermediate Unit. The LHV will work with administrators and curriculum specialists at NEIU to review and update programs with state mandates for public education. The NEIU will also provide professional development for educators and communities as a way of promoting an understanding of the region's rich heritage.

Review Of Current Programs

The current programs and projects under the auspices of the Lackawanna Heritage Valley were fully described in the CURRENT PROGRAMMING section of this document. The initiatives are, however, always under review as the LHV continues to refine its educational mission. Working with the LHV Educational Alliance, the current partner base, state and federal agencies, and regional educational institutions, the Heritage Valley will assist in building a framework that will review, strengthen, enhance and connect existing programs that provide an outreach to a wider community.

- The Young People's Heritage Festival concept, as an all-encompassing umbrella, remains strong.
- The Living Legacies aspect will concentrate on collecting oral histories in a manner that will be both beneficial and act as a reliable means of obtaining important stories on the history of the valley.
- Traveling Trunks is still a very successful program that has proven to be a valuable classroom asset to area teachers. The LHV will continue to explore the idea of providing a living history presentation to enhance the educational value of the trunk prior to its introduction into the classroom setting.
- The Heritage Express has been a project supported by the LHV for the past seven years. The program, although still a useful educational opportunity, will need to be handed off to the partner organizations and their committee to obtain funding from other sources. This is essential so LHV can direct seed money into various initiatives being proposed and now under development.
- The environmental projects of the LHV will be undergoing qualitative and quantitative evaluation under the auspices of a newly proposed Environmental Alliance (see below).
- The Museums in the Classroom program gains in popularity and is a useful means of educating area educators on the primary resources that are available to utilize in their classrooms.
- Curriculum Guides, and their corresponding teacher's utilization workshops, have always been an important way to integrate heritage content into school curricula. Opportunities for development of new guides and on-line components will be examined.

New Initiatives

The primary historical resources of the Lackawanna Heritage Valley are rapidly dwindling. Although the physical attributes of the valley are addressed as part of the interpretive plan *(PHYSICAL IMPROVEMENTS PLAN - Key Interpretable Places Improvements)*, it is also essential that we protect the first person stories of the region through a concerted effort to collect **"ORAL HISTORIES."** Following the guidelines established by the American Folklife Studies Center at the Library of Congress, the LHV will work toward collecting the stories of the valley. This effort will initiate a program to contact and interview people who worked in the anthracite mines, laid track for the railroad, wove silk in area textile mills, labored in the valley's needle trades, plowed the farm fields of the region and developed successful businesses. Their experiences will tell the story of the valley in a real-life way.

LHV will contract with consultants who will act as primary facilitators and work in conjunction with LHV partners in accomplishing the task of obtaining audio and/or videotaped oral histories, cataloging the tape and film and archiving it for future utilization. Serious consideration will be given to the setting of the interview to achieve the best results. In addition, faculty at local colleges and universities will be encouraged to conduct field research activities and oral histories as a means of gathering additional stories. Student internships for credit are another means of obtaining important stories.

These stories will be used in a myriad of ways both present and future. From posting on the LHV website to use in future tourist presentations and exhibits, the stories will offer a glimpse into a world that no longer exists but that these residents have experienced firsthand. In addition, with current video and multi-media technologies, interpretive and /or educational presentations may be developed employing still photographs and existing film footage.

Residents of the region are unable to tell the story of the Lackawanna Valley if they don't know it. Natives, as well as "new immigrants" to the area, need to understand the significance of the region in the development of the nation as a whole, and its contribution to the Industrial Revolution. It is also important that an attempt be made to eliminate the stigma of the dirty coal mining town image of Scranton and its surrounding regions, and promote a progressive, proud image to their children and grandchildren. To this end, it is essential that LHV provides an opportunity for **"LIFE-LONG LEARNING"** as a way of attracting a larger adult population to the area's historical and cultural sites. LHV will develop a consortium and provide assistance in the development, planning and coordination of regional seminars, symposia, conferences, family programs, cultural celebrations and exhibits of fine arts. These efforts will lead to a measurable growth of awareness in the area's significant past. Working with individual communities, LHV will promote the concept of heritage conservation by supporting historic efforts to preserve artifacts, celebrate traditions and culture, and promote local heritage initiatives.

The renaissance of Nay Aug Park, and the speculation of the revitalization of the Nay Aug Zoo with animals indigenous to the region, will provide the Lackawanna Heritage Valley with an opportunity to interface its environmental education program with a unique area treasure. The Nay Aug Gorge, the vast array of flora and fauna, and the beauty and tranquility of the area will lend itself perfectly toward a hands-on environmental education experience that promotes protection and preservation to all demographic groups. Working with the City of Scranton, Lackawanna County, and area environmental agencies, the LHV will solicit membership in an **"ENVIRONMENTAL ALLIANCE."** The mission of this new entity is to promote conservation of natural resources in the Lackawanna Valley by creating effective, collaborative projects and programs that educate citizens on environmental issues, benefit the community in general, and afford an opportunity to raise awareness of the partner agency's mission and goals. This alliance, in addition to reviewing current LHV environmental programs, will produce a resource directory, design an environmental conference and develop a continuing education course for area biology and environmental teachers on ways their organizations are working to preserve the natural resources of the region.

The only major partner of the Lackawanna Heritage Valley that does not have a curriculum-based guide to its programs and historical holdings is the Everhart Museum. The museum is making great strides in the development of a substantive educational program. The Heritage Valley will work with the Everhart, the NEIU and area teachers to produce a **"HERITAGE HANDBOOK."** This child-centered booklet, developed for ages K-8, will also include a teacher's guide with appropriate lesson plans and suggested activities. Unlike the current Curriculum Guides that are now in distribution for the other partner sites, this booklet will focus on hands-on activities for students. The teacher's pages will be separate from the actual student workbook. The innovative educational materials will encourage young people to discover the heritage of the valley in a fun and informative book.

With plans for an **"INTERPRETIVE CENTER"** in development, an educational program will be developed to enhance the center's impact by employing the latest in technology and thematic integration of education into an experience for area students as well as residents and visitors. Using such examples as the "National Constitution Center" in Philadelphia, the merging of exhibitory, hands-on activities, multi-media presentations and living history will bring an understanding of the Lackawanna Valley and the role it played in the growth of our nation.

Today's student is captivated by technology. Game Boy®, Play Station®2 and X-Box ™ take up a great deal of adolescents and young adult's leisure time. It is believed that the integration of technology with education has become an important way for students to become engaged in meaningful learning experiences. In an effort to gain the attention of the students, as it relates to regional heritage education, LHV will examine the potential of an **"INTERACTIVE COMPACT DISC (CD) / DIGITAL VERSATILE DISC (DVD)"** that will be able to relate the history of the region in a high-tech manner. Through a process of needs assessment, design, development, implementation and evaluation, a useful tool will be brought to the classroom and home computer. This project will also have the capability of acting as a multi-functional marketing tool to encourage families to visit the area and learn about the Lackawanna Valley's unique history. LHV will work with existing partners to provide web links that will be incorporated into the CD/DVD. These active links will keep information fresh and current with the ability of updating content on a regular basis.

An effort will be made to enhance and further develop the current "LACKAWANNA HERITAGE VALLEY WEB SITE" (www.lhva.org) and integrate it with existing partner sites. This comprehensive vehicle will not only promote the region to outside entities, but will also form a coalition of educational institutions to develop and share programs, ideas, and materials that tell the story of the valley. In addition, curriculum guides that are in existence or under development will be more easily distributed and updated via this on-line model.

The Lackawanna Heritage Valley is promoting "LIVING HISTORY" in a number of ways. With a group of high school students, the Past Players research and write plays based on local people and events of significance. Presentations that depict coal miners' lives are presented to school students on a regular basis. Individuals on the Heritage Express train excursion take on the persona and tell the tale of hobos who traveled the rails around the country. The LHV will forge partnerships with area theatrical groups to research stories, write scripts, design costumes and develop characters that depict the people of the region in an earlier time. Taking a cue from such successful efforts as Williamsburg, Virginia, the Heritage Valley will ascertain the components necessary to present and promote living history in the context of educational initiatives for in-school, community and on-location sites such as downtown Scranton.

The *Traveling Trunks* initiative presents a way of capturing a glimpse of the region's lifestyle in the late 19th and early 20th centuries. But what will be historically significant in 100 years? Times change rapidly. A major form of entertainment for our ancestors was the phonograph. Although some recordings still exist, there are very few ways of playing them. Audiocassettes all but eliminated vinyl recordings. Now cassettes are being replaced by the compact disc. Photographic film has given way to digital images. Will the digital shots of today be replaced tomorrow by 3 dimensional or holographic images? Through a "HERITAGE TIME CAPSULE," LHV will work with area schools to encourage classroom group activity that will identify items from the area that students believe will be of historical significance in the future. This project-based form of education will afford students the opportunity to catalog, collate, and preserve items that are now in everyday use. Although this time capsule will never be buried, the
teacher/ school may utilize its contents to relate back to the growth of our region in the future. The time capsule may also be shared with the community. A brief teacher guide will be provided to work with the contents in the capsules and will travel to the schools as well to teach current history, geography, environmental science, and current immigration.

CONCLUSION

The Lackawanna Heritage Valley has successfully implemented programs and projects that encourage regional educators to focus on the heritage of the area in classroom curriculum. The innovative design of the educational plan has created opportunities for community agencies, museums and educational partners to come together to foster strong alliances that result in exemplary and substantive materials and initiatives. The future plans for education will further the development of the region through strong alliances in the community. The wealth of ideas that result from a united educational community will be implemented through the support of the LHV. All educational programs and projects will continue to be based on the Pennsylvania Academic Standards to ensure the strength of the programs. The most important result of the work of the LHV is the newfound respect for the region that has evolved, as more and more people learn of the abundance of opportunities in the valley and the dedicated people who believe anything is possible.

The Interpretive plan that is also a part of this comprehensive educational plan proposal will endeavor to bring residents and tourists alike to the various heritage attractions within the Lackawanna Heritage Valley. This "Heritage Explorer" concept will allow travelers to decide on the route and attractions in which they are most interested. The comprehensive educational plan is designed to work with the various attractions to insure that they are prepared to provide the visitor with a meaningful educational experience through exhibitory, hands-on opportunities and technologically advanced displays.

LACKAWANNA HERITAGE VALLEY EDUCATIONAL INITIATIVES BUDGET

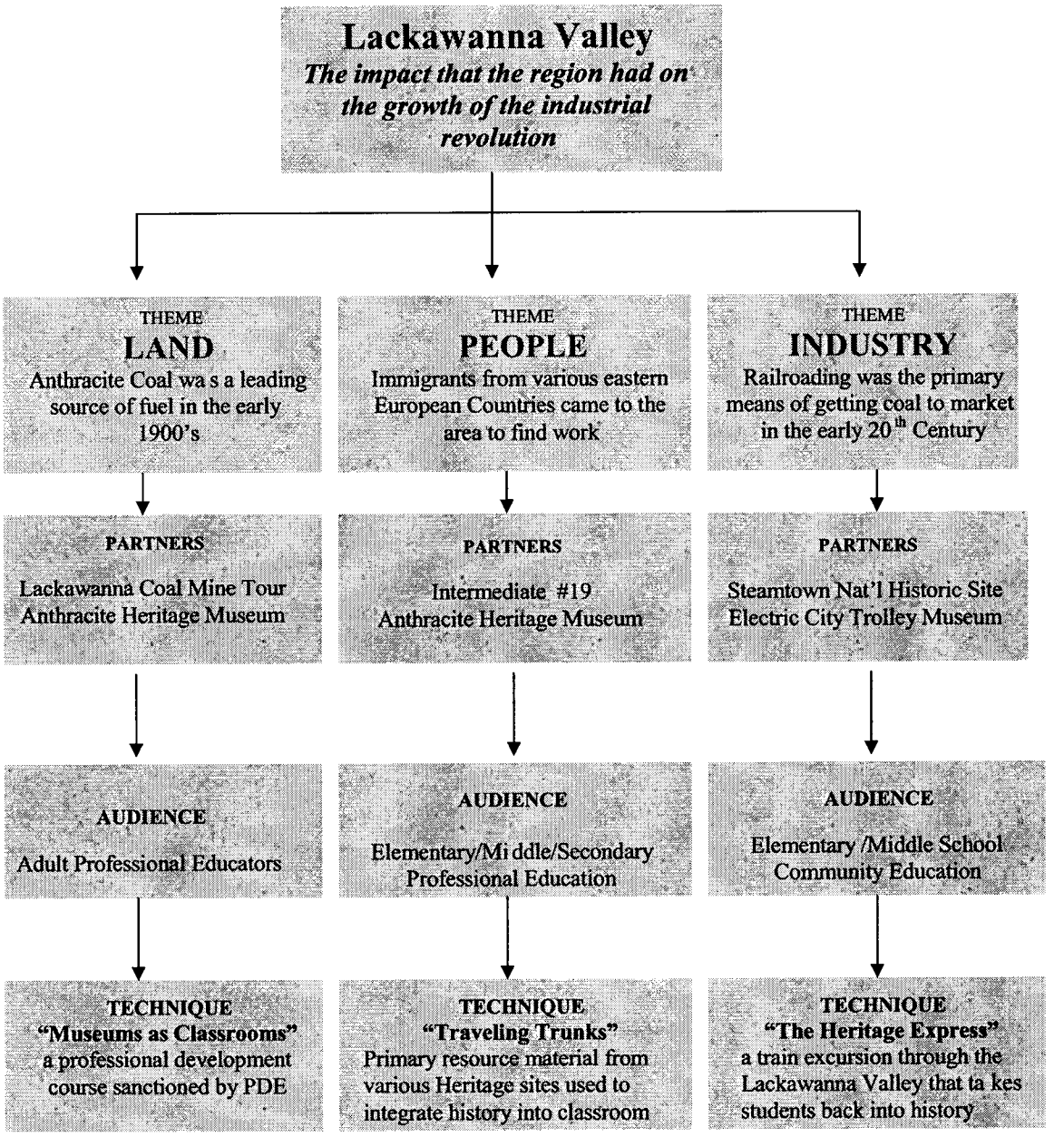
LACKAWANNA HERITAGE VALLEY Educational Initiatives Program	COST	PRODUCTION COSTS	TOTAL	
Young People's Heritage Festival	4,330		4,330	
Educational Planning Process	6,410		6,410	
Heritage Express	2,625	6,500	9,125	*
Heritage Outreach	2,100		2,100	
Heritage Conference	1,225	8,450	9,675	*
Multi-Media Projects	1,250	3,500	4,750	
New Projects Programming	1,750		1,750	
Museums as Classrooms	1,375		1,375	*
Promotion/Publicity	5,495		5,495	
New Media Technology	6,375		6,375	
Misc	1,715		1,715	
	34,650	18,450	53,100	

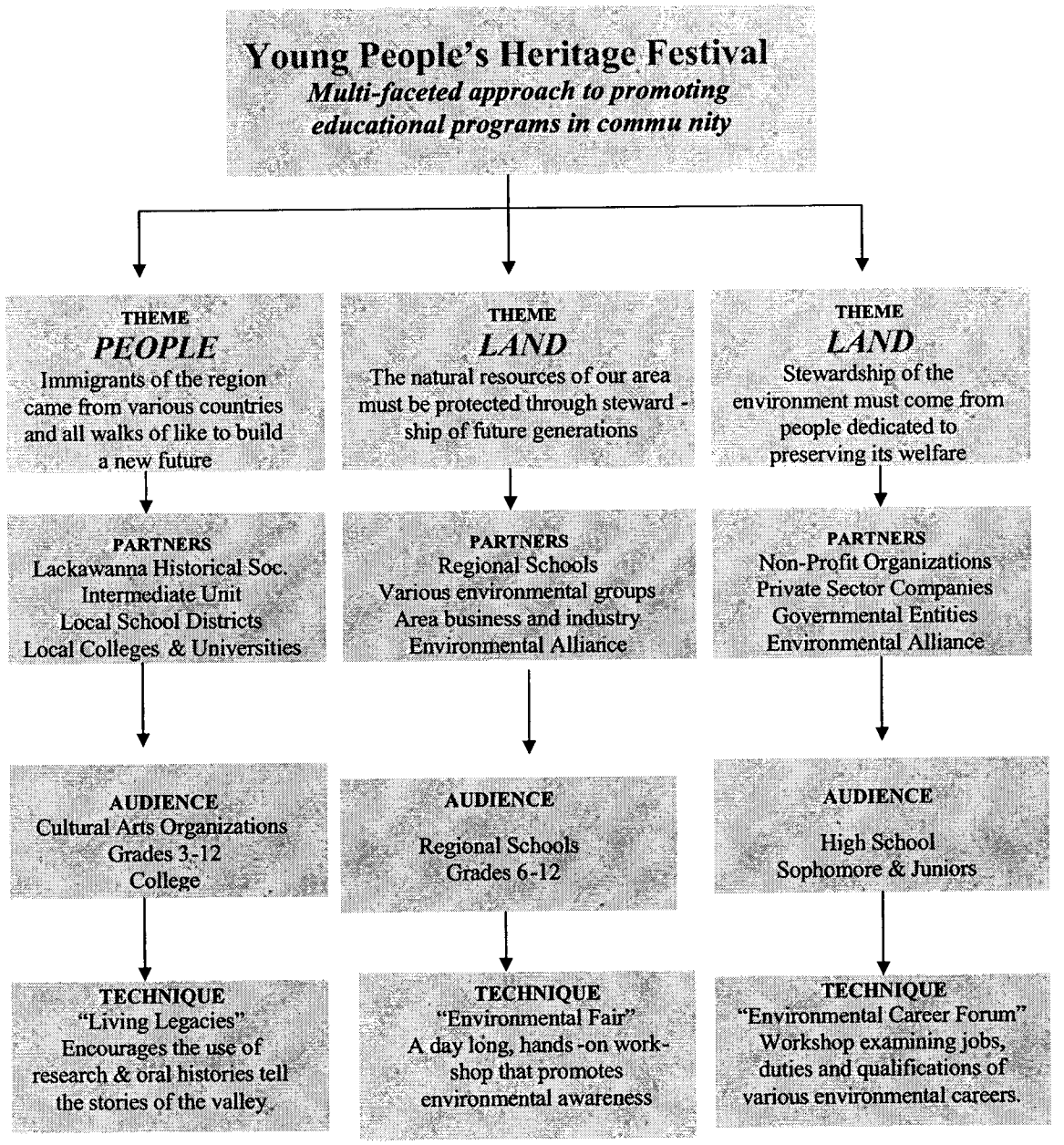
* In addition to LHV funds expended on these programs, additional revenue to plan and produce these initiatives was provided by partnering organizations and additional sponsorships

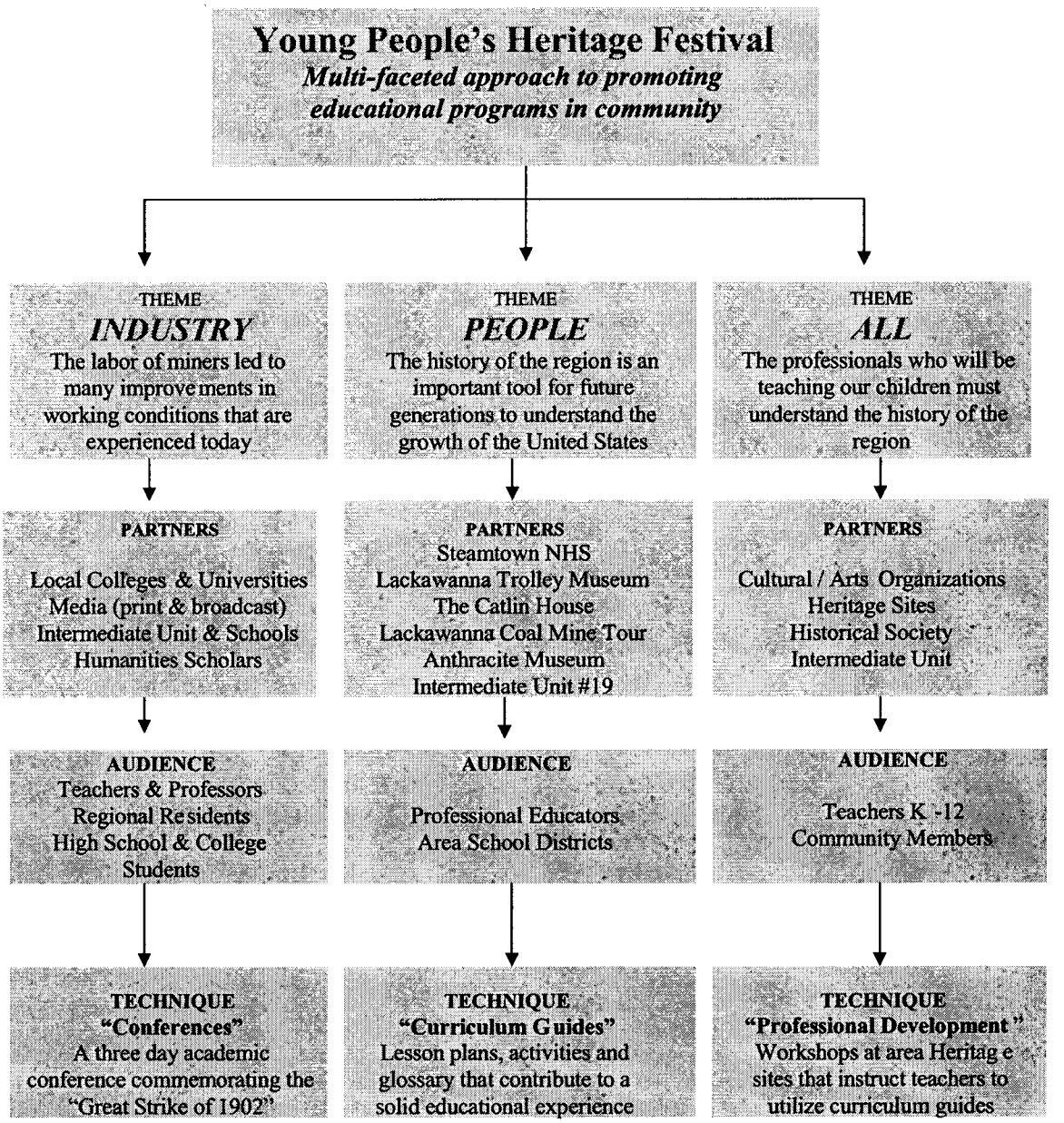
PARTIAL LIST OF REGULAR LHVA EDUCATIONAL PARTNERS

Everhart Museum
Lackawanna Trolley Station and Museum
PA Anthracite Heritage Museum
Steamtown National Historic Site
Lackawanna Coal Mine Tour
NE PA Convention & Visitors Bureau
Northeast Regional Cancer Institute
Lackawanna Historical Society
PA History and Museum Commission
PA Humanities Council
PA Council on the Arts
Scranton Area Foundation
County of Lackawanna
Borough of Jessup
City of Scranton
Borough of Archbald
Carbondale Historical Society
City of Carbondale
Borough of Olyphant
Dorflinger Sanctuary & Glass Museum
Wayne Co. Historical Society
Scranton Tomorrow
Scranton Cultural Center
Scranton Times
WEJL Radio
WVIA- TV/FM (Public Television)
Avanti Cigar Company
Lackawanna River Corridor Association
Northeast Educational Intermediate Unit #19
Lackawanna County Recycling Center
Lackawac Sanctuary
Lackawanna County Conservation District
Pa American Water Company
Cocciardi & Associates
Earth Conservancy
Advocacy Alliance
Keystone College
Lackawanna College
Luzerne County Community College
Marywood University
University of Scranton

LACKAWANNA HERITAGE VALLEY AUTHORITY
PROGRAM MATRIX




Young People's Heritage Festival
Multi-faceted approach to promoting educational programs in commu nity
THEME
PEOPLE
Immigrants of the region came from various countries and all walks of like to build a new future
PARTNERS
Lackawanna Historical Soc.
Intermediate Unit
Local School Districts
Local Colleges & Universities
AUDIENCE
Cultural Arts Organizations
Grades 3-12
College
TECHNIQUE
"Living Legacies"
Encourages the use of research & oral histories tell the stories of the valley.
THEME
LAND
The natural resources of our area must be protected through steward - ship of future generations
PARTNERS
Regional Schools
Various environmental groups
Area business and industry
Environmental Alliance
AUDIENCE
Regional Schools
Grades 6-12
TECHNIQUE
"Environmental Fair"
A day long, hands -on work- shop that promotes environmental awareness
THEME
LAND
Stewardship of the environment must come from people dedicated to preserving its welfare
PARTNERS
Non-Profit Organizations
Private Sector Companies
Governmental Entities
Environmental Alliance
AUDIENCE
High School
Sophomore & Juniors
TECHNIQUE
"Environmental Career Forum"
Workshop examining jobs, duties and qualifications of various environmental careers.


Young People's Heritage Festival
Multi-faceted approach to promoting educational programs in community
THEME
INDUSTRY
The labor of miners led to many improvements in working conditions that are experienced today
THEME
PEOPLE
The history of the region is an important tool for future generations to understand the growth of the United States
THEME
ALL
The professionals who will be teaching our children must understand the history of the region
PARTNERS
Local Colleges & Universities
Media (print & broadcast)
Intermediate Unit & Schools
Humanities Scholars
PARTNERS
Steamtown NHS
Lackawanna Trolley Museum
The Catlin House
Lackawanna Coal Mine Tour
Anthracite Museum
Intermediate Unit #19
PARTNERS
Cultural / Arts Organizations
Heritage Sites
Historical Society
Intermediate Unit
AUDIENCE
Teachers & Professors
Regional Residents
High School & College Students
AUDIENCE
Professional Educators
Area School Districts
AUDIENCE
Teachers K -12
Community Members
TECHNIQUE
"Conferences"
A three day academic conference commemorating the "Great Strike of 1902"
TECHNIQUE
"Curriculum Guides"
Lesson plans, activities and glossary that contribute to a solid educational experience
TECHNIQUE
"Professional Development"
Workshops at area Heritage sites that instruct teachers to utilize curriculum guides