

Special History Study /
Historic Context Study



NEW RIVER GORGE
National River • West Virginia

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Special History Study /
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August 1996

By

Harlan D. Unrau

NEW RIVER GORGE

National River • West Virginia
Fayette, Raleigh, Summers Counties

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PREFACE

This special history study/historic context study has been prepared to satisfy in part the research needs as stated in the task directive (approved by Charles P. Clapper, Jr., Acting Regional Director, (former) Mid-Atlantic Region, in a memorandum dated June 16, 1993) concerning New River Gorge National River (NERI), Special History Study/Historic Context Study, under Package No. 112 (later changed to Package No. 150). The purpose of this study was to (1) establish the foundation for decisions about identification, evaluation, registration, and treatment of historic properties and (2) integrate preservation planning into the broader park planning process. This study was developed to meet the requirements of the Secretary of the Interior's "Standards for Preservation Planning" included in the "Standards and Guidelines for Archeology and Historic Preservation" (September 26, 1983), and complies with the National Park Service's (NPS) *Cultural Resources Management Guideline* (NPS-28, Release No. 4, September 23, 1994), which delineates the relationship between the secretary's "Standards" and the planning process as applicable to NPS cultural resource properties.

As defined in the secretary's "Standards for Preservation Planning," a historic context study organizes information based on a cultural theme and its geographical and chronological limits. The study identifies and describes broad patterns of development in an area that individual historic properties represent and defines the relationships of individual properties to those themes.

This study is intended to provide a narrative and graphic document covering the historic resources of New River Gorge National River. Because the focus of this study is historic properties, archeological resources will not be included. This study does not include all historic contexts for the national river, but it does develop five narrative historic contexts which incorporate the majority of the national river's historic properties. These five contexts are: (1) coal industry; (2) railroad industry; (3) lumber industry; (4) Euro-American settlement/agriculture; and (5) recreation/state parks.

In compliance with the secretary's "Standards," property types which identify important trends are defined for each historic context. In addition, the study includes an annotated bibliography, list of information needs and research questions, a tabular summary of key management information for each surveyed property, and a set of cultural resource base maps. The study includes an evaluation process that addresses the application of National Register of Historic Places criteria for significance and integrity for historic properties associated with each historic context.

The historic contexts are intended to provide a framework for the evaluation of historic properties within the boundaries of New River Gorge National River and the subsequent preparation of determinations of eligibility and future National Register of Historic Places nominations for submission to the West Virginia State Historic Preservation Office. This study enables those determinations and nominations to be developed in compliance with National Register Bulletins 15, *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin 16A, *How to Complete the National Register Registration Form*, and 16B, *How to Complete the National Register Multiple Property Documentation Form*. Thus, this study will permit programmed design work to proceed with sensitivity to national river

PREFACE

historic properties and provide background information required to make informed decisions for planning, management, and interpretation.

The five historic contexts developed for this study are consistent with the comprehensive preservation planning efforts of the State Historic Preservation Office in West Virginia. This study was conducted with reference to the identified research needs and preservation planning policies of the state described in the *West Virginia Statewide Assessment, Phase 1: Initial Findings* (Draft for Public Review) prepared by the West Virginia Task Force in cooperation with the National Park Service, former Mid-Atlantic Regional Office, in September 1990 and the draft *Historic Preservation State Plan for West Virginia* prepared by Michael J. Pauley and Thomas Swift Landon in 1991.

The immediate focus of this study are the historic properties in New River Gorge National River that have been subject to inventory and/or evaluation. The evaluation process for each context, however, is generally applicable to properties that may be inventoried/evaluated in future years.

Information for these historic properties has been derived from the national river's draft List of Classified Structures (LCS) developed under the direction of the cultural resource management staff of the former Mid-Atlantic Regional Office (MARO). During fiscal year 1992, a survey by MARO was conducted of structures acquired from 1982 to 1992 to begin the LCS for the national river. Information on each structure (including structural landscape features and ruins) was collected from land acquisition records, local histories, journals, newspapers, and oral interviews. Compilation of the information is an on-going process. In November 1993, for example, the MARO-LCS team surveyed structures at the Harry Hampton Ballard Farmstead and at Thurmond that had recently been purchased by the National Park Service.

It is recommended that future research be undertaken to expand the scope of this study to include the southern West Virginia region, thus enhancing its usefulness for the park's cultural resource management concerns. Counties, such as Nicholas, Mercer, Greenbrier, Monroe, and McDowell, are linked historically with Fayette, Raleigh, and Summers counties by agri-settlement and transportation/industrial development because of the natural environment and their inter-connecting waterways.

ACKNOWLEDGEMENTS

A number of persons have assisted in the preparation of this study. My special thanks extend to Joe L. Kennedy, Superintendent, New River Gorge National River, and members of his staff, including Henry G. Law, Assistant Superintendent; Warren Snyder, Chief, Interpretation and Visitor Services; and Loretta Schmidt, Park Historian, for making available park data files for research and providing guidance for research and evaluation of the historic properties in the national river.

I also extend my appreciation to former Mid-Atlantic Regional Directors John J. Reynolds and B. J. Griffin, as well as former Associate Regional Director, Planning and Resource Preservation, Katherine H. Stevenson. Several persons, formerly staff members under Stevenson and currently holding other positions in the National Park Service, provided direction for the study, developed its scope of work, and shared their ideas on the nature of research required for the project. These include Bonnie J. Halda, Acting Chief, Park Historic Preservation Division, and Clifford Tobias, Historian, Resource Stewardship and Partnerships Team, Chesapeake/Allegheny System Support Office.

In addition, my thanks go to the staffs of the various repositories with whom I consulted during research for this study. A list of these repositories may be seen in the annotated bibliography of this study.

CHAPTER ONE: INTRODUCTION

NEW RIVER GORGE NATIONAL RIVER

On November 10, 1978, President Jimmy Carter signed into law an Act of Congress (Public Law 95-625; 92 Stat. 3545) designated the National Parks and Recreation Act of 1978. Title XI of this act provided for establishment of New River Gorge National River.

New River Gorge National River comprises some 62,000 acres on the west slope of the Appalachian Mountains in south central West Virginia. The national river corridor extends 53 miles from Hinton northward to the U.S. 19 bridge near Fayetteville, incorporating portions of Raleigh, Summers, and Fayette counties. Headquarters of the national river are located at Glen Jean.

The purpose of the national river is stated in its establishing act. The national river was established for the purpose

of conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge and preserving as a free-flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations.

To accomplish this purpose, the Secretary of the Interior was mandated to

administer, protect, and develop the national river in accordance with the provisions of the Act of August 25, 1916 (39 Stat. 535, 16 U. S. C. 1 et seq.) [establishing act of the National Park Service], as amended and supplemented; except that any other statutory authority available to the secretary for the preservation and management of natural resources may be utilized to the extent he finds such authority will further the purposes of this title.

Physical Setting

The physiographic setting of New River Gorge National River is essentially a 53-mile-long rugged trough dissecting the Allegheny Plateau that averages 1,000 feet in depth, making it one of the more prominent landforms and one of the most spectacular canyons in the eastern United States. Beginning at the south boundary of the national river near the town of Hinton and continuing to the settlement of Meadow Creek, the gorge is a mile or so wide and forested with areas of dispersed residential and agricultural uses. A predominately natural forested landscape lies north of Meadow Creek to a loosely knit, small residential area at Prince and Quinimont. Farther north the scene changes to undeveloped forested areas with a few scattered residential and recreational sites until one reaches Thurmond, a small community that features the restored depot of the Chesapeake and Ohio Railroad (C & O). North of Thurmond, the gorge has the least contemporary development, and the river begins its wildest stretch within the national river boundary.

Geological History

According to geological records, the New, Gauley, and Kanawha rivers are remnants of an ancient watercourse called the Teays River. The present New River was the main headwaters of the Teays River.

During the Paleozoic era some 200 million years ago, the eastern and central parts of the present United States lay beneath the sea. Toward the end of the Paleozoic era, the sea bottom was uplifted resulting in the appearance of the Appalachian Mountains. Early in the Mesozoic era the Appalachians were probably higher than the present-day Rocky Mountains; however, through erosion they were worn down to a nearly level plain. The Teays River accomplished much of that erosion flowing westward to a large inland sea that covered much of the central part of what is North America.

Some 50 million years ago at the beginning of the Cenozoic era, another broad land uplift occurred, causing the inland sea to drain away except for an arm that extended north from the present-day Gulf of Mexico to southern Illinois. The Teays River was also uplifted causing its gradient to steepen, but it maintained the same course as it eroded through the uplifted rock layers. The deep canyons, winding course, and nearly vertical walls of the gorge are the result of the New River's erosion since the first Appalachian uplift.

Natural Environment

The New River is significant because it is the only present-day stream that flows northwestward across the Appalachians. As the river flows north, the average elevation of the ridges above it decreases and the rock dips northward. Hence the river gradually drops 750 feet in elevation between Hinton (at the south end) and Gauley Bridge (at the north end above the boundary of the national river). It averages a drop in elevation of 12 feet per mile, thus resulting in fast-flowing whitewater that provides some of the best extended-season whitewater boating in the eastern United States.

The rocks in New River Gorge are sedimentary formations that were deposited during the Mississippian and Pennsylvanian periods of the Paleozoic era. They range in age from some 340 to 280 million years. The older Mississippian strata dominates the upper gorge between Hinton and Meadow Creek. Below Thurmond, both the gorge and adjacent ridges are composed of Pennsylvanian rocks. The major formations within these two groups of rocks are named Hinton and Bluestone (Mississippian) and Pocahontas, New River, and Kanawha (Pennsylvanian). It is unusual for a river to flow from an older formation into a younger one.

The Hinton and Bluestone formation are primarily shale and siltstones. The Pocahontas and New River formations are complexes of sandstone interbedded with siltstone, shale, and coal. The New River formation contains the Fire Creek and Sewell coal beds, the most important coal strata in the immediate gorge area. The Kanawha formation, which dominates the lower gorge above Hawk's Nest, contains less sandstone and more shale.

Soils within the national river boundary are moderately deep silty or sandy loams, usually well-drained. Most of the soils lie on very steep (40 to 70 percent) slopes. They possess low or moderate fertility and are generally unsuited for crops or pasture except in limited areas of the gentle slope as found in the southern end of the gorge.

Derived from shale and siltstone the Calvin-Gilpin association dominates the river basin in the areas between Hinton and the Meadow Creek area. They are moderately fertile and well-suited for tree growth, but have severe erosion potential when destabilized because of their steepness, stoniness, and relatively shallow bedrock.

The Calvin-Gilpin soils continue to dominate the valley bottom and lower slopes in the area between Meadow Creek and Claremont. The upper slopes, ridgetops, and tributaries contain the Steep-Rockland-Dekalb-Gilpin soils. Steep Rockland refers to areas of massive sandstone outcrops and broken cliff, one foot high to over 50 feet high, found along the rims of the gorge. Dekalb soils are rocky, brown sandy loams (derived from sandstone) that occupy the gorge walls and many of the ridgetops. These soils are permeable and rather droughty and have a slight erosion hazard.

The gorge is dominated entirely by the Steep Rockland-Dekalb-Gilpin association between Claremont and the lower national river boundary. The most common bank soils are very stony silt loams of the Earnest series, which are moderately fertile colluvial soils limited by seasonally high water tables.

New River and its tributaries are part of the mixed mesophytic forest region of central Appalachia, characterized by a dense growth of deciduous trees and shrubs. Although stand compositions vary from site to site depending on slope, exposure, depth of soil, and disturbance history, the most common trees include species of the red and white oak groups, basswood, tulip poplar, sugar maple, buckeye, beech, hickory, and hemlock. Virginia and shortleaf pines are common on drier sites and recently disturbed areas, while the river edges support elm, silver or red maple, and black gum species. Frequent associates include white ash, cucumber magnolia, and sour gum. An even greater variety of low trees and shrubs such as dogwood, redbud, witch hazel, magnolia, persimmon, and rhododendron adds to the complexity of this vegetation. The herbaceous flora of the area is also rich and abundant. Twenty-eight different vegetation types have been identified within the national river boundaries.

The topographic diversity of the gorge has led to the development of an unusual variation of flora, including species with northern or southern affinities and disjunct populations of plants from other regions. The gorge serves as a distributional corridor for plants between the eastern coastal plains and the Mississippi Valley and contains plants common in either or both of those regions, but uncommon elsewhere in the central Appalachians.

The New River and its tributaries comprise the largest and most significant warm-water fishery in West Virginia. Its flow gradient and bottom type provide good spawning areas, while riffles and pools supply excellent habitat for a variety of fish. The river has good instream and riparian cover characteristics, further contributing to fish habitat quality. The New River supports and maintains game fish populations of largemouth bass, smallmouth bass, catfish, muskellunge, walleye, crappie, sunfish, and spotted bass. The entire river is identified as existing or potential spawning grounds. Fifty-eight species of fish have been

identified in New River, five are considered endemic, and one has been recognized as endemic, but not yet described.

The forests support healthy populations of wildlife species. In wooded habitats white-tailed deer, gray squirrel, fox squirrel, raccoon, opossum, skunk, fox, and various small rodents are the most common mammals. Black bears have been sighted in the past, and evidence indicates they may be increasing in numbers.

The gorge supports numerous species of birds, such as belted kingfisher, catbird, swifts, sparrow hawk, blackbird, crow, and dove which are prominent year-round. The approximate 100 mining complexes within the national river boundary with multiple openings serve as habitat for various species of bats.

Open lands support healthy populations of groundhog, rabbit, and other common animals. Streamsides provide habitat for such riparian species as muskrat, mink, raccoon, and beaver.

Many reptiles and amphibians are also common. Spring peeper, American toad, and green frog are common representatives of the *Ranidae*, while box, stinkpot, and snapping are the most common turtles. Numerous snake species inhabit the area, including timber rattlers and copperheads.¹

The natural environment of New River Gorge provides the backdrop for the principal historic themes and resources examined in this study through its difficult challenges and abundance of raw material to support new settlement and industrial growth.

1. Elizabeth Watson, "New River Country: Wild & Scenic," *National Parks and Conservation Magazine*, XLIX (February 1975), pp. 10-14; U.S. Department of the Interior, National Park Service, *General Management Plan, New River Gorge National River, West Virginia*, 1982; *Ibid.*, *Management and Development Guidelines, New River Gorge National River, West Virginia, Reference Material*, December 1988; and *Ibid.*, *Resource Inventory and Analysis, New River Gorge National River, West Virginia*, 1989.

CHAPTER TWO: COAL INDUSTRY HISTORIC CONTEXT

NARRATIVE HISTORY

Summary

Geographic boundaries: New River Gorge National River (Fayette and Raleigh Counties, West Virginia)

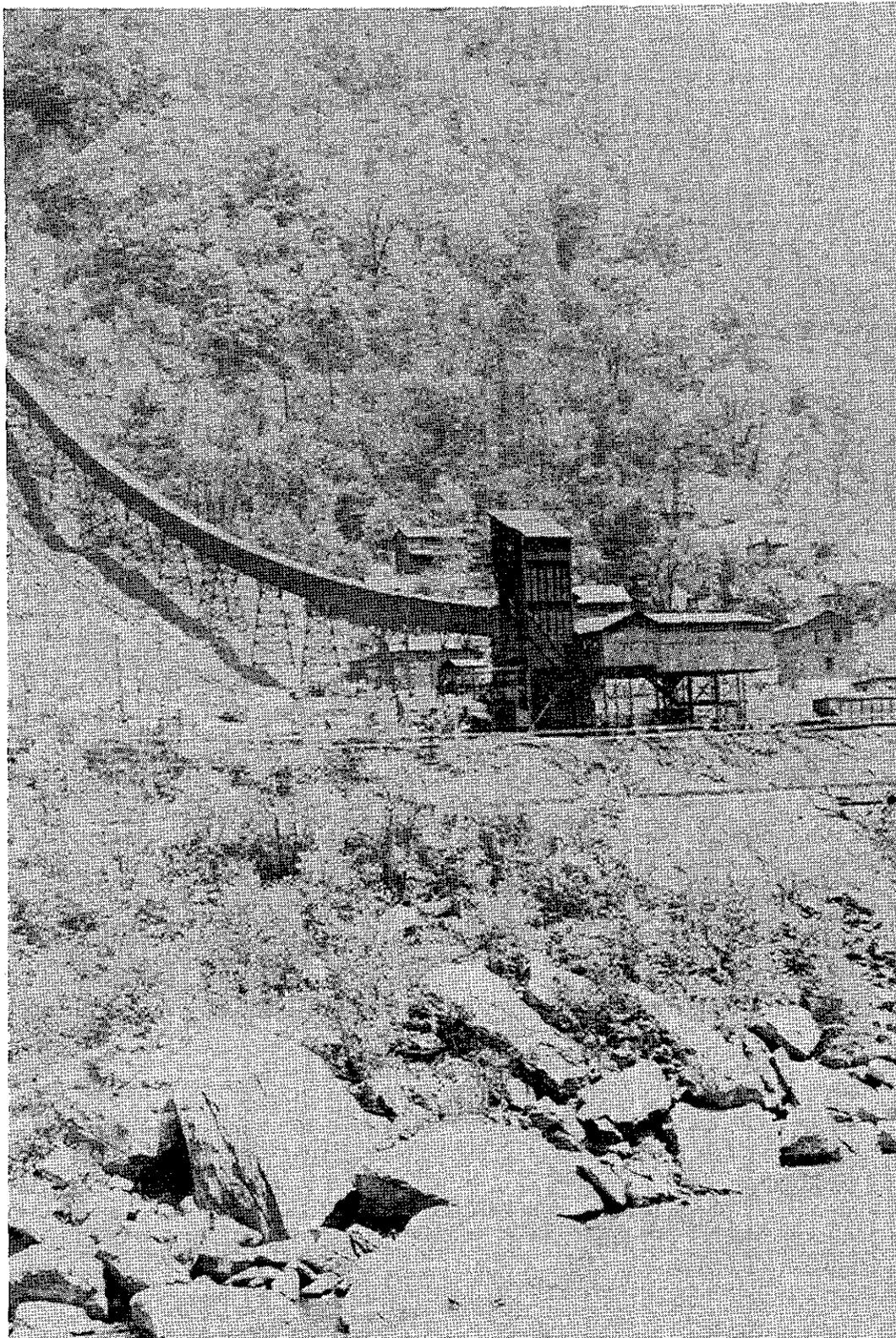
Chronological period: 1870s-1940s

The historic context for the coal industry in New River Gorge National River focuses on the New River coal field that includes eastern Fayette County and northeastern Raleigh County in West Virginia. Lacking river transportation and local industries to stimulate production, development of the "smokeless," or low-volatile, coal of the New River field did not commence until completion of the C & O Railroad through the New River area in 1873. The Quinnimont mines, under the supervision of Joseph L. Beury, shipped the first coal from the field in 1873. Coal quickly became the dominant industry in the New River region, as rapid industrialization created an increase in population, an extensive array of coal mines and company towns, and a society unusual for its cultural diversity in a remote area.

Introduction

The historic context for the coal industry in New River Gorge National River is based on several studies that have been prepared in recent years. The significance of the coal industry within the framework of its national and state contexts is based on two complementary studies prepared during 1991-92. As authorized by Public Law 100-699 (Title VI — "Coal Mining Heritage" of the "Omnibus Public Lands and National Forests Adjustments Act of 1988"), the National Park Service (Division of Park and Resource Planning, former Mid-Atlantic Regional Office), in cooperation with the West Virginia Division of Culture and History, prepared a report entitled *A Coal Heritage Study: A Study of Coal Mining and Related Resources in Southern West Virginia* (1992).¹ A draft study, entitled "Historical Context for the Coal Heritage Survey" (June 19, 1991), was prepared by Michael E. Workman, *et al.*, of the Institute for the History of Technology and Industrial Archaeology, West Virginia University, to complement the National Park Service's coal heritage study. The "Historical Context" examines the history of the underground coal industry of southern West Virginia from 1870-1945 and includes a brief overview of the historical development of the New River coal field. The material concerning the New River coal field is derived primarily from Phil Conley's *History of the West Virginia Coal Industry* (Charleston, West Virginia, Education Foundation, Inc., 1960), pp. 202-22.

1. For more data on the background and preparation of this study, see U.S. Department of the Interior, National Park Service, Mid-Atlantic Regional Office, *Coal Fields, Communities and Change, Status of Planning: Study of Coal Mining Heritage and Related Resources in Southern West Virginia*, 1991.



"Where Coal Was King! — Nuttail Tipple;
National Park Service Archives, New River Gorge National River.

For the purposes of historical research and planning considerations, the study area for the two aforementioned reports was the eleven-county region of southern West Virginia identified as the "coal heritage area." The eleven counties were divided into three groups. The first group is the core coal mining area, consisting of Boone, Logan, Mingo, Wyoming, and McDowell counties.² The coal industry has been so important to economic development in these counties that Richard Simon, an economic historian, has termed their economies "mono-economies." The second group is the coal mining/industrial area, consisting of Fayette, Raleigh, and Mercer counties. In these counties, which include the New River field, coal was the most important industry, but other industries and, to a limited extent, agriculture, provided for a more diversified form of economic development. The third group, consisting of Summers, Wayne, and Cabell counties, was a peripheral or associated area where coal was not extensively mined (or not at all in Cabell County), and it played a limited role in economic development. This latter area contributed to the coal mining heritage of southern West Virginia, primarily by providing transportation, financial services, labor, and sometimes food to the coal mining counties.

While the aforementioned groupings of counties are useful for surveys and some research, it is important to recognize that scholarship on coal mining history, the state Bureau of Mines, and trade literature is organized by coal field. Such groupings place each county within a recognizable production field to delineate the development history of each coal-producing county. The state contains ten major coal fields designated in general by geographical location: Kanawha, New River, Winding Gulf, Flat Top-Pocahontas, Logan (or Guyandotte), Williamson, Fairmont, Elkins, Greenbrier, and Northern Panhandle.³

The quality of coal in West Virginia improves from north to south. Those reserves found within the eleven-county study area covered in the two aforementioned reports are considered to contain the best bituminous coal in the world. There is a further division of coal reserves within the southern West Virginia coal fields. Unlike other boundaries that relate to geography and patterns of development, this division deals with the quality of the coal itself. The coal of the Kanawha, Logan, and Williamson fields is termed "high-volatile," because it contains between 32 percent and 38 percent volatile matter. (The more volatile matter, or gas, a coal contains, the more smoke it makes when burned.) Conversely, the New River, Winding Gulf, and Flat Top-Pocahontas fields contain "low-volatile" coal. Low-volatile coal contains between 16 percent and 24 percent volatile matter; hence, the term "smokeless" is often used.

Historic Development of the Coal Industry in Its National and State Contexts

Role of Coal Industry. Lying in the center of the rich Appalachian bituminous coal field, two-thirds of the land in West Virginia is underlaid with coal seams, fifty of which are

2. For a detailed history of the development of the coal mining industry in the core coal mining area, see West Virginia State Historic Preservation Office, *Coal Heritage Survey, Southern West Virginia Reconnaissance Study of Sites Related to the History of Coal Mining, Phase I, Final Report, Boone, Mingo, Wyoming, McDowell, and Logan Counties*, by Cindy Dobson, Stacy Stone, and Kim Valente, November 8, 1991.

3. Phil Conley, *History of the West Virginia Coal Industry* (Charleston, West Virginia, Education Foundation, Inc., 1960), pp. 7-8.

sufficiently thick to be considered minable. Found in all but two of West Virginia's 55 counties, coal has been mined in the state for more than a century.

In no other state in the nation has coal been so central to economic development and social life. The history of the state, particularly during the 1870 to 1945 period, is primarily the history of the coal industry. Nearly ten billion tons of coal have been extracted from the state's mines. An inexpensive source of efficient energy, the extraction of coal has been the single dominant economic factor in West Virginia's history, around which many of the other economic activities in the state, including lumbering, railroading, iron-making, and, to a lesser extent, manufacturing, have been subsidiary and dependent parts.⁴ From 1890 to the present, coal has been the most important industrial employer in the state. During the peak employment years from 1920 to 1950, more than 100,000 men, many of whom were immigrants from other countries, labored in the state's mines. Coal so dominated West Virginia's economy that during the period of its rapid industrialization, from 1890-1930, the number of people employed, and the capital invested, in coal mining equaled that of all other industries in the state combined.⁵

Paramount to the state's economic history, the West Virginia coal industry has also served an important role in the development of the national industrial economy during the late 19th and 20th centuries. Historically, West Virginia coal has been widely considered as unsurpassed in quality. Some of its seams are the best in the world. The Pittsburgh seam, found in the Fairmont field in north-central West Virginia, is a thick seam which was extensively utilized as steam coal by railroads, utilities, and industry. The "smokeless" coals found in the New River, Winding Gulf, and Flat Top-Pocahontas fields of southern West Virginia, particularly the Pocahontas No. 3 seam, were highly prized for metallurgical purposes.⁶

West Virginia led the nation in coal production from 1927, when it surpassed Pennsylvania, until 1973, when Kentucky became the leading state. While West Virginia's push to national prominence sometimes contributed to an oversupply of coal, consumers in the industrial northeast and midwest benefitted from the resulting lower prices.

West Virginia coal has fed the boilers of the nation's trains, factories, fleets, and power plants. As a processed fuel — coke — it has helped to satisfy the appetites of the nation's iron furnaces. It has been the basis for the tremendous growth of the American economy in the 20th century and played a significant role in supporting the American cause during wartime.⁷

4. West Virginia State Historic Preservation Office, *Coal Industry and Labor, History (Coal) Context* (Draft), by Michael J. Pauley, January 6, 1989, p. 1.

5. Further data on the role of the coal industry in West Virginia history may be found in West Virginia Geological and Economic Survey, *Coal and Mining in West Virginia*, Coal-Geology Bulletin No. 2, by James A. Barlow (Morgantown, West Virginia, February 1974).

6. For more data on the quality of coal in the southern West Virginia fields, see Charles Kenneth Sullivan, *Coal Men and Coal Towns: Development of the Smokeless Coalfields of Southern West Virginia, 1873-1923* (New York and London, Garland Publishing, Inc., 1989), pp. 16-60.

7. Further data on coal in the national context may be found in *Dictionary of American History*, Vol II (Rev. ed., New York, Charles Scribner's Sons, 1976), Vol. II, pp. 84-86.

West Virginia Coal Industry and the National Market. The southern West Virginia coal industry performed a significant role in the highly competitive national coal industry. The southern West Virginia coal fields were brought into production at a time when the established northern fields were already adequately supplying the national demand. Moreover, the northern fields, with the important exception of the anthracite field in Pennsylvania,⁸ had sufficient reserves to expand production in line with future increases in demand. Thus, from the outset, southern West Virginia producers were faced with stiff competition from the established coal fields. Their only real advantage was the superiority of West Virginia coal. Their competitive situation was made more difficult by the fact that the northern producers, as a result of their proximity to the market centers in the northeast and the midwest, had lower transportation costs. Consequently, in order to compete in distant markets, West Virginia producers had to keep their production costs below those prevailing in the northern fields.

The task of keeping production costs down was made less difficult by the fact that southern West Virginia was easily accessible because of the completion of the C & O Railroad through the region in 1873. The costs of starting a mine were low, as little as \$2,000 in 1875 in the Kanawha field and approximately \$2.00 per ton of production by the 1920s. "All that was required," recalled a coal operator, "was to build houses for the miners, a store to supply them, and a tipple structure to dump the coal into railway cars."⁹

Since most state mines were self-draining, maintenance costs were often low as well. This cost advantage was nullified, in part, by the fact that the West Virginia operator was forced to build a coal camp or town to accommodate miners because of the isolated location of many mines. Savings were often made in this area by choice or amount of construction materials, by constructing the dwellings to similar simple designs, or by limiting amenities.

Since labor accounted for 65 to 70 percent of the cost of mining, savings were exacted most readily in labor costs. Two principal methods were employed by coal operators to cut labor costs, the direct method consisting of holding wages below those prevailing in the northern fields. After the northern fields were organized by the United Mine Workers of America (UMWA) in 1902, the northern operators were forced to pay the union scale or face a strike. Thus, West Virginia coal operators took diligent steps during the first three decades of the 20th century to keep the UMWA out of its mines in order to ensure a lower wage structure. This policy not only enabled them to keep wage rates down, but allowed them to steal the markets of the northern union producers during strikes.

West Virginia coal operators also attempted to cut labor costs by reducing the real pay of mine workers. Many coal companies docked or fired a miner for loading unclean coal, shortweighed his cars, or denied him pay for the production of slack coal. These practices were rarely employed in the union fields because of the presence of the checkweighman.

8. For a comprehensive history of the anthracite coal industry, see Donald L. Miller and Richard E. Sharpless, *The Kingdom of Coal: Work, Enterprise, and Ethnic Communities in the Mine Fields* (Philadelphia, University of Pennsylvania Press, 1985).

9. W.P. Tams, Jr., *The Smokeless Coal Fields of West Virginia: A Brief History* (Morgantown, West Virginia University Library, 1963), p. 24.

In addition, the coal companies often made deductions in a miner's check for various purposes, such as burial, coffin, doctor, and hospital funds. The most prevalent means of reducing the miner's real pay was by forcing him to trade in the company store and paying him in scrip, redeemable only at the company store.

Using these methods, West Virginia producers were able to keep their costs below those of northern operators and compete favorably in the national market. The success of West Virginia operators in meeting the market challenge can be seen in production figures, which show an increase in tonnage from 1,800,000 tons in 1880 to 145,100,000 tons in 1927, the year the state became the leading coal producer. Of the 1927 tonnage, 86,863,895 was mined from the southern West Virginia coal fields. A more dramatic indicator for measuring marketing success is the percentage of market share won by West Virginia producers. They increased their market share from 4.2 percent of national production in 1880 to 28 percent in 1927, with 16.8 percent of the 1927 total the result of southern West Virginia production.

The national coal industry had overexpanded by the 1910s, as the capacity to supply coal greatly exceeded the demand. During the 1920s, the excess capacity in the industry was 10.6 percent — a figure that rose to 33.8 percent in the 1920s as competition from hydroelectric power, natural gas, and oil reduced demand. As a result, coal prices plunged from \$3.76 per ton in 1920 to \$1.78 per ton in 1929.¹⁰

The productivity of the West Virginia coal industry was, to a large degree, responsible for the excess capacity. Coal analysts in other states called the West Virginia coal industry an "economic blunder." If West Virginia tonnage was subtracted from the national production total, the excess capacity would have been a relatively healthy 5.5 percent.¹¹

Only consumers of coal benefitted from the low prices brought on by overexpansion. Profits were low or nonexistent: from 1923 to 1929, the coal industry on a national level operated at a net loss. Some West Virginia firms fared better than national companies during the 1920s. Despite the banner year in the state in 1927, however, they were still losing money. Because of the lower price per ton, sales revenue was below that afforded in less productive years.

Although coal production in West Virginia would experience a series of boom/bust trends during the next six decades, coal production in the state went into a significant decline after 1927. The Depression forced hundreds of companies, especially the smaller ones, many of which were owned by West Virginia entrepreneurs, into bankruptcy. Some large companies, such as Island Creek, Consolidation Coal Corporation, and U.S. Steel, continued to operate, in part because of their financial strength. They had the capital to mechanize their mines and realize economies of scale in their streamlined operation.

10. For an analytic discussion of the overexpansion of the coal industry, see M.B. Hammond, "The Coal Commission Reports and the Coal Situation," *The Quarterly Journal of Economics*, XXXVIII (August 1924), pp. 550-66. More data on the problems facing the bituminous coal industry may be found in Edward Eyre Hunt, F.G. Tryon, and Joseph H. Willits, *What the Coal Commission Found* (Baltimore, Williams and Walkins Company, 1925), pp. 25-36.

11. For more information on this topic, see Charles Phillips Anson, "A History of the Labor Movement in West Virginia" (Ph.D. dissertation, University of North Carolina, 1940), pp. 30-41.

Island Creek, for example, abandoned the hand-loading of coal in favor of mechanical loaders.

The West Virginia coal industry suffered production declines during the Depression. However, underemployment, rather than unemployment, was the rule in the southern coal fields. The number of men employed in the mines in southern West Virginia through the 1930s dropped below the 1930 level of 60,000 only during the 1931-34 period. While the average miner worked 247 days per year in 1930, he worked less than 200 the remainder of the decade. Miners responded to the economic downturn by adopting a "share the work" philosophy, thus allowing more men to work fewer days.

World War II led to yet another boom in production in the West Virginia coal fields. In 1942, for the first time since 1927, production reached the 140 million-ton level. The all-time state production record of 173,653,816 tons was reached in 1947. After 1950, employment, which peaked in that year at 119,568, declined dramatically due to mechanization and the rise of surface mining.

Historic Development of the Coal Industry in Its Regional Context

Coal Industry in Southern West Virginia. While it has eclipsed other industries in the state as a whole, the coal industry in the southern West Virginia fields has been pervasive. From the days of the first railroad in 1873 to the present, the region has exported huge amounts of coal recognized internationally for its quality. The development of coal mining facilities was so rapid that many journalists, evoking a buoyant spirit of boosterism, predicted prosperity and industrial greatness for the region during the 1870s and 1880s. The growth of the coal industry in southern West Virginia continued during the early years of the 20th century, prompting one newspaper editor in Beckley, West Virginia, in 1907 to describe his faith in the magic of "King Coal":

Towns and cities springing up where before stood dense forests or waving fields of grain; thousands of coke ovens gleaming along the pathway of the iron horse and clouding the noon-day sun with their endless streams of smoke; armies of men collected together from every quarter of the globe to dig his vast treasures from the mines; heavily loaded freight trains plunging through mountain fastnesses, fording great rivers and spanning wide canyons to carry to the world its precious supplies of fuel — these are some of the accomplishments of old king coal, who is working out the miracle daily before our eyes.¹²

By the early 1920s, southern West Virginia was a heavily populated region with an industrial economy dependent upon coal production and linked to national and international markets. In 1921, a circuit judge, recognizing this reality, told a committee of United States senators touring southern West Virginia: "We think and live coal. If you take

12. *Raleigh Register* (Beckley, West Virginia), November 7, 1907, quoted in Ronald D. Eller, *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930* (Knoxville, University of Tennessee Press, 1982), p. 130.

our coal from us, we shall go back to the days of bobcats and wilderness. Coal is our existence."¹³

The southern West Virginia region has the most rugged topography in the state. With no naturally navigable streams and no north-south transportation outlets until completion of the C & O Railroad in 1873, the area, which had known coal beds since colonial times when John Peter Salley and companions discovered an abundance of coal along the banks of the Coal River in 1742, has been isolated from most commercial trends and market forces.

Before the development of coal, the local economy was based predominantly on subsistence agriculture, and there were few manufacturing jobs. In 1880, there was a combined total of 44 industrial wage earners in Boone, Logan, Mingo, Wyoming, and McDowell counties. Fayette, Raleigh, and Mercer counties had a slightly higher number of manufacturing jobs. For example, Fayette County had a total of 224 manufacturing employees.

As the coal industry "boom" began in the southern coal fields, the number of mining jobs increased dramatically. With the exception of the coke industry, however, it generated few manufacturing jobs. In 1900, coal mining employment in Boone, Logan, Mingo, Wyoming, and McDowell counties was 4,622, and there was a total of 1,771 manufacturing jobs. Of the manufacturing jobs, 1,581 were in the coke industry. Fayette and Mercer counties, with coal employment of 8,287, had a total of 1,845 manufacturing jobs. A total of 337 of these were in coke-making in Mercer County.

In 1929, with the maturation of the coal industry and the decline of coke-making, coal mining employment in Boone, Logan, Mingo, Wyoming, and McDowell counties was 40,151, while total manufacturing employment was 3,031. Here coal mining had developed into a mono-economy. A degree of diversification was achieved in Mercer and Fayette counties, however, as coal mining employed 16,099 and manufacturing jobs totalled 3,370. Of the latter figure, 349 were jobs in coke-making.

To a large degree, the economy of the southern West Virginia coal fields was built on a narrow base of resource extraction, rather than manufacturing. Because the coal lands and major coal companies were primarily absentee-owned, there was little profit from mining that could be reinvested in other industries. This dependence upon coal placed the region at the mercy of the national coal market, a situation that had ramifications not only for the coal industry itself as a whole, but also on a smaller scale for local development of housing and other "infrastructure."¹⁴

13. Quoted in David Alan Corbin, *Life, Work, and Rebellion in the Coal Fields: The Southern West Virginia Miners, 1880-1922* (Urbana, Chicago and London, University of Illinois Press, 1981), p. 1.

14. Jerry Bruce Thomas, "Coal Country: The Rise of the Southern Smokeless Coal Industry and its Effect on Area Development, 1872-1910," (Ph.D. dissertation, University of North Carolina, 1971), pp. 274-79, 313-14.

West Virginia remained devoted to the production of a single raw material destined for distant markets, and the very success of the coal industry tied the railroads to coal transportation and further inhibited diversified economic activity.¹⁵

Coke Industry in Southern West Virginia. Production of inexpensive, high-quality coke was essential to the development of the emerging iron and steel industry of the United States following the Civil War. Coke, a high-carbon material consisting of the fused ash and fixed-carbon compounds produced by the incomplete combustion of bituminous coal in the absence of oxygen, burns with intense heat and little smoke, and is used primarily in the steel-making process in which it serves as a reducing agent. During the late 18th century, the primitive open-air method of coke-making was replaced by the beehive oven in England. This method produced a superior metallurgical coke and was the principal method of producing coke in the United States until the end of World War I.

With an abundant supply of wood available for making charcoal, the use of coke was not initiated in the United States until the late 1830s. In 1837 iron was produced successfully in limited quantities by utilizing coke at both the Oliphant furnace near Uniontown, Pennsylvania, and at the Lonaconing furnace at Frostburg, Maryland. By 1850 there were four coking establishments in the United States; this number would increase dramatically to 388 in 1900.¹⁶

Low-volatile, smokeless, or semibituminous coal necessary to produce the high-grade coke required for steel production was found in only three areas of the United States. These areas were western Maryland, southwestern Pennsylvania, and southern West Virginia. Coal in the southern West Virginia fields was easily "degradable" and broke down into slack (fine coal) during mining and handling. Slack, which brought a low market price, accounted for as much as 55-60 percent of the total production in the southern West Virginia fields. Since slack sold for less than coarse coal and coarse coal had to be crushed for coke-making, coal operators in the region turned increasingly to coke manufacturing.

Coke was first produced in West Virginia in 1843 at the Green Spring iron furnace on the Cheat River. By 1850 there were 631 coke ovens in the state. Coke from the southern West Virginia coal fields soon surpassed the Connellsville coke of western Pennsylvania which had been the national standard. Largely because of the New River plants, West Virginia ranked third among the states in coke production by 1880. Five years later, selling agencies for New River coke were operating in Cincinnati, Columbus, Evansville, Indianapolis, Louisville, Nashville, Memphis, Detroit, Chicago, and St. Louis. The coking industry demonstrated dramatic growth in southern West Virginia during the late 19th century, and by 1902, the number of ovens, virtually all of which were of the beehive type, had risen to 7,334.

The distinguishing feature of coke-making in southern West Virginia was the dome-shaped beehive oven. A typical battery of such structures generally consisted of an

15. For more information on the impact of coal and related industries on the West Virginia economy, see John Alexander Williams, *West Virginia and the Captains of Industry* (Morgantown, West Virginia University Library, 1976).

16. Paul D. Marshall and Associates, Inc., *A Cultural Research Project: The New River Gorge National River, West Virginia*, (Charleston, West Virginia, 1981), Vol. II, pp. 217-21.

alternate arrangement of ovens to provide the most compact plan, thus permitting the ovens to be charged from a single track above them. In hilly terrain, ovens were often built against a hillside in a single line. The ovens were constructed on a raised earth platform called a wharf, the earth being contained by masonry retaining walls. The wharf was a raised working platform for transferring the coke to railway hopper cars.

The retaining walls of the wharf and ovens were constructed of masonry except around the oven door openings where the intense heat from the oven and the quenching of the coke with water requires fire brick. The ovens were constructed entirely of fire brick with a clay mortar, and they had a hole at the top for recharging.

Early coke ovens were charged with a special hopper car called a lorry. These cars, when filled, rolled by gravity from oven to oven and were towed back to the end of the battery by mule or locomotive for recharging. By the 1890s, lorries were powered by DC electric motors.

In early coking operations, the coke was removed from the ovens by hand and transported by wheelbarrows across the wharf to waiting railway cars. About the time of the introduction of DC electric power for lorry cars, an electro-mechanical coking machine was developed for removing the coke from the ovens and loading it into railway cars.¹⁷

Southern West Virginia Labor Force. Southern West Virginia was sparsely populated prior to development of the coal industry. In 1880, Boone, Logan, Mingo, Wyoming, and McDowell counties had a combined population of only 20,559, while the population of Fayette, Raleigh, and Mercer counties was 26,394. This small pre-industrial white population, many of whom were reluctant to enter mining and give up their rural way of life, was inadequate to meet the demands of the labor-intensive coal industry. Coal operators were forced to recruit labor from three principal sources: 1) white Americans from older coal regions; 2) black Americans from other southern states, especially Virginia and North Carolina, as well as from the large group of black laborers who had entered the region to work on the C & O Railroad;¹⁸ and 3) immigrants from southern and eastern Europe, particularly after the great mine strike in 1902.¹⁹ Many coal companies became and remained active in labor recruitment, sending agents to northern urban areas, such as New York City, and to the south. With the onset of large-scale coal production by 1900, the population of Boone, Logan, Mingo, Wyoming, and McDowell counties had increased to 53,635, while that of Fayette, Raleigh, and Mercer counties had grown to 57,446. Notably, the Fayette County population in 1910 had a square mile density three times the national average of 24 people. With the population growth, the once-isolated idyllic

17. For more information on the historical development of the coke industry in the United States and particularly southern West Virginia, see Thomas, "Coal Country," pp. 93-123; William McKinley Merrill, "Economics of the Southern Smokeless Coals" (Ph.D. dissertation, University of Illinois, 1950); and Louis L. Athey, with assistance of Geoffrey B. Skaggs, "A Kind of Pittsburgh: Beehive Coke Making in the New River Gorge," *Proceedings, New River Symposium*, 1982, pp. 161-67.

18. For more information on the recruitment of black laborers by the coal industry, see Charles W. Simmons, John R. Rankin, and U.G. Carter, "Negro Coal Miners in West Virginia," *Midwest Journal*, VI (Spring 1954), pp. 60-69, and James T. Laing, "The Negro Miner in West Virginia," in William H. Turner and Edward J. Cabbell, eds., *Blacks in Appalachia* (Lexington, University Press of Kentucky, 1985), pp. 71-78.

19. For more information on the recruitment of immigrants by the coal industry, see Thomas, "Coal Country," pp. 175-204.

valleys of southern West Virginia filled with mining camps, and a new way of life came to the area.

The coal companies employed a combination of native white miners, blacks, and immigrants.²⁰ Most took advantage of racial divisions, playing one group against another to forestall the establishment of unions. The exact nature of the mix among the three groups, however, varied from field to field. Boone, Logan, Mingo, Wyoming, and McDowell counties had a fairly equal proportion of the three groups. In 1908, for example, the miners of this area were 34.4 percent native white, 34.7 percent black, and 30.9 percent foreign-born. In Fayette, Raleigh, and Mercer counties, native whites predominated with 57.4 percent, 21 percent black, and 21.6 percent foreign-born. The largest group of immigrants employed in the mines were Italians, followed by Hungarians, Poles, Russians, Slavs, and Rumanians.²¹

Although many commentators have remarked on the considerable racial harmony manifest in company towns where the three groupings of miners were thrown together in small areas, the three groups were segregated in the typical company town. Whites occupied the choicest dwellings near the tipple, foreigners generally lived on the fringes of the settlement, and blacks lived in houses that were frequently separated from the main cluster.²² Although segregation was not practiced inside the mine, there was an occupational hierarchy, particularly after mechanization. The majority of whites held the higher paying and more authoritarian positions, such as superintendent, foreman, and fire boss, and they generally operated the machinery. Some whites were also coal loaders, the lowest occupational category. The foreign-born were on the second echelon of the occupational ladder, holding some machine and machine-helper jobs. Sometimes they were loaders. Many blacks were former agricultural workers from other southern states who had come to West Virginia to work on the C & O Railroad and had stayed to work in the mines, or were miners from other southern mining areas who had come to obtain higher wages and more stable employment. They were on the lowest rung of the occupational ladder, rarely having machine or machine-helper jobs, and almost always working as coal loaders.²³ As a consequence of their relegation almost exclusively to coal loading jobs, blacks were displaced from the industry during the two decades after 1935 when machine loaders were introduced.²⁴

Role of the United Mine Workers of America (UMWA) in Southern West Virginia Labor History. The historic purpose of the UMWA, an industrial union founded by bituminous miners from Pennsylvania, Ohio, Indiana, and Michigan in 1890 to improve working conditions, wages, and rights of miners, has been to unite the three labor

20. Kenneth R. Bailey, "A Judicious Mixture: Negroes and Immigrants in the West Virginia Mines, 1880-1917," in Turner and Cabbell, eds., *Blacks in Appalachia*, pp. 117-32.

21. Simmons, Rankin, and Carter, "Negro Coal Miners in West Virginia," p. 64.

22. For more information on interracial relations in coal company towns in southern West Virginia, see Corbin, *Life, Work, and Rebellion in the Coal Fields*, pp. 61-86, 146-65.

23. One study, for instance, indicated that 75.7 percent of blacks were coal loaders. Laing, "Negro Miner in West Virginia," p. 73.

24. For more information on the southern West Virginia coal labor force, see Eller, *Miners, Millhands, and Mountaineers*, pp. 165-75.

groupings into one body with a common set of goals and beliefs.²⁵ Achievement of this goal, however, took many years. The low wage structure was a competitive advantage in the 1910s and 1920s, and the operators resisted the UMWA with all the tools they could garner. The UMWA, with its base of strength in the Central Competitive District which included Pennsylvania, Illinois, Indiana, and Ohio, realized that it was threatened with extinction if the non-union mines of southern West Virginia continued to out-produce and dominate the markets. Therefore, the UMWA concentrated on organizing West Virginia, thus setting the stage for the "Mine Wars" during the 1910s and 1920s. Throughout this period, the bastion of non-union strength was in Logan, McDowell, Mingo, and Mercer counties, which remained unorganized until 1933 when passage of the National Industrial Recovery Act enabled unionization.

The UMWA's role in southern West Virginia is one of the most memorable chapters in the development of industrial unionism in the United States. Colorful figures, such as Mary Harris "Mother" Jones, John L. Lewis, William Blizard, Fred Mooney, Frank Keeney, and Van Bittner, played key roles in the story. Dramatic confrontations, such as the Paint Creek-Cabin Creek strike in 1912-13, the aborted Armed March of 1919, the Battle of Tug Fork and the Matewan Massacre in 1920, and the Battle of Blair Mountain in 1921, drew national attention.²⁶

Perhaps the most significant outcome of the southern West Virginia mine wars was the development of a distinctively American working class reformist philosophy known by many as the "Union Gospel." In southern West Virginia, the UMWA accepted blacks on equal terms with whites. Some blacks were union leaders, and one, "Red" Thompson, led the charge through Crooked Creek Gap in the Battle of Blair Mountain. In an era noted for Jim Crow laws in the South and the resurgence of the Ku Klux Klan in the North, this was an example of integration and a harbinger of the Civil Rights Movement of the 1950s and 1960s.

Evolution of Mining Technology in Southern West Virginia. When the first coal mines in southern West Virginia were opened in the 1870s, it took only modest capital investment of several thousand dollars. Nearly all of the early mines were drift mines, opening directly back into an exposed seam of coal through a horizontal, or nearly horizontal, drift, so expensive excavation equipment or hoists were not required. The operator had to provide little more than housing and a store for miners, a wooden tippie, mules, and some light track. No power machinery was used, and the miners supplied their own picks, shovels, and tamping bars. The small capital outlay required made it easy for the small operator to enter the industry, thus creating a highly competitive setting and

25. One of the best sources for the historical development of the UMWA in southern West Virginia is Corbin, *Life, Work, and Rebellion in the Coal Fields*, pp. 25-60, 87-101, 106-16, 183-90, 195-221, 236-47. Other sources include Anson, "A History of the Labor Movement in West Virginia," pp. 113-47; Thomas Edward Posey, "The Labor Movement in West Virginia, 1900-1948" (Ph.D. dissertation, University of Wisconsin, 1948), pp. 201-60; and Thomas, "Coal Country," pp. 232-70.

26. For more information on this period of labor history, see John Alexander Williams, *West Virginia: A History* (New York, London, and Nashville, W.W. Norton and Company and American Association for State and Local History, 1976), pp. 130-58.

encouraging production from a large number of operators which ultimately led to overexpansion in the industry.²⁷

Inside the mines, workers removed coal by a "room and pillar" grid system, mining the rooms first and often "robbing the pillars" as they retreated. The early miner worked independently, essentially as a subcontractor to the company, paid by the amount of coal produced, rather than time on the job. The miner had his own workplace and used his own hand tools.

The "room and pillar" system of extraction divided the mine into separate, more or less self-contained working chambers, each having an approximate 24-foot working face with access passages back to the surface. After an area was "worked out," the pillars were removed by taking slices off the sides while the adjacent roof was supported by timber props. The sequence was repeated when the outer props were removed and the roof allowed to collapse. It was a dangerous procedure which could yield up to 90 percent of the coal.²⁸

Typically, a two-man crew first undercut the coal with a pick, then drilled blasting holes above the cut with a breast auger, which were filled with black powder and tamped. After the coal was shot down, it was loaded into wooden cars with a coal shovel. Each miner had his own payroll number which was stamped on brass "checks." To each loaded car the miner attached one of his checks so the weighman could credit him with the work. The car was pushed to the mainline where mules or ponies were used to haul it to the surface. There the coal was prepared for market, typically in a wooden tipple. The coal was screened, slate or other impurities removed, usually by hand, and the coal crushed into several sizes. It was then loaded into railroad cars for shipment.

By the late 1890s, the era of "low-tech" operation was approaching its end. The more progressive companies, typically also the larger ones, began to electrify their mines. Electric, or, in some cases, compressed air cutting machines were introduced, relieving the miner of the burdensome task of undercutting the coal and resulting in increased productivity. Electric locomotives or "motors" were installed, replacing, at least on the mainline, animal haulage. Electric fans came into wide use, replacing furnaces as a means of ventilation. Electrification required the installation of a powerhouse, which generated DC power from coal-fired generators.

The pioneers in this first round of mechanization were the large companies, usually those backed by out-of-state capital. The Thurmond Coal Company was the first to electrify a mine in the southern coal fields, equipping its Concho mine in the Flat Top-Pocahontas field with a power plant, an electric locomotive, and a coal cutting machine in the early 1880s. The United States Coal and Coke Company at Gary, which later became a part of

27. For more data on the job and workplace of the coal miner, see Carter Goodrich, *The Miner's Freedom* (New York, Arno Press, 1977); Keith Dix, *Work Relations in the Coal Industry: The Hand-Loading Era, 1880-1930* (Morgantown, Institute for Labor Studies, West Virginia University, 1977), pp. 8-14; and Thomas, "Coal Country," pp. 205-31.

28. More data on the "room and pillar" system may be found in West Virginia Geological and Economic Survey, *Coal and Coal Mining in West Virginia*, p. 31; Dix, *Work Relations in the Coal Industry*, pp. 4-7; and Eller, *Miners, Millhands, and Mountaineers*, pp. 175-82.

U.S. Steel, was the testing ground for a number of cutting and loading machines in the 1890s. In 1900 about 15 percent of the state's output was undercut mechanically.

By 1920 some 70 percent of West Virginia's mines were using mechanical cutting machines and had been electrified. During the 1920s, many mining plants were modernized further with the erection of metal framed and sided tipples. While most of these still relied on the simple bar screen and chute to screen and size the coal, a few also washed the smaller sizes of coal. In addition, more shaft and slope mines were opened in the 1910s and 1920s, although drift mine openings remained the norm. By the late 1920s, the typical mining plant in southern West Virginia consisted of the following inside equipment: electric cutting machine, electric drill, and electric motor haulage. Outside facilities consisted of a fanhouse, powerhouse, tippie powder magazine, cap house, mine car repair shop, supply house, shower house, offices, railroad sidings, and chutes and coal bins.

By the 1920s, many of the small-time, indigenous operators had disappeared.²⁹ Large corporations, such as the Island Creek Coal Company in Logan County, U.S. Steel in McDowell County, the Boone County Corporation in Boone and Logan counties, and the New River Company in Fayette County, dominated the industry. These companies were generally owned or financed by capitalists in New York, Philadelphia, Boston, Baltimore, and London.³⁰ These companies could afford the technological innovations necessary to increase their average output per worker.

The first loading machines used in West Virginia were installed by the large companies. In 1910, for example, the United States Coal and Oil Company (now Island Creek) installed a Myer-Whaley loader in its Logan County mine. The first "Joy" loader on caterpillar treads used in the country was installed at the Gay Coal and Coke Company in Logan County in 1920.

A good measure of the degree of mechanization is production per man-day. In 1920 production per man-day in Boone, Logan, Mingo, Wyoming, and McDowell counties was 4.64 tons, while that for Fayette, Raleigh, and Mercer counties was 3.91 tons. The state average was 4.39 tons in 1920.³¹

While West Virginia led other states in the introduction of cutting machines, it lagged behind in installing loading machines. Thus, the introduction of such machines marked a second round of mechanization in the state's coal industry. Unlike the cutting machine and other early innovations, the loading machine displaced the hand loader, thus changing the character of the labor force and increasing coal production per man-day. Although a few companies installed loaders in the 1910s and 1920s, it was not until the 1935-55 period that this revolution in mechanization was carried out. In 1935 only two percent of coal mined in the state was loaded mechanically. By 1956 some 89 percent was loaded by machine. By 1940 production per man-day in Boone, Logan, Mingo, Wyoming,

29. For more data on the replacement of local mine operators by consolidated corporations and a comparison of the two systems of management, see Dix, *Work Relations in the Coal Industry*, pp. 39-65.

30. For more data on the historical development of coal company consolidation, see Thomas, "Coal Country," pp. 124-58.

31. For more data on early mine mechanization and its impact on the labor force and productivity, see Dix, *Work Relations in the Coal Industry*, pp. 14-38.

and McDowell counties had increased to 5.62 tons, compared with 4.71 tons in Fayette, Raleigh, and Mercer counties and the state average of 5.60.

By 1955 most mines in southern West Virginia were fully mechanized. A few small concerns in isolated areas, however, continued hand-loading operations until the late 1960s. Along with the loading machine, self-propelled electric drills were introduced between the mid-1930s and the mid-1950s. Roof bolting machines, which drilled holes in the roof and set expansion bolts that anchored in the roof strata, were also introduced, supplementing timbers as a means of roof support. Innovations in haulage included electric pan-lines and electric rubber conveyor belts, replacing in some cases, the electric motor track haulage. This assemblage of inside equipment, which included the cutting machine, electric drill, loading machine, and roof bolter, is now widely referred to as the conventional system of mining.

Major changes in the surface mining plant were undertaken during the 1935-55 period. A major innovation was the introduction of mechanical cleaning. In 1935 only 12 percent of all West Virginia coal was cleaned mechanically, but by 1956 this proportion had risen to 58 percent. Many operations also abandoned the powerhouse and tapped into the utility grid. Since only AC power at high voltage was available, however, it was necessary to install transformers for lowering voltage and rectifiers for changing power from AC to DC.

Company Towns in Southern West Virginia. Company towns were the most important institutions in the coal fields of southern West Virginia.³² Housing was a necessity, and the coal operators were the only entities in the region with the means to build it on the massive scale required by the expanding industry. Since most mines were opened in isolated and virtually unsettled areas, few resources necessary to even the simplest and most rudimentary lifestyle were available to cope with the vast influx of laborers. Thus, the company town was more prevalent in West Virginia than in any other state. More than one-half of the nation's company-controlled communities were in the state, and more than 80 percent of all state miners were living in such places by 1922.³³

Locations of company towns were determined by proximity to the mine outcrop, not by considerations for health or community life. The basic facilities for mining, the mine opening and the tippie, were constructed first. Next, consideration was given to the location of a railroad siding. Finally, in the remaining space, whether it was valley floor or hillside, the town was constructed.

The layout of the town typically assumed the shape of the widest bench, just above creek level. Mack Henry Gillenwater's Ph.D. dissertation, entitled "Cultural and Historical Geography of Mining Settlements in the Pocahontas Coal Field of Southern West Virginia, 1880-1930," is one of the best documentary historical studies on company towns in the

32. Background data on the historical development of coal company towns in southern West Virginia may be found in Eller, *Miners, Millhands, and Mountaineers*, pp. 182-98, and Thomas, "Coal Country," pp. 279-87.

33. U.S. Congress, Senate, Committee on Mines and Mining, *Report of the United States Coal Commission*, 68th Cong., 2d Sess., S. Doc. 195, Part 3, 1925, pp. 1465-68.

region.³⁴ In this study, the author states that most companies preferred not to defy gravity. In 1930, for example, 89 settlements occupied valley floor sites, and 11 settlements were located on hillsides. The shape of the Pocahontas settlements was predominantly cruciform, extending along lateral lines of transportation or along tributary valleys adjacent to the main part of town. Others were in a linear form, having a single street with houses located on one or both sides, or a block form, dominated by a uniform system of closed blocks. A few were fragmented or multi-segmented, containing a combination of block, linear, and cruciform elements in a shapeless agglomeration with little planning. The company store, along with other public buildings such as churches, schools, and community centers, was located in the town center in an area where the bench widened. Dwellings were generally situated in two distinct settings; one, for whites, was located a short distance from the work site, while the other, for blacks, was on the periphery, frequently in another hollow.

Construction was generally undertaken by the operating company, but sometimes all or some of it was contracted out, especially in the later years. In the former case, mining administrators chose the housing plans. The first step was to build temporary shelters for the construction workers. A sawmill was often moved to the site and lumber cut as the land was cleared.

Dwelling houses were built of the most rudimentary sort and reflected a vernacular style of architecture. Generally, they were of frame construction sheathed in weatherboard or board-and-batten siding, and usually roofed with composition paper. The typical house was uninsulated and perched on posts or piers without underpinning. Eight basic types of houses were found by Gillenwater in the Pocahontas field:

1. One-story "L"
2. Pyramidal
3. Bungalow
4. Basic "I"
5. Two-story, four-pen
6. Two-story shotgun
7. Salt-box
8. Two-story "L"

Despite the diversity in the field, the typical mining town contained only one or two basic types, with the cheaper dwellings reserved for blacks. Interior layouts varied widely, but three- and four-room houses were common, having an average of 225-250 square feet per room. Amenities were lacking, and few houses had indoor plumbing, the tenants obtaining drinking water from wells or springs. Many houses had electric lighting, and heat was provided by an open coal grate.

Company houses in the Pocahontas field were typically surrounded by a small yard, sometimes with room for a garden enclosed by a board fence. Within the yard was a wood or brick coal house, a privy, and sometimes a wash house. No provisions were made for handling waste water, which generally was allowed to flow into a nearby creek.

34. Mack Henry Gillenwater, "Cultural and Historical Geography of Mining Settlements in the Pocahontas Coal Field of Southern West Virginia, 1880-1930" (Ph.D. dissertation, University of Tennessee, 1972).

More substantial dwellings were constructed for superintendents, usually at a distance from the rest of the residences and often located on a hillside overlooking the town. The superintendent's house was typically the largest dwelling in the coal town and was usually surrounded by trees and well-kept grounds.

The company store, a necessity because of the lack of commerce in the isolated mining areas, was built in nearly every mining town. As the commercial heart of the community, the store was usually located in the town center. Most stores were constructed with wood clapboard siding, although some were built of brick. They were typically of cubic shape, although each was custom-built for a particular town. Their architectural style was usually unimaginative and reflected no specific building period. The roof was commonly flat or low-angle gable. The store structures were usually three stories in height, the first level being used for storage of goods, the second for retailing and offices, and the third exclusively for offices.³⁵

Many company towns, especially the newer ones, included a multi-purpose community building. These structures, frequently large, bulky buildings with end-facing gables, clapboard siding, and an attached porch, generally contained one or more facilities: auditorium, billiard room, dining room, lodge hall, and upstairs sleeping rooms. The community buildings were generally part of the later mining towns constructed by the consolidated conglomerates during and after the 1910s and probably represented the impact of the Progressive movement on coal town development. The reform movement's emphasis on "sociological work" and the government agencies which it spawned, such as the Bureau of Mines and Bureau of Public Health, had an impact, principally during the 1910s and early 1920s when there was heightened concern for producing a sober American citizen, as well as a contented, family-oriented, and reliable laborer by providing improved housing, health, and community services.³⁶

The Pocahontas field coal towns typically had two company churches, built by the company to help ensure harmony in the town and to meet the religious needs of the laborers and their families. One church building was for whites, the other for blacks. The white church was usually larger and more elaborate than the black church. Because of a relatively short life expectancy of a mining operation and the expenses involved in housing, many coal operators were reluctant to invest in large church structures. Thus, a simple but functional building of a quality similar to that of the laborers' dwellings was constructed. The structure usually was a simple box-shaped building with front- and rear-facing gables, and was built with either a cupola, which contained a bell, or an attached bell tower. Siding was predominantly clapboard, and windows were single-casement or simple cathedral type; a single interior chimney was constructed near the rear of the

35. For more data on the historical development of company stores, see U.S. Department of the Interior, National Park Service, National Register of Historic Places — Registration Form, "Whipple Company Store," prepared by Stacy Stone, February 5, 1991.

36. More data on improved housing and living conditions in company towns may be found in Robert F. Munn, "The Development of Model Towns in the Bituminous Coal Fields," *West Virginia History*, XL (1978-79), pp. 243-53; U.S. Department of the Interior, Bureau of Mines, *Houses for Mining Towns*, Bulletin 87, by Joseph H. White (Washington, Government Printing Office, 1914), pp. 1-58; R.H. Hamill, "Design of Buildings in Mining Towns," *Coal Age*, XI (June 16, 1917), pp. 1045-48; A.F. Huebner, "Houses for Mine Villages," *Coal Age*, XII (October 27, 1917), pp. 717-20; and Corbin, *Life, Work and Rebellion in the Coal Fields*, pp. 117-27.

church. Rather than building to serve a single denomination, the company churches had plain interiors, well-suited to the Protestant fundamentalism of most native white and black miners.

In addition, Pocahontas coal towns had two segregated schools, one for white children and one for black children. Both were of similar functional design and construction as the churches. Typically, the white school was a two-story, four-room structure, while the black school had one story and two rooms. Prior to 1920, children were required to attend school only to the eighth grade. Thus, one or two small schools satisfied the needs of most mining settlements. Although built by the coal companies, many of the schools were soon deeded to the county boards of education.

Gillenwater noted that there was a uniformity of basic morphology, house types, and construction materials in the 100 settlements surveyed, despite the fact that there was a considerable degree of variation among the towns themselves. Stating that almost "every sampled town had an exclusive building style and one dominant house type," Gillenwater explained the variation among the towns as the result of "individual operators controlling the house construction and building to their own desires and specifications."

Living conditions in company towns in southern West Virginia varied considerably. During the early 1920s, the U.S. Coal Commission found that "company-owned towns varied from those in which the state of disrepair" was "beyond the power of verbal description" to those "with paved streets and running water in houses superior to many non-mining rural communities." Conditions in the newer towns were somewhat improved as a result of the aforementioned Progressive movement's influence, the efforts of some coal operators to thwart unionism, the greater availability of resources for upgrading living conditions as a result of consolidation, and the impetus afforded by World War I when companies were forced to upgrade facilities to attract workers during a period of labor shortage. On the whole, however, the commission found that living conditions in the mining camps of southern West Virginia were among the worst in the nation.³⁷

If slight variation can be discerned in the architecture of coal towns, tremendous variation is found among the commentators on that architecture and its relationship to the patterns of community life. In his study entitled *Coal Men and Coal Towns*, Charles Kenneth Sullivan observes, "Contemporary testimony of the conditions of life in the state's coal fields varied with the observer."³⁸ Mother Jones, as well as historians Ronald D. Eller and Richard Mark Simon, condemned the coal towns for their monotony and drabness and the social and economic injustice they represented.³⁹ Simon supports the conclusions of a 1920 U.S. Department of Labor publication that the coal town was the foundation on which the coal operator built his system of control over labor and posits further that the coal town was

37. S. Doc. 195, Part 3, pp. 1431, 1433-37.

38. Sullivan, *Coal Men and Coal Towns*, p. 164.

39. For more data on this subject, see Ronald D. Eller, "The Coal Barons of the Appalachian South, 1880-1930," *Appalachian Journal*, IV (Spring-Summer 1977), pp. 195-207; Eller, *Miners, Millhands, and Mountaineers*, pp. 182-98; and Sullivan, *Coal Men and Coal Towns*, pp. 164 ff.

nearly as essential to the operator in maximizing his profits as the coal mine itself.⁴⁰ According to many observers, the coal town was an investment to reduce expenses and extract as much value from the miners as possible.

In contrast, Phil Conley, a historian and long-time coal industry chronicler and apologist who served briefly as a company town school teacher, explains that the towns were "built for the sole purpose of providing homes and pleasant living conditions for employees of the coal companies," and that he found little to indicate that the builders fell far short of that goal. In pamphlets, books, letters, and speeches, Conley consistently called attention to, and praised, the benefits the coal industry had bestowed upon West Virginia and its people and asserted the positive good of the company town.⁴¹ Southern West Virginia coal operators who later published their reminiscences, such as W.P. Tams, Jr., and Walter R. Thurmond, echo the sentiments of Conley.⁴²

Historic Development of the Coal Industry in Its Local Context

The New River Coal Field. New River Gorge National River lies within the New River coal field. The field includes eastern Fayette County and northeastern Raleigh County. It is the second oldest field to be developed in southern West Virginia, but it is younger than the fields in the northern part of the state.

New River Gorge is centrally located on the east flank of the Appalachian coal basin. The coal-bearing rocks are of Pennsylvanian age and consist of some 2,100 feet of interbedded sandstone, shale, and underclay. The principal seams mined in the coal field are the Beckley, Sewall, and Fire Creek.

The importance of the coal in the New River Gorge area is derived from its suitability for metallurgical use. It is a clean-burning, high-quality, low-sulfur, low-ash bituminous coal with few equals in the world. The coal ranges in rank from low-volatile to high-volatile A bituminous; analytical data indicate that the ash content is less than six percent, and the sulfur content is less than one percent. Calorific values range from 14,000 to 15,000 BTU per pound on a moist, mineral matter-free basis.⁴³

40. For further information on Simon's conclusions, see Richard Mark Simon, "The Development of Underdevelopment: The Coal Industry and Its Effect on the West Virginia Economy, 1880-1930" (Ph.D. dissertation, University of Pittsburgh, 1978).

41. Conley, *History of the West Virginia Coal Industry*, pp. 72-81. Also see Corbin, *Life, Work, and Rebellion in the Coal Fields*, pp. 134-35.

42. Sullivan, *Coal Men and Coal Towns*, pp. 243-70.

43. U.S. Department of the Interior, Bureau of Mines, *Coal Reserve Study, New River Gorge, West Virginia*, by Peter C. Mory, Alice V. Brocoum, Armond H. Beers, 1977, p. 6; C.R. Meissner, Jr., K.J. Englund, and P.C. Mory, "Coal Resources of the New River Gorge, West Virginia," *Proceedings, New River Symposium*, 1982, pp. 146-55; American Institute of Mining and Metallurgical Engineers, *The Low-Volatile Coal Field of Southern West Virginia*, by Howard N. Eavenson (New York, 1931), pp. 1-25; Keystone Consolidated Publishing Co., *The Coal Catalog Combined With Coal Field Directory for the Year 1920* (Pittsburgh, 1920), pp. 783-84; Neil Robinson, *The Kanawha and New River Coal Fields of West Virginia, U.S.A.* (Charleston, West Virginia, 1904), pp. 7-18; and Charles E. Krebs and D.D. Teets, Jr., *West Virginia Geological Survey, Raleigh County and the Western Portions of Mercer and Summers Counties* (Wheeling, West Virginia, Wheeling News Litho. Co., 1916), pp. 380-650.

Historic Development of the New River Coal Field. When coal operators commenced development in the isolated and rugged New River Gorge country, they faced tremendous obstacles dictated by geography. While nature had, through uplift and the erosion process, exposed generous outcroppings, these were frequently hundreds of feet above the valley floor. Thus, the coal deposits lay exposed and tempting, waiting for a means of transportation to move them from the mine openings to the valley and out of the gorge.⁴⁴

Plans to improve navigability of the New River were considered to be the key to early development of the New River field. In 1872 a company was incorporated in West Virginia to sell stock in a scheme to finance channel development to the Virginia line. Another plan was advanced by a company whose owners were simultaneously involved in the Fayette Coal and Iron and the Raleigh Coal and Iron companies to construct a canal along the east bank of the New River.⁴⁵ Neither of these plans was carried out, and lacking river transportation and local industries to stimulate production, the New River field remained untouched until the arrival of the C & O Railroad in 1873.

By the early 1880s, the New River coal field was served by two railroads, the Chesapeake and Ohio and the Norfolk and Western, and reliable movement of coal to market was assured. The Chesapeake and Ohio mainline was constructed along the New River through Fayette and Raleigh counties during 1869-73, and its completion made possible the opening of the New River field. Although the field depended entirely on the Chesapeake and Ohio, the railroad's initial principal interest was provision of an east-west trunk line connecting the Atlantic seaboard with the Midwest. Hence, it was not until the 1890s that the railroad began construction of branch lines to various mines in the New River area and committed itself to becoming a major coal carrier.⁴⁶

As the coal men entered the mountainous terrain of southern West Virginia, they found themselves no less subject to physical geography than had been earlier pioneers. The railroads, with their inflexible grade requirements, sought out the river and creek valleys, and the prospective mine operators followed the railroads. They usually found coal along these valleys and hollows as well. The same forces of erosion that had opened the natural transportation routes also bisected the shallower coal beds, exposing generous outcrops in many places that could be easily developed by drifts back into the seams.⁴⁷ This was particularly true of the precipitous New River country, of which an early promotional piece noted:

In respect to conditions most essential to cheap and profitable working, this region stands unrivalled. It has been stated before that the chasm of the river renders it most peculiar service in its relation to the coal. Cutting all the coal strata for nearly its whole length entirely through, and getting down among the shales under the coal, the river has caused the numerous streams which pierce

44. More information on the problem of transportation and its impact on coal development prior to 1873 may be found in Thomas, "Coal Country," pp. 23-38.

45. Sullivan, *Coal Men and Coal Towns*, pp. 62-63.

46. Thomas, "Coal Country," pp. 56-82, and Sullivan, *Coal Men and Coal Towns*, pp. 65-76.

47. Sullivan, *Coal Men and Coal Towns*, pp. 52-53.

this whole coal region to cut down through most of the coal-bearing strata on their courses, leaving the coal entirely above water level, accessible at a hundred points by simply scraping off the surface soil; so that so far as the mere getting of the coal is concerned, two thousand dollars will open a mine ready to ship one thousand tons per week. There is no region in the world where less physical labor will prepare a mine for the delivery of coal at the drift's mouth . . .

Now, in this great coal-field crossed by the C & O Railroad, Nature has already sunk all the necessary pits and shafts, which need neither repair, renewal, or labor to work them. The laws of gravity have provided the most perfect, permanent, and costless pumping machinery; and the most ventilation of the mine and safety of the employees, instead of requiring scientific knowledge and anxious thought, is simply a matter of the most ordinary care, the almost perfect freedom from noxious gases being the natural result of the position of the coal strata.⁴⁸

This rosy assessment, prepared by the Chesapeake and Ohio bankers, failed to indicate that the New River operators' problems were likely to go far beyond the "mere getting of the coal," but aptly sums up the field's great advantage by noting that "nature has already sunk all the necessary pits and shafts."⁴⁹

Coal development in the New River coal field was originally characterized by small enterprises, frequently organized on a family basis. Many of the early entrepreneurs who opened and developed the field often came with experience in other coal fields, especially eastern Pennsylvania and Great Britain. Approximately one-half of the early coal developers had this background. The Pennsylvania coal operators who came to southern West Virginia often had more initial wealth, while the British were more often self-made men who had risen from the working class. Approximately one-third of the early operators were part of the Virginia-West Virginia gentry.⁵⁰

Highly ambitious men, the early coal operators valued order, coveted power, wielded political influence, and disdained labor unions. Having entered the mountains to exploit the region's vast mineral wealth, these rugged individualists undertook to wield their power over the local communities in direct support of their business enterprises.⁵¹

The first coal shipment over the Chesapeake and Ohio from the New River field was made by Joseph L. Beury in September 1873, the coal having been extracted from the Fire Creek seam in his Quinimont mines, some 1,000 feet above the river. Born in Schuylkill County, Pennsylvania, in 1842, Beury, whose Welsh family had been involved in mining for generations, had served in the Union Army during the Civil War. Following the war, he became a coal mine superintendent in the Pennsylvania anthracite fields. While in that

48. Fisk and Hatch, Bankers, *The Chesapeake and Ohio Railroad* (New York, 1873), pp. 48-49, quoted in Merrill, "Economics of the Southern Smokeless Coals," p. 43.

49. *Ibid.*

50. Eller, *Miners, Millhands, and Mountaineers*, pp. 199-223, and Sullivan, *Coal Men and Coal Towns*, pp. 112-13.

51. Eller, "Coal Barons of the Appalachian South," pp. 195-207. Also see Sullivan, *Coal Men and Coal Towns*, pp. 108-50, and Thomas, "Coal Country," pp. 82-92.

position, he became involved in the struggle between the coal operators and the Molly Maguires, a secret labor organization that promoted violence, and, for a time, his life was threatened. In part because of this danger, he left Pennsylvania in 1872 and located on Laurel Creek in the New River Gorge.

With financial support from Connecticut capitalists Samuel Coit and Samuel Day, Beury constructed a coal settlement which he named Quinnimont, a Latin term for the five mountains that surrounded it. Within a year, he became the first operator to mine New River smokeless coal and the first to ship it on the Chesapeake and Ohio. The Quinnimont mines were opened to supply iron furnaces of the Longdale Iron Company in Allegheny County, Virginia. After operating the Quinnimont mines until 1876, Beury, who with his associates Jenkin Jones, John Freeman, and Thomas Davis, had established the Fire Creek Coal and Coke Company, opened a seam at Fire Creek.⁵² After a short time, he left that operation and leased the property of the Hawk's Nest Coal Company at Ansted. After six months, the proprietors of the mine reclaimed their lease, and Beury began operations at McDougal and later at Caperton, where he was joined by John Cooper. In time Beury and various associates opened other mines in the New River region, including the Echo Mine, about one mile east of Fire Creek, and the Glendale Mine. In addition, Beury purchased a large tract of timber land near Meadow Creek in Summers County; initially, the logging industry was geared toward the needs of the coal industry in this area. Beury's diversified business interests included a bottling company and ice house plant in the New River Gorge town near his home. By the time he died in 1903, Beury was a millionaire, and his estate included some 40,000 acres of coal lands. Beury's significance in the early development of the New River coal field was recognized by other coal operators, who erected a monument in his memory at Quinnimont.⁵³

Another coal operator in the New River field was John Nuttall, an Englishman who had emigrated to the United States in 1849 and who moved from Pennsylvania in 1873 to begin developing the uppermost seam of the Pottsville series at Great Sewall Mountain. Nuttall had first seen the fine quality of New River coal while warming himself beside the fire of Colonel George Alderson's tavern near Lookout in early 1870. Later that November, he began purchasing property in the New River region, acquiring some 1,500 acres for his first operation on Keeneys Creek. Development of the mine was begun before the Chesapeake and Ohio was completed through the region, and the Keeneys Creek mine was the second to ship coal over the new road. Soon thereafter, he opened the Nuttallburg mine on Short Creek just downstream from Keeneys Creek. During 1873-74 Nuttall erected at the two mine sites 17 two-family dwellings, 80 one-family residences, 80 coke ovens, and 4 two-car monitors and acquired 30 mine mules and 220 mine cars. In addition, the Nuttallburg mine had a scalehouse, scales, a drumhouse or headhouse, a blacksmith shop, a carpenter shop, slate dump, and tipple. By 1880 the Nuttallburg Coal Company (superseded by the Nuttallburg Coal and Coke Company in 1882) was the largest producer in the New River field. Nuttall continued to acquire property and eventually owned a 3½-mile river frontage and a vast estate that extended well back on the plateau above the river. During the 1880s, Nuttall worked with Norfolk and Western Railroad

52. For a history of the Fire Creek mines, see Charles Smith, *Fire Creek: A New River Coal Mining Community, 1877 to 1976* (Glen Jean, West Virginia, Gem Publications, 1991).

53. Sullivan, *Coal Men and Coal Towns*, pp. 110-11, 272-73, and Thomas, "Coal Country," pp. 83-84.

officials to extend railway transportation to the Pocahontas coal field south of New River.⁵⁴

Other entrepreneurs soon became interested in the development of the New River coal field. One of the best-known operators was Thomas G. McKell, who entered the mining business as a result of land his bride was presented at the time of their marriage in 1870.⁵⁵ John Dunn, of Chillicothe, Ohio, presented his daughter Jean with an interest in a 12,500-acre tract of land on Dunloup Creek that stretched from present-day Thurmond to Terry along New River in Fayette County. This land comprised a portion of the Graham estate, and, prior to that, one of the numerous properties held by Henry Banks, a wealthy Richmond merchant with extensive landholdings in the region that became the state of West Virginia in 1863. Originally, the tract, like others in the mountainous parts of the region, had been considered of value chiefly for its timber, but with completion of the Chesapeake and Ohio, its coal resources took on new importance.

When several coal operators began to ship coal from nearby properties, McKell undertook a personal investigation of the land his wife had been given. Quickly recognizing its value, he purchased the shares of others in the tract and began to acquire adjacent lands. Among the latter were properties belonging to Morris Harvey and those of Samuel Coit of Hartford, Connecticut, who, with a group of associates, including Joseph L. Beury, had organized the Fire Creek Coal and Coke Company in 1876. McKell soon possessed an unbroken 25,000-acre tract along the New River beneath which lay the rich Sewall and Fire Creek coal seams. McKell built a bridge to connect his property with the Chesapeake and Ohio mainline on the opposite side of the New River at Thurmond in 1889 and then persuaded the railroad to build a branch line through his property along Loop Creek. The branch was completed to Macdonald in 1893-94.

For a period of time, McKell leased his coal lands to others rather than operate the mines himself. In 1900, however, McKell organized the McKell Coal and Coke Company and entered the mining business, opening the Derryhale, Kilsyth, Oswald, Graham, and Tamroy mines during the next several years.

The center of McKell's operations was the town of Glen Jean, a coal town constructed during the 1890s-1900s by him at the confluence of White Oak and Dunloup creeks and named in honor of his wife. Among other things, the town featured an opera house designed and constructed in 1896 by Frank L. Packard, a Columbus, Ohio, architect. A more spectacular monument to McKell was his part of the town of Thurmond, located at the junction of Dunloup Creek and New River and the site of his famous three-story, 100-room Dungen Hotel built in 1901. When McKell died at Atlantic City, New Jersey, in 1904, management of his property and holdings passed to his son William, who had resided at Glen Jean since 1893. William continued to move the family enterprises toward

54. Historic American Engineering Record, *Nuttallburg Mine Complex, 1873*, HAER No. WV-51, by Lee R. Maddex, draft, 1992, pp. 1-82; John Nuttall, *Trees Above With Coal Below* (San Diego, Neyenesch Printers, 1961), pp. 52-54, 63-64; and Sullivan, *Coal Men and Coal Towns*, pp. 306-07.

55. A detailed history of McKell's coal developments may be found in U.S. Department of the Interior, National Park Service, *Historic Structure Report, Bank of Glen Jean, New River Gorge National River, West Virginia*, by Norma Camerena and Sharon A. Brown, October 1990, pp. 7-43. Also see Melody E. Bragg, "Glen Jean: Echo of an Empire," *Goldenseal*, XIV (Winter 1988), pp. 9-16.

diversification, establishing, for example, the two-story native stone Bank of Glen Jean in 1909 to serve as the center of his financial empire, and later extending the family-owned Kanawha, Glen Jean, and Eastern Railroad in 1915 to a connection with the Virginia Railroad at Pax, thus providing the Glen Jean mines with a second outlet for their coal.⁵⁶

Initial development of the New River coal field was slowed by the Panic of 1873, but, once its effects subsided, development accelerated as local capitalists, such as General John Imboden of Beckley and Allen Caperton of Union in Monroe County, were able to attract capital from the eastern United States and Great Britain to open new mines. By 1876 there were six mining companies shipping coal from the field, and by 1880, the following companies were in operation: Pennsylvania and Virginia Iron and Coal Company at Quinnimont; Fayette Coal and Coke Company at Stone Cliff; Fire Creek Coal and Coke Company at Fire Creek; Longdale Iron Company at Sewall; Beury, Cooper, and Williams Company at Elm; Nuttallburg mines under the management of John Nuttall and W.A. Burke on Keeneys Creek at Nuttallburg; Louisa mines operated by Byrne, Snyder, and Holt and R.J. Echols and Company at Hawk's Nest; and the Lane and Schnepf Company at Sewall.

The 1880s were a boom decade in the New River Gorge area as dozens of mines were opened and coal towns settled. By 1885 there were mines operating at Quinnimont, Stone Cliff, Echo, Fire Creek, Sewall, Caperton, Keeneys Creek, Nuttallburg, Fayette Station, Elmo, Sunnyside, and Gaymont. During the mid- to late 1880s, new mines were opened at Alaska, Claremont, and Central. These early operations were located along the mainline of the Chesapeake and Ohio, with the majority of the mine openings high on the walls of the gorge and the mining towns located on the plateau surrounding the gorge or at the bottom of the gorge along the railroad.

The New River field mines produced ever-increasing amounts of coal. In 1879 mines on the New River and upper Kanawha shipped 365,523 tons of coal on the Chesapeake and Ohio, the Quinnimont mines alone producing 49,953 tons. In 1888 Fayette County produced 1,522,430 tons of coal, thus becoming the first West Virginia county to exceed 1,000,000 tons per year. This production was due in no small measure to production in the New River field, with nearly one-half of the Fayette County total coming from the gorge itself. By 1903, 56 coal mines were in operation along the Chesapeake and Ohio west of Prince in the New River and Kanawha fields. These mines, together with others in Fayette and Kanawha counties, were producing nearly one-third of all the coal mined in the state.

Initially, development of the New River coal field was limited to exploration along the Chesapeake and Ohio mainline track. A branch line was built up Loup Creek from Thurmond to Glen Jean in 1893-94, and the Arbuckle Branch was completed from Minden to Thurmond in 1904. These lines accessed the rich seams south of New River, creating the basis for Thurmond to become the leading revenue-producer in the entire Chesapeake and Ohio system.

56. Sullivan, *Coal Men and Coal Towns*, pp. 92-93, 299-301; J.T. Peters and H.B. Carden, *History of Fayette County, West Virginia* (Charleston, West Virginia, Jarrett Printing Company, 1926), pp. 261-65; and U.S. Department of the Interior, National Park Service, National Register of Historic Places Inventory — Nomination Form, "Bank of Glen Jean," prepared by James C. Blankenship III and Michael J. Pauley, December 15, 1982.

In 1899, the Low Moor Iron Company opened a mine in the New River Gorge to obtain coal for its blast furnaces in Low Moor and Covington, Virginia. Construction began on a railroad siding, tipple, and mine in a drift entry into the Sewall seam above the New River at Kay Moor. Founded on the South Side Branch of the Chesapeake and Ohio, the town and mine were laid out, and the first coal shipment was made on August 23, 1900. Initial construction of employee housing began in 1901, and by November 1904, 338 workers were employed at Kay Moor. By 1917 the mining complex at Kay Moor, which is considered to be the most representative, relatively intact coal mining system in the New River region, produced 15,000 tons of coal per month, the majority of which was shipped to Virginia.⁵⁷

The mineral development of Raleigh County, which lay to the south and west of the New River, awaited transportation across to the C & O Railroad tracks on the Fayette County side of the river. The railroad would eventually bridge the river and push up Piney Creek toward Beckley, but the first tentative solution to the crossing problem came from two Scotch coalmen, James Kay and James Loring.

Kay and Loring opened Raleigh County's first mine in 1891, penetrating the Fire Creek seam at Royal on lands that would later become a part of Grandview State Park. The Royal Coal and Coke, the operating company, was founded by Kay and Loring, who personally directed the work at the mine as superintendent and foreman, respectively. Some 75 houses were constructed, and some 80 men were employed to begin digging coal in 1891. A large furnace was built near the present-day main overlook at Grandview to ventilate the mines. Other evidence of coal mining activity at Grandview can be found near the Turkey Spur overlook in the extant concrete tipple abutments. Coal from the mine was ferried across the river by a unique aerial hoist system, whose half-ton buckets were dumped into waiting railroad gondolas at Prince.⁵⁸

Raleigh County did not become a major coal producer until it was penetrated by rail branch lines. In 1893 only one coal mine was operating within its borders, and coal production was only 94,933 tons by 1895. The principal owners of potential coal acreage in the county were the Drexel family and other Philadelphia investors. The Chesapeake and Ohio completed a branch line to Raleigh County in 1901, opening markets for coal around Beckley. The area developed rapidly, and Beckley and Mount Hope became significant commercial and trade centers in the region. A number of mines in the county were developed by older business concerns from Fayette County. In 1906, only five years after the Chesapeake and Ohio branch line entered Raleigh County, production increased to more than 1,000,000 tons. That same year, the Virginian Railroad, constructed mainly to open the coal reserves in the Winding Gulf field in Wyoming and south Raleigh counties

57. For more information on the Kay Moor mining operation, see U.S. Department of the Interior, National Park Service, *Historic Resource Study, Kay Moor, New River Gorge National River, West Virginia*, by Sharon A. Brown, July 1990; Lou Athey, *Kay Moor: A New River Community* (N.P., Eastern National Parks and Monuments Association, 1986); and U.S. Department of the Interior, National Park Service, National Register of Historic Places — Registration Form, "Kay Moor; Kay Moor No. 1 Coal Mine," prepared by Sharon A. Brown, July 13, 1990.

58. Sullivan, *Coal Men and Coal Towns*, p. 96; Krebs and Teets, *West Virginia Geological Survey, Raleigh County and the Western Portions of Mercer and Summers Counties*, p. 380; and "Story of Royal on New River," Beckley *Post-Herald*, January 14, 1957, in file "H-14, Royal," historical files, New River Gorge National River.

and to provide the third railway from southern West Virginia to the seacoast, was completed through both Raleigh and Fayette counties and would ultimately provide a direct link to Norfolk.⁵⁹

While the coal industry was developing extensive operations in Fayette and Raleigh counties during the late 19th century, coal men began moving into Summers County, an area having less rugged topography than the aforementioned counties. Among the areas of the county where mining ventures were initiated were the Backus Mountain area and the plateau region in the vicinity of Jumping Branch near the Bluestone. One of the leading coal men to enter Summers County was Beury, who purchased and developed a large tract of land near Meadow Creek. Initially, the logging industry in this region was geared toward the lumber needs of the coal industry, but coal mining operations were also commenced. By the mid-1910s, however, no commercial coal mines were operating in Summers County.⁶⁰

By the late 1890s, the lack of adequate medical facilities to serve the southern West Virginia coal fields had become evident. In 1899 the state legislature passed an act providing for construction of three hospitals for treatment of "persons injured while engaged in employments dangerous to health, life, and limb." The three hospitals were to be built in the Flat Top-Pocahontas, Fairmont, and New River fields. One of the hospitals, designated Miners Hospital No. 2 (name changed to McKendree Hospital No. 2 by state legislature in 1915), was built along the Chesapeake and Ohio mainline at McKendree in New River Gorge on 6½ acres of land donated by Joseph L. Beury. Opened in 1901, the state institution, which consisted of a large, 2½-story brick and stone building and auxiliary structures, treated 171 patients in its first year of operation. The McKendree facility, which added a nurses-training school in 1910, served the New River region until 1941, when it was converted into the West Virginia Home for Aged and Infirm Colored Men and Women, a function it would serve until 1956 when it was closed.⁶¹

Early coal developers in the New River field were largely unassisted technologically and had to cope with prevailing conditions above and below ground as exigencies arose. The aforementioned aerial tramway that transported coal across the river from Royal to Prince was a notable example of the ingenuity exhibited by the coal operators as they attempted to extract coal from the rugged New River region (on lands that later became Grandview State Park). Inclined railways were used where mines worked outcroppings well up the gorge wall, and rail sidings were located along the valley floor near water level.

At Nuttallburg coal was lowered to the tippie at the Chesapeake and Ohio mainline with a ten-ton "monitor," a steel tube mechanism with a door at its lower end. The door was

59. For more information on the historical development of the Winding Gulf field, see Eller, *Miners, Millhands, and Mountaineers*, p. 739, and Tams, *Smokeless Coal Fields of West Virginia*, pp. 64-73.

60. Krebs and Teets, *West Virginia Geological Survey, Raleigh County and the Western Portions of Mercer and Summers Counties*, p. 380.

61. Melody Bragg, *Window to the Past* (Glen Jean, West Virginia, Gem Publications, 1990), pp. 28-29; "Mabel Gwinn, New River Nurse: Interview by Paul J. Nyden," and William E. Cox, "McKendree No. 2: The Story of West Virginia's Miners Hospitals," *Goldenseal*, VII (Fall 1981), pp. 30-35 and 36-40, respectively; and Jim Comstock, ed., *The West Virginia Heritage Encyclopedia, Shirley Donnelly Sampler*, Volume Sixteen, Supplemental Series (Richwood, West Virginia, Jim Comstock, 1974), pp. 65-66.

automatically tripped open to release its coal upon striking the lower tipple, and a full car by its loaded descent pulled an empty twin back up to mine level. The drumrunner rode the monitor, regulating the trip speed with a long brake lever.⁶²

The mechanization of the New River field resulted from market forces over which the early coal operators had little control. The local operators were a small part of the overall industrial scene. As the early coal operations gave way to mergers and consolidations in future years, however, the local operators were valued for their ability to fit raw local circumstances to the demands of the larger economy. After they had served their role in the early development of the coal field, they would be absorbed and finally dispensed with when consolidation provided for professional managers who directed mining operations from the perspective of more modern industrial organization.⁶³

The early system of development, characterized by relatively small capital demands and many independent operators competing with each other, prevailed for approximately one generation in the New River coal field. The system had some fundamental weaknesses, and it gave way to increased industrial consolidation and modern managerial efficiency by the early 20th century. Early mine operators often lacked geological and scientific knowledge, and small independent operators were at the mercy of outside sales companies (usually the railroads) because they had no sales apparatus of their own. The operator who tried to bypass the railroad sales company, often without railroad cars, faced critical competition. To counter this problem, operators gradually began to organize their own sales companies. Samuel Dixon and Justus Collins, for example, organized the White Oak Coal and Smokeless Fuel companies during the late 19th century to establish their own sales markets.⁶⁴ Mine mechanization in the New River field, which began during the early 1880s when an electrical power plant, electric locomotive, and coal undercutting machine were purchased for the Thurmond Coal Company's Concho mine near Thurmond, increased the demand for capital and brought in outside financial interests whose perspectives were sometimes different from that of the local operators.⁶⁵

Thus, the desire for dependable sales outlets, steady sources of capital, skilled personnel, and stability in the highly competitive coal industry led to consolidation and the introduction of new managerial efficiencies in the coal business during the early 1900s.⁶⁶ Marginal producers were pushed aside, and numerous mines came under common ownership or were controlled by holding companies, most of which were financed by syndicates of northern bankers, industrialists, and capitalists.⁶⁷ A new managerial elite replaced the early independent coal operators, becoming "a close knit fraternity" reinforced by kinship ties, business contacts, and interlocking company directorships. This new elite branched out into auxiliary enterprises. The coal operators, for instance, played a significant role in the development of Fayette County banking institutions after 1900.⁶⁸

62. Nuttall, *Trees Above With Coal Below*, pp. 73-74.

63. Sullivan, *Coal Men and Coal Towns*, p. 107.

64. Tams, *Smokeless Coal Fields of West Virginia*, pp. 25-27.

65. Sullivan, *Coal Men and Coal Towns*, pp. 102-04, 210.

66. For more data on the consolidation movement, see Thomas, "Coal Country," pp. 124-58.

67. Eller, *Miners, Millhands, and Mountaineers*, p. 134.

68. Sullivan, *Coal Men and Coal Towns*, pp. 139-40.

This stage of consolidation is perhaps best represented by the emergence of the New River Company, which dominated coal mining in Fayette and Raleigh counties.⁶⁹ Samuel Dixon, who emigrated from England to the New River region in 1876, combined several New River mining properties and organized the company with the aid of Scranton, Pennsylvania, and Boston, Massachusetts, capitalists. The company soon became the giant in the field, operating 22 mines stretching over a 35-mile area from north of Fayetteville to south of Beckley that included portions of present-day New River Gorge National River. For a period, the combination of local management, its own sales subsidiary (the White Oak Coal Company), and infusions of outside capital existed together in mutually beneficial equilibrium. In 1912-13, however, Dixon's New River Company was itself absorbed, when English investors established the Ajax Coal Company to operate 96 mines on more than 550,000 acres of coal land in Fayette and Raleigh counties.⁷⁰ This pattern recurred in the New River field, and by the 1910s, nearly all of the early local coal operators who had opened the field had been purged by outside financial interests.⁷¹

Production in the New River coal field increased dramatically during the early years of the 20th century, the coal boom peaking in 1916 when Fayette and Raleigh counties produced more than 18 million tons of coal and Fayette County ranked second in the state behind McDowell County in total coal tonnage production.⁷² After 1917 a coal slump settled over the field. Between 1922 and 1933, production levels fluctuated with an overall decrease in the quantity of coal mined. This decrease in production followed the overall industry trend throughout West Virginia in the 1920s and early 1930s as the industry suffered from the effects of overexpansion and mines closed when demand slackened. By then much of the coal field's reserves had been depleted. Nevertheless, production for Fayette and Raleigh counties during the Great Depression of the 1930s remained near the 14 million-ton level.⁷³

Mergers swept Fayette and Raleigh counties during the 1920s-1940s period. Dozens of small mines opened during the coal boom of the 1910s were either closed or consolidated under the larger companies. One of the largest producers in the field and the state to emerge as a result of consolidation was the New River and Pocahontas Consolidated Coal and Coke Company, a subsidiary of the Berwind-White Coal Mining Company. The latter conglomerate, one of the largest producing mining operations on the Pennsylvania Railroad, had extensive interests in New York Harbor, Cuba, and other Caribbean

69. For more information on the New River Company, see Robert Craigo, ed., *The New River Company: Seventy Years of West Virginia Coal History* [Mt. Hope, West Virginia, New River Company, 1976].

70. Sullivan, *Coal Men and Coal Towns*, pp. 210-42, 280-82, and Eller, *Miners, Millhands, and Mountaineers*, pp. 138 ff.

71. For an overview of operations in the coal mines of Fayette County in 1911, see *Fayette Journal, Special Edition, Historical, Industrial*, November 2, 1911, pp. 7-14.

72. For a resumé of coal production in Fayette County in 1916, see Ray V. Hennen and D.D. Teets, Jr., *West Virginia Geological Survey, Fayette County* (Wheeling, West Virginia, Wheeling News Litho. Co., 1919), pp. 374 ff.

73. U.S. Department of the Interior, Bureau of Mines, *Coal Reserve Study, New River Gorge*, p. 4. For an examination of the effects of the Depression on Stone Cliff, a New River Gorge coal community, see Murray Shuff, "Life on the New River . . . Fifty Years Ago," *Proceedings, New River Symposium*, 1984, pp. 15-32.

islands.⁷⁴ In 1923 the New River and Pocahontas operated ten mines in Fayette County and nine in McDowell County and was among the top five coal producers in the New River and Flat Top-Pocahontas coal fields. In 1925 the company purchased 5,000 additional acres of coal lands from the Low Moor Iron Company, including the Kay Moor mining property in New River Gorge.⁷⁵

In 1941, at the outset of American involvement in World War II, Fayette County had 39 coal companies operating 72 mines employing 12,542; Raleigh County had 39 companies operating 79 coal mines employing 13,174. That year, some 5,700,000 tons of coal were mined in the New River region, 70 percent of which was produced by two companies. These were the New River Company, which mined 2,387,879 tons, and the New River and Pocahontas Consolidated Coal Company, which produced 1,655,865 tons. The principal companies operating in the New River field that year included: 1) Gauley Mountain Coal Company, with four mines at Ansted; 2) Maryland-New River Company, with three mines at Winona and one at Nuttallburg; 3) New River Company, with mines at Prudence, Carlisle, Whipple, Lochgelly, and Summerlee; 4) New River and Pocahontas Consolidated Coal Company, with mines at Kay Moor, Layland, and Minden; 5) Pugh Coal Company at Stone Cliff; 6) Rucker Coal Company at Claremont; 7) Scotia Coal and Coke Company at Brooklyn; 8) South Side Company at Claremont; 9) Standard Fire Creek Coal Company at Beelick Knob; 10) Star Coal Company at Red Star; 11) Babcock Coal and Coke Company at Clifftop; 12) Eli Smokeless Coal Company at Nuttallburg; 13) Fire Creek Coal and Coke Company at Fire Creek; 14) Glade Smokeless Coal Company at Landisburg; 15) Greenwood Coal Company at Lawton; 16) Laurel Creek Coal Company at Laurel Creek; and 17) Laurel Smokeless Coal Company at Kathryn.

The coal market recovered during World War II, and a brief coal boom in the New River field ensued, leading to peak production in the New River field during the late 1940s. Changes in methods of recovering coal resources, such as surface and auger mining, began to accelerate in the 1950s, drastically altering the economy as well as the landscape of the New River field. These changes, together with the working out of some older mines and slackening demand, substantially reduced coal production in the gorge area. By 1968 coal production in Fayette County had dropped to 9,402,679 tons, of which slightly more than 4,000,000 tons were produced by traditional methods in drift or shaft mines. More than 5,000,000 tons were recovered by surface mining, and 210,718 tons by auger mining. The new methods required relatively few miners compared to the old techniques, and the work force that year was equal to only about one-sixth that of the years of greatest coal production.

While certain regions of the New River field continue to produce large quantities of coal, mining within New River Gorge itself has all but stopped. Mining towns, once bustling and teeming with life and activity, have rapidly lost population in recent decades and, in many cases, have become ghost towns. Such abandoned settlements have become familiar sites in the New River Gorge area. In isolated sections of the gorge, town and mining sites have returned to a primitive state, and the country is virtually as deserted as when the C & O Railroad first opened it to the outside world.

74. *Fayette Tribune*, May 19, 1988, newspaper clipping in file "H-14 Minden," historical files, NERI.

75. For a resumé of the 92 coal companies operating in Fayette County in 1923, see Peters and Carden, *History of Fayette County*, pp. 272-301. Also see Brown, *Historic Resource Study, Kay Moor*, pp. 8-11.

Role of the United Mine Workers of America (UMWA) in the New River Coal Field.

Unionization efforts led by the Knights of Labor had occurred in the New River coal field as early as the 1870s, with the first strike being called in 1879-80. Subsequent union efforts to improve wages and working conditions during the 1880s and 1890s were thwarted by a combination of economic downturns, government suppression, and vigorous opposition by the mine operators. After its founding in 1890, the UMWA emerged as the principal union representing American coal miners, and by the late 1890s, it realized that it was threatened with extinction if the nonunion mines of West Virginia continued to out-produce and dominate the coal market.

During a national strike called by the UMWA in 1897, efforts were again undertaken by Mary Harris ("Mother") Jones and John Mitchell to organize the West Virginia mines. Alarmed by increasing shipments of superior and cheaper coal that were reaching the Middle West and Great Lakes markets from West Virginia, operators in the Central Competitive Field agreed in 1897 to permit unionization of their mines on a standard wage and dues check-off basis provided the UMWA would organize the West Virginia and Kentucky mines on the same terms. To accomplish the goal of unionizing West Virginia's coal miners, the UMWA established field headquarters at Fairmont, Elkhorn, and in the New River field. Although one-third of the 15,000 coal miners in West Virginia supported the strike and some 40 percent of Fayette County miners became affiliated with the union, the effort in West Virginia soon failed, in large part because of the private police system (Baldwin-Felts detectives) employed by the coal operators, use of injunctions to prevent miners from assembling to hear organizers, and the operators' raising of wages and offering bonuses to break the strike.

Spurred on by the operators in the Central Competitive Field, the UMWA resumed organizing efforts in West Virginia by calling a general strike in June 1902. The strike covered 15 counties, involved some 16,000 miners, and closed 108 of the state's 408 active mines. As a result of organizing drives spearheaded by Mother Jones, local unions were established at Mt. Hope and Thayer in the New River field. While the union movement made appreciable gains in the Kanawha field north of New River as well as in the northern part of the state, the union efforts in southern West Virginia were again thwarted by the fierce opposition of the coal operators.

Despite the setbacks to unionism in southern West Virginia, membership in UMWA District 17, covering the Pocahontas, Fairmont, and New River fields, reached some 7,000 by 1907. During the early years of the 20th century, local union organizations at Stanaford, Royal, Ansted, Signal Knob, and Caperton received UMWA charters, but these locals were not recognized by the coal companies. In 1909 new efforts were undertaken to organize the New River field, particularly the mines operated by the New River Company, and a strike was commenced, but it was soon called off.

During 1912-13 a strike in the Cabin Creek-Paint Creek area was settled following violent confrontation, the mine operators agreeing to recognize the UMWA and negotiate a working agreement. A new union district organization was established out of District 17 at a convention of delegates from the New River and Winding Gulf fields in Montgomery on April 15, 1913. District 29 was established with headquarters in Fayetteville, and on March 7, 1915, officers of the fledgling district signed a tentative working agreement, covering

working conditions, wages, and union recognition with coal operators in the New River and Winding Gulf fields.

The tentative contract, as well as the District 29 organization, were not destined to survive, although by 1919 many of the mines in the New River and Winding Gulf fields were organized. In the New River fields, locals were established at Lochgelly, Summerlee, Layland, Laurel Creek, Terry, Royal, and Ansted. Labor peace reigned uneasily until the end of World War I, when slackening demand, rising inflation, and new technology created conditions leading to the labor wars of the 1920s when these locals were suppressed. During the early 1920s, the labor wars in the Kanawha and New River fields led to dramatic confrontations such as the Battle of Blair Mountain in 1921. Wage agreements in the two coal fields were lost in 1922, and miners resumed work, in many cases signing the hated yellow-dog contracts as a condition of being rehired. For all practical purposes, the UMWA was a defunct organization in southern West Virginia, and by 1928 the entire state with a few exceptions had become non-union. Union efforts in the New River field did not re-emerge until 1933, when Section 7A of the National Industrial Recovery Act gave the protection of federal law to labor's right to organize. That year the UMWA organized the southern West Virginia fields, including New River, under the leadership of Van A. Bittner, president of District 17, and the national leadership of John L. Lewis.⁷⁶

Historic Development of New River Coal Field Coke Industry. The first company to produce coke in the New River Gorge area was the Longdale Iron Company, which operated beehive ovens on its lands at Sewall.⁷⁷ The company had iron furnaces in Longdale, Virginia, some 128 miles east of Sewall, and its headquarters in Philadelphia. Founded prior to the Civil War by the Firmstone, Pardee, and Johnson families, the firm was managed by Frank Firmstone as president until 1881 at which time he was succeeded by his brother Harry, who served until 1923. The company began coal mining at Sewall in 1873, and the first coal was converted into coke the following year.

Soon after the Longdale coke venture began, other companies in the gorge added coking to their operations, and within several years, coke-making had become a major industry in itself. In 1879, a year in which the Chesapeake and Ohio shipped 19,748 tons of coke from the New River and Kanawha coal fields, six companies operating coal mines in the gorge area were producing coke. These companies were the Pennsylvania and Virginia Iron and Coal Company at Quinnimont; the Fire Creek Coal and Coke Company at Fire Creek;

76. For more information on the role of the UMWA in the New River coal field, see Lois C. McLean, "Labor History in the New River Coalfield," *Proceedings, New River Symposium*, 1982, pp. 176-84; Anson, "A History of the Labor Movement in West Virginia," pp. 113-47; Conley, *History of the West Virginia Coal Industry*, p. 216; Simmons, Rankin, and Carter, "Negro Coal Miners in West Virginia," pp. 66-69; Thomas, "Coal Country," pp. 17-18; Charles Ambler and Festus P. Summers, *West Virginia: The Mountain State* (Englewood Cliffs, New Jersey, Prentice-Hall, 1958), pp. 446-47; P.J. Laska, "The UMWA in the New River Field: A Study of the Organization and Function of UMWA Locals in the New River Coal Field of Southern West Virginia," 1978, (draft), in A & M 2680, R 50 C 5-6, United Mine Workers of America-Local 6046, West Virginia Collection, Colson Hall, West Virginia University, Morgantown; and S. Doc. 195, Part 1, pp. 163-73.

77. For more data on this company, see Ron Lane and Ted Schnepf, *Sewall: A New River Community*, (N.P., Eastern National Parks and Monuments Association, 1985).

Firmstone, Pardee, and Company at Sewall; the Beury and Williams Company at Caperton; J. Nuttall and Company at Nuttallburg; and the Hawk's Nest Coal Company at Hawk's Nest. In 1880 the mines at Quinnimont had 100 beehive ovens in operation and another 20 under construction. In addition, the Fire Creek mines had 60 ovens, the Sewall mines had 50 ovens with a total capacity of 35,000 tons, Nuttallburg had 40, and Hawk's Nest had 6. The total coke production for all these mines was between 60,000 and 70,000 tons in 1880. Largely because of the New River operations, West Virginia ranked third among the states in coke production that year.

In 1882 the Hawk's Nest mines constructed 80 Belgian-designed Coppee coke ovens, distinct from the beehive in structure and operation in that they were horizontal retort ovens designed to reduce heat loss by reburning and rechannelling exhaust gases into passages in the brickwork under the oven. After these ovens failed, the reorganized company that took over the mines in 1891 constructed 152 beehive ovens at Ansted.⁷⁸

By 1892, the number of coke ovens in Fayette County had reached 1,334, and total coke production was 326,984 tons. In 1897 the county took over second place among West Virginia's counties in coke production. The largest coking operation in the New River Gorge area, which comprised a significant proportion of the Fayette County coke-making facilities, was located at Sewall, where 196 beehive ovens had been constructed during the 1880s. Selling agencies for New River coke were operating in Cincinnati, Columbus, Evansville, Indianapolis, Louisville, Nashville, Memphis, Detroit, Chicago, and St. Louis.⁷⁹

Coking operations continued to increase in the New River Gorge area during the early 20th century. For example, 120 beehive ovens were built at Kay Moor in 1901, and 15,000 tons of coke were produced at the site the following year. By 1917 Kay Moor had 202 ovens in operation.⁸⁰

By 1910 the New River Gorge area had seven companies producing coke. These firms reported 754 beehive ovens, of which 452 operated an average of 199 days yielding 81,941 short tons of coke. The principal coke producers were located at Sewall, Kay Moor, Elverton, and Fire Creek.⁸¹

After 1910 the expense of the coking process and the increasing production of coke by the iron manufacturers near their plants reduced the New River coal field coke operations.⁸² Despite the general decline of the coking industry in the field, however, coke production in New River Gorge remained a significant industry for another decade. During the 1910s, business consolidations and mine closings pared the number of coking companies in the gorge to four, but in 1920 there were still more than 520 ovens operating with an output

78. Athey, "A Kind of Pittsburgh," pp. 161-62.

79. Ron Lane and Ted Schnepf, "The Saga of Sewall: Case Study of a Ghost Town in the New River Gorge," *Proceedings, New River Symposium*, 1983, p. 90, and Lane and Schnepf, *Sewall*, pp. 7 ff.

80. Brown, *Historic Resource Study, Kay Moor*, pp. 18-19.

81. Athey, "A Kind of Pittsburgh," p. 163.

82. Thomas, "Coal Country," p. 93.

of 120,071 short tons from an average of 280 work days per oven.⁸³ Coking continued in the gorge until 1956 when the last coking line at Sewall was closed.⁸⁴

Company Towns in the New River Coal Field. The coal company towns in the New River coal field reflected the patterns of similar settlements throughout southern West Virginia. The early mines in the New River field were opened in isolated, sparsely settled locations, thus making the company town an economic necessity. The early coal operator not only had to organize his mining enterprise, but also the "adjuncts and services necessary to its functioning." Because early mining was a labor-intensive industry, the mine operator had to provide extensive services to his work force, including residences, churches, schools, and stores. As the early coal industry in the New River field was short on capital in many cases, operators provided only the basic essentials for living. Construction was commonly done by the operating company as part of the general development of the property, but this work might also be contracted out in whole or in part. For instance, the New River town of Kay Moor was built completely by the Low Moor Iron Company, while the construction of Eccles in Raleigh County was contracted entirely.⁸⁵

As with other southern West Virginia coal communities, coal towns in the gorge were laid out wherever space could be found. Unlike other areas where towns often had lineal or cruciform patterns, New River Gorge towns clung to any available space and even to the sides of the gorge itself in places. The first decision made was the mine itself, and around its entrance sufficient land was necessary for support structures: drum house, scale house, blacksmith and carpenter shops, storage area for posts, track to slate dump, and, in time, electrical and ventilation buildings. The tippie was at trackside as were the coke ovens, such as those at Nuttallburg, Sewall, and Fire Creek. The company store and a railway depot were more centrally located near the railroad tracks, but other buildings such as churches, schools, community centers, and recreational fields were located wherever space permitted.

Residential housing was placed wherever the terrain permitted. At Quinnimont the houses ranged back up along the hollow, while Thayer had two rows of houses between the tracks and the river. Claremont had four rows of houses, and Pennbrook had several rows of residences. Houses at Thurmond clung to the mountainside, accessible only by narrow one-lane roads.

From the earliest days, some towns in the gorge existed at two or more levels, the river edge and one or more benches or ridges above. Kay Moor, for instance, consisted of two sections of settlement, Kay Moor Top and Kay Moor Bottom, the latter being the older settlement of the two built near the river. The two sections of the town were connected by an incline that ran up the mountain.⁸⁶ At Sewall some houses were built along the tracks near the river, while others were at the top of the ridge above the river with a road connecting the two parts of the town. Stone Cliff was linear in

83. Athey, "A Kind of Pittsburgh," p. 163.

84. Thomas, "Coal Country," pp. 114-20, and Athey, "A Kind of Pittsburgh," p. 163.

85. Sullivan, *Coal Men and Coal Towns*, pp. 151-79.

86. For more details on the layout of Kay Moor, see Brown, *Historic Resource Study, Kay Moor*, pp. 63-89.

form, but it had two rows of houses one above and the other below the railroad. Nuttallburg took advantage of a less precipitous valley slope and was able to squeeze in three rows of houses on three levels. At Nuttallburg families who lived on the ridges above the river could own their own homes, have room for gardens, fruit trees, chickens, or a cow, and generally enjoyed a better standard of living than the residents along the river who owned no property and were largely dependent on the company store.⁸⁷

New River coal towns, like others in southern West Virginia, practiced a tripartite racial and ethnic form of segregation. There were residential areas for whites, immigrants, and blacks. The white residential area was typically closest to the center of town activity, while the immigrant and black sections were more distant. The quality of housing was generally better in the white district. Two-story houses, extant remnants of which remain at Thayer and Sewall, were generally built for the mine foreman, engineer, or other supervisory personnel who were white. Blacks were often given inferior housing. The three-room "Jenny Lind" house form was often referred to as the "nigger house" in the New River region, and in Sewall, blacks were assigned the "red row" housing along the railroad tracks or houses out by the coke ovens.⁸⁸

Segregation in the coal towns of New River Gorge resulted in part from the labor recruitment process. Agents of coal companies visited industrial and mining districts in the North and small towns and agricultural sections in the southern states to secure laborers. As early as 1876, blacks were brought to the New River-Kanawha fields, and by 1886 there were more than 1,000 blacks in the coal fields of Fayette County.⁸⁹ In 1893 one Glen Jean company brought a force of Magyars and Slovaks from the mines of Pennsylvania, but after the strike of 1902, immigrants, particularly from southern and southeastern Europe, came in increasing numbers. By 1908 the immigrant groups with the largest numbers in the New River field were the Italians (1,500), followed by the Magyars (780), Poles (750), English (375), Slovaks (350), and Germans (350).⁹⁰

Many companies utilized a "judicious mixture" of whites, blacks, and immigrants to keep unions out of the coal fields. Some whites were local residents who had modest resources or at least had kinship ties in the area. They came to work from nearby or had resources to live on the ridge top or outside the company towns. Immigrants and blacks, whether they migrated in voluntarily or were brought in by railroad via a system whereby the coal companies paid travel costs and deducted it from the first few pay periods, had no such resources. They had no family support systems and hence were totally dependent upon

87. Nuttall, *Trees Above With Coal Below*, p. 92, and R.T. Hill, "Line Villages in Southern West Virginia: Examples in the New River Gorge," *Proceedings, New River Symposium*, 1985, pp. 121-29. While most New River towns were dependent on company stores for supplies and necessities because of their isolation, the Prince Brothers General Store, established in Prince during the mid-1870s, is an example of private commercial enterprise in a coal-dominated economy. U.S. Department of the Interior, National Park Service, National Register of Historic Places Inventory — Nomination Form, "Prince Brothers General Store," prepared by William E. Cox and Rodney S. Collins, January 29, 1986.

88. Sullivan, *Coal Men and Coal Towns*, pp. 159, 172. For more data on blacks in New River Gorge coal mines, see William E. Cox, "The Black Labor Force in the New River Gorge," in file "H-14 Blacks," historical files, New River Gorge National River.

89. Anson, "History of the Labor Movement in West Virginia," pp. 65-66.

90. U.S. Congress, Senate, Committee on Immigration, *Reports of the Immigration Commission, Immigrants in Industries, Part 1: Bituminous Coal Mining*, 61st Cong., 2d Sess., S. Doc. 633, 1911, pp. 151-56.

the largesse of the company. These two groups, which tended to have a larger number of single men, received the menial jobs and lesser accommodations. Blacks and immigrants were more likely to take in boarders for extra income, further crowding an already congested situation. Coal companies did little to alleviate the problems of foreign immigrants, leaving their "Americanization" largely up to them. Despite these problems, however, the three groups of laborers lived in relative peace. All had to use the central support services such as the company store, although they usually had separate churches, schools, and other services.⁹¹ For instance, Sewall had a white union church constructed about 1912 that included a belfry and decorative front door. Baptist, Methodist, and Presbyterian services were held in the building at different times, led by travelling ministers. Blacks held services in a separate, more simply constructed building not far away, this building later doubling as a school.⁹²

As with other coal towns in southern West Virginia, the houses in the company settlements in New River Gorge were the essence of simplicity. In the early days when communities were being carved out of relative wilderness, a company would often set up a sawmill on the site or contract the work and cut the lumber on the site.⁹³ A simple "Jenny Lind" house, consisting of three rooms in an L-shape with a porch enclosed by two wings, could be erected for as little as \$50. Three- or four-room houses were typical of most miners' residences. Universally of frame construction and sheathed with weatherboard or board-and-batten siding, the houses often sat on piers without foundations and had no insulation. The aforementioned eight basic styles of houses in coal towns identified by Gillenwater are generally reflected in the New River Gorge settlements.

Living conditions in the New River Gorge coal towns varied from town to town, but most were relatively primitive. In 1923 the U.S. Coal Commission, for example, reported that living conditions in the New River towns of Rush Run and Brooklyn were especially poor. Water supplies were adequate but doubtful in quality, some New River towns drawing water directly from the polluted river. The water quality at Terry was one of the worst in southern West Virginia. Few towns had sewers, and where they existed only management offices and homes were connected. Outdoor privies were universal, but cleaning privies and garbage disposal were not conducted with regularity. Services in a town improved if important company officials lived there.⁹⁴

PROPERTY TYPES

Introduction

Underground coal mining had a profound impact on the natural and built environments of West Virginia from 1870 to 1945, especially in the southern part of the state, an area

91. Kenneth R. Bailey, "A Judicial Mixture: Negroes and Immigrants in the West Virginia Mines: 1880-1917," in Turner and Cabbell, eds., *Blacks in Appalachia*, pp. 117-32.

92. Lane and Schnepf, *Sewall*, pp. 32-33.

93. Nuttall, *Trees Above With Coal Below*, pp. 188-91.

94. Sullivan, *Coal Men and Coal Towns*, pp. 164-66.

that includes New River Gorge National River. Despite the historic impact of the coal industry on the environment, however, its material legacy is comparatively small, and much of what remains extant presents difficulties in terms of environmental degradation and potentially severe health and safety hazards. Much of the material in this section has been extracted from the draft study entitled, "Historical Context for the Coal Heritage Survey" [June 19, 1991] prepared by Michael E. Workman, *et al.* of the Institute for History of Technology and Industrial Archaeology, West Virginia University.

Typology of Known and Expected Property Types

The typology of known and expected types for the coal industry context includes:

1. Primary Production Facilities
 - a. Mine portals
 - b. Mining machinery
2. Secondary Production Facilities
 - a. Coal hoists/head houses
 - b. Tipples
 - c. Conveyors
 - d. Buildings, structures, and objects associated with coal production
 - e. Mining plant internal transportation facilities
 - f. Facilities for coke-making
3. Transportation Facilities
 - a. Railroad tracks, sidings, yards, and support structures
 - b. Rolling stock
 - c. Roundhouses, stations, repair shops, and offices
4. Company Towns
 - a. Houses and ancillary outbuildings
 - b. Company stores
 - c. Community buildings
 - d. Private manufacturing/commercial buildings
5. Buildings in Incorporated Towns Associated with the Coal Industry
 - a. Residences of coal operators and managers and ancillary outbuildings
 - b. Residences of coal miners and ancillary outbuildings
 - c. Private manufacturing/commercial buildings and ancillary outbuildings
 - d. Community buildings
 - e. Residences of railroad workers and ancillary outbuildings
 - f. Residences of railroad administrators and ancillary outbuildings
6. Buildings or Sites Associated with Significant Events and/or Personalities in the Mine Wars and the Union Movement During the 1900-30 Period
7. Environmental Sites
 - a. "Gob" piles

b. Water impoundments

8. Sites Associated with Recent Historical Figures or Recent Events of Great Significance Related to the Coal Industry

9. Government Facilities Associated with the Coal Industry

Known and Expected Distribution of Property Types

Primary Production Facilities. A coal mine is literally a factory that devours its own walls. Much of the primary production site, the mine itself, has been removed, burned, and now is available as a historic artifact only in gaseous form in the atmosphere. The hollowed caverns which remain where the coal seams once lay are inaccessible except under special circumstances. All that remains are mine portals. Many of these portals have been obliterated, and will continue to be obliterated, due to safety concerns. The primary production machinery, including cutting, loading, and other types of machines, remain buried in the mine, have been scrapped, or have been forgotten. These, of course, are commonly not considered properties or sites.

Secondary Production Facilities. The most apparent remains of underground coal mining are found on the surface near the mine portal of the mine plant. Even at this location, however, many historic structures have been demolished, mainly because of the threat they pose to public safety. Coal hoists/head houses, used for transporting men and coal in slope and shaft mines, are rare in the area, primarily because of the prevalence of drift mining operations. Tipples, facilities for screening, crushing, sizing, and cleaning coal, are more prevalent. However, it is questionable whether one dating earlier than 1930 can be found, except in isolated areas of the New River Gorge. Conveyors, belts, monitors, tramways, or hoists used to remove coal and waste products, such as slate or gob, can be observed at most mine sites, mainly in ruinous condition. Of all surface facilities, buildings directly associated with coal production, such as powerhouses, powder houses, cap houses, supply buildings, shops, and offices, are the most likely to remain through time. Mining plant transportation facilities consist of rail lines and rolling stock, such as lorry cars, for moving coal between different points within the surface mining plant. Coke-making was a major adjunct industry in the "smokeless" coal fields, and coke ovens, the most significant structures associated with coke-making, often survive through time because of their sheer mass of brick and stone.

Transportation Facilities. Coal was a bulk commodity in which transportation was essential for marketing. Historically, many of the railroad companies played large roles in the development of the New River coal field. The Chesapeake and Ohio was the primary railway line through the New River Gorge, but there were smaller branch lines, many of which were built by independent companies and later taken over by the C & O and other large transportation conglomerates. Railroad tracks, sidings, and yards are easily located, while former railroad rights-of-way from which tracks have been removed may be valuable as a resource in "rails to trails" initiatives. Rail lines in southern West Virginia were always the most direct path to a mine, following the most level contours of the often rugged landscape. Rolling stock, including coal cars and locomotives, are basic to

transportation, but not considered sites. Roundhouses, stations, repair shops, and offices, especially in the service cities, have a high probability of survival.

Company Towns. A characteristic of the West Virginia coal fields is the extremely high number of miners who resided in company towns in the state. In 1922 more than 80 percent of all West Virginia miners lived in company towns. The towns were distinguished by their ethnic diversity, containing native whites as well as a high proportion of blacks and foreign-born workers, mainly from southeastern Europe. Southern West Virginia had several "model" company towns, including Tams, Gary, Holden, and Nellis, but most company towns were not exemplary, being simply a manifestation of the operators' need to maximize profits and maintain control over the labor force.

Company towns were facilities constructed by the coal operators or corporations to house and serve the social needs of the miners. More than any other property type, company towns have come to represent the legacy of coal. Since a company town was a complete social unit and an institution, an intact example of a complete town is more valuable than fragments of several towns. Houses and ancillary buildings are perhaps the most common remnant of coal mining. Although many have been altered drastically since construction, many that possess integrity remain. Included under this property type are outbuildings, yards, fences, and other structures situated on the house lot. Company stores and community buildings, such as schools, churches, and community centers, are not as prevalent as houses. Those surviving are usually easy to locate, but some have been modified to such an extent that they have lost much of their integrity.

In addition to houses, company stores, and community buildings, some company towns contained private manufacturing/business concerns. Owned or controlled by the coal operators, these facilities represented business diversification within a company town setting.

Buildings in Incorporated Towns Associated with the Coal Industry. Part of the legacy of coal in southern West Virginia are the lives and architecture of the coal operators, many of whom lived in the major service towns in the region. Many residences of these operators and managers remain, but locating them and clearly identifying them with a specific personality may prove difficult. Residences of coal miners in the service towns were unusual in the early period, since more than 80 percent of West Virginia coal miners lived in company towns in 1922. However, some must remain, if only from the later period.

Because the railroad industry was so closely associated with the development of the coal industry, buildings located in railroad towns are included under this property type. Private manufacturing/business buildings in the major service towns in the region tended to be substantial structures, and thus a significant number that possess integrity remain. Community buildings, such as churches, are usually easy to locate, but some have been modified or have deteriorated to such an extent that they have lost much of their integrity. Data concerning the known and expected distribution of residences of railroad workers and administrators is similar to that for coal operators/managers and miners.

Buildings or Sites Associated with Significant Events and/or Personalities in the Mine Wars and the Union Movement During the 1900-30 Period. The role of the United Mine Workers of America in the conflict between capital and labor in West Virginia is one of the most memorable chapters in the development of industrial unionism in the United States. It included colorful figures and resulted in development of a distinctively American working class reformist philosophy known by many as the "Union gospel." Here, for the first time, the union accepted blacks on equal terms, and some blacks were placed in union leadership positions. In an era noted for Jim Crow laws in the South and resurgence of the Ku Klux Klan in the North, the union exemplified integration and presaged the Civil Rights Movement of the 1950s and 1960s.

The events and personalities associated with the strikes and battles of the Mine Wars riveted national attention on southern West Virginia during the 1900-30 period. Thousands of miners took up arms as they struggled to defend their right to organize union locals and fend off the coal operators' attempts to break the unions. Although other states experienced this type of conflict or in some instances, warfare, in no other state was it more intense or prolonged than in West Virginia. There are a number of buildings in southern West Virginia that have some relationship to the Mine Wars by virtue of the personalities who built or lived in them or where union activities occurred.

Environmental Sites. While these sites may be less than worthy of recognition, they are reservoirs of the tremendous waste produced by a mining operation. Thus, such sites are important in representing the negative impact of the coal legacy.

Sites Associated with Recent Historical Figures or Recent Events of Great Significance Related to the Coal Industry. While this property type has yet to be fully defined, an example of this type of site (outside the national river) would be Eureka Hollow in McDowell County. Visited by John F. Kennedy in 1960, this site played a significant role in his successful bid for the presidency of the United States.

Government Facilities Associated with Coal Industry. Government facilities, such as hospitals, were constructed at widely scattered sites throughout the coal fields to serve the needs of miners. As their mission was later taken over by other institutions, such facilities either were adapted to other uses or fell into decay.

Present Conditions of Property Types

Numerous historic properties related to coal mining in New River Gorge National River are best described today as historic archeological sites. Abandoned coal mining operations and company towns, which might have survived as "ghost towns" in a different environment, have deteriorated rapidly in the humid New River climate. Most structures associated with the coal towns and mines were designed to be short-lived and meet pragmatic operational objectives, and many were dismantled when abandoned. Coal company houses and other structures along the river in the gorge were often salvaged or removed to be rebuilt in communities above the gorge. Many abandoned houses were destroyed by fire and/or years of neglect because of absentee ownership. Some historic mining sites in New River Gorge National River are located in areas where various forms of industrial or transportation system activities have occurred up until the present time. In these areas, historic resources have often been cleared away as modern machinery or

technology has replaced older equipment. Generally, the longer a mining site has been operated, the fewer the number of historic resources remaining at the site, since it was often modified to suit contemporary needs.

More substantial structures, such as coke ovens and tipples, have survived better than the frame coal town residences and mine equipment structures, but all have been subjected to vandalism, salvage by area residents, and "pot-hunting" by artifact collectors, as well as the destructive effects of rapid and dense vegetative growth. The West Virginia State Historic Preservation Office estimates that the extant ruins of most coal towns and mining sites in New River Gorge contain an average of some 10 to 20 percent of original fabric. A few historic structures survive relatively intact in the historic coal towns and mining sites, but many towns and mines have only remnant ruins while others have disappeared entirely. In the most isolated sections of New River Gorge, many coal town and mining sites have virtually returned to their preindustrial state, and the area is almost as deserted as when the C & O Railroad first opened it to the outside world in the early 1870s.

TABULAR SUMMARY OF MANAGEMENT INFORMATION

This tabular summary of management information includes key data for each historic property related to the coal industry context in New River Gorge National River that has been surveyed by the cultural resources management staff of the former Mid-Atlantic Regional Office. During fiscal year 1992, a survey by MARO was conducted of structures acquired by the National Park Service from 1982 to 1992 to begin the draft List of Classified Structures for the national river. Information on each structure (including structural landscape features and ruins) was collected from land acquisition records, local histories, journals, newspapers, and oral interviews. Compilation of information for the draft LCS is an ongoing process.

Data for the structures listed in the tabular summary is from the draft LCS. This information will change as further studies and fieldwork are undertaken and Determinations of Eligibility and National Register of Historic Places nominations are completed. The names of the structures in the tabular summary were given at the time of the fieldwork and often represent the name of the most recent owner of the property rather than a historic name. Some of the structures' names will change as a result of the research for this historic context study as well as research that may be undertaken in the future.

Tabular Summary of Management Information

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
N-001	80364	Pugh House	Thurmond	Standing structure	5a	Listed (1-27-84)
N-002	80340	Mankin-Cox Building	Thurmond (NERI Tract 164.27)	Standing structure	5c	Listed (1-27-84)
N-003	80365	Goodwin-Kincaid Building	Thurmond (NERI Tract 164.27)	Standing structure	5c	Listed (1-27-84)
N-004	80341	National Bank of Thurmond	Thurmond (NERI Tract 164.27)	Standing structure	5c	Listed (1-27-84)
N-006	80447	Stone Structure	Thurmond (NERI Tract 164.27)	Standing structure	5c	Listed (1-27-84)
N-007	80366	Erskine Pugh House, Rental	Thurmond	Standing structure	5b	Listed (1-27-84)
N-008	80367	Thurmond Passenger Depot and Offices	Thurmond	Standing structure	3c	Listed (1-27-84)
N-009	None	Baptist Church (Black Church)	Southside Junction	Standing structure	5d	Not evaluated
N-019	80368	Vento House	Glen Jean (NERI Tract 173-71)	Standing structure	4a	Determined eligible (7-21-92)
N-020	80369	Vento Outhouse	Glen Jean (NERI Tract 173-71)	Standing structure	4a	Determined eligible (7-21-92)
N-021	80370	Vento Storage Building	Glen Jean (NERI Tract 173-71)	Standing structure	4a	Determined eligible (7-21-92)
N-022	80371	Bank of Glen Jean	Glen Jean	Standing structure	4c	Listed (2-10-83)
N-056	None	Stone Cliff Powder House/Engine House	Stone Cliff (NERI Tract 136-01)	Standing structure	2d	Not evaluated
N-061	None	Little Rock Assembly Church (Thayer Church)	Thayer (NERI Tract 166-30)	Standing structure	4c	Not evaluated
N-076	None	McKendree Hospital Ruins	McKendree	Unstabilized ruin	9	Not evaluated
N-079	None	Trestle No. 1, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated
N-080	None	Trestle No. 2, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated
N-081	None	Trestle No. 3, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated
N-082	None	Trestle No. 4, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated
N-083	None	Trestle No. 5, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated

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PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
N-084	80372	Kay Moor Lamp House/Superintendent's Office	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-085	80373	Kay Moor Water Tanks	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)
N-086	80374	Kay Moor Powder House	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)
N-088	80375	Kay Moor Cap House	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)
N-090	80378	Kay Moor Coal Car Repair Shop	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-092	80377	Kay Moor Monitor Incline	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2e	Listed (11-08-90)
N-093	80343	Kay Moor Headhouse	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2a	Listed (11-08-90)
N-101	80379	Kay Moor Company Store #9	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	4b	Listed (11-08-90)
N-102 /03	80353	Kay Moor Coke Ovens	Kay Moor (NERI Tract 151-21)	Standing structure	2f	Listed (11-08-90)
N-104	80380	Kay Moor Mountain Haulage	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2e	Listed (11-08-90)
N-168	81342	Philip McClung House	Thurmond (NERI Tract 165-09)	Standing structure	5b	Listed (1-27-84)
N-169	81343	Philip McClung House - Rental	Thurmond (NERI Tract 165-12)	Standing structure	5b	Listed (1-27-84)
N-170	81344	Philip McClung House - Home Place, Rental	Thurmond (NERI Tract 165-13)	Standing structure	5b	Listed (1-27-84)
N-179	81345	Tom Kelly House	Thurmond	Standing structure	5b	Listed (1-27-84)
N-181	81346	Sid Childers/Margie Richmond House	Thurmond	Standing structure	5b	Listed (1-27-84)
N-182	81347	Fatty Lipscomb House	Thurmond	Standing structure	5b	Listed (1-27-84)
N-182A	81354	Fatty Lipscomb's Retaining Wall	Thurmond	Unstabilized ruin	5b	Listed (1-27-84)
N-182B	81353	Fatty Lipscomb's Yard Fencing	Thurmond	Unstabilized ruin	5b	Listed (1-27-84)
N-183	81348	Marilyn Brown House	Thurmond	Standing structure	5b	Listed (1-27-84)
N-186	81349	Sidney Ward House	Thurmond	Standing structure	5b	Listed (1-27-84)

Tabular Summary of Management Information

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
N-190	81350	Homer Nicely/Charles H. Ashley House	Thurmond	Standing structure	5b	Listed (1-27-84)
N-191	81351	Ashley Garage	Thurmond	Standing structure	5b	Listed (1-27-84)
N-192	80381	Kay Moor Berwind Electrical Substation	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-193	81352	Ashley Shed	Thurmond	Standing structure	5b	Listed (1-27-84)
N-194	80382	Kay Moor Berwind Fan House	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-195	80383	Kay Moor Low Moor Iron Co. Fan House	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-196	80451	Kay Moor Low Moor Iron Co. Electrical Substation	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-197	80384	Kay Moor Blacksmith Shop and Retaining Wall	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-198	80386	Kay Moor Monitors	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2e	Listed (11-08-90)
N-199	80387	Kay Moor Conveyor	Kay Moor (NERI Tract 151-21)	Standing structure	2c	Listed (11-08-90)
N-200	80390	Kay Moor Power House	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-201	80391	Kay Moor Power Poles	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)
N-202	80392	Kay Moor Ice House	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	4b	Listed (11-08-90)
N-203	80393	Kay Moor Pump House	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-204	80385	Kay Moor Covered Walkway	Kay Moor (NERI Tract 151-21)	Unstabilized ruin	2d	Listed (11-08-90)
N-205	80352	Kay Moor Coal Car	Kay Moor (NERI Tract 151-21)	Standing structure	3b	Listed (11-08-90)
N-206	80344	Kay Moor Concrete Staircase	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)
N-207	80345	Kay Moor Safety Board	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)
N-208	80346	Kay Moor Steel I-beam	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)
N-209	80347	Kay Moor Cap Magazine	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)

CHAPTER TWO: COAL INDUSTRY HISTORIC CONTEXT

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
N-210	80348	Kay Moor Processing Plant	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)
N-212	80350	Kay Moor Sand House	Kay Moor (NERI Tract 151-21)	Standing structure	2d	Listed (11-08-90)
N-213	80351	Kay Moor Sand Car	Kay Moor (NERI Tract 151-21)	Standing structure	3b	Listed (11-08-90)
None	None	Stone Cliff Turntable Ruins	Stone Cliff (NERI Tract 136-01)	Unstabilized ruin	2e	Not evaluated
None	None	Stone Cliff Stone Building Ruins	Stone Cliff (NERI Tract 136-01)	Unstabilized ruin	2d	Not evaluated
None	None	Little Rock Assembly Church Outhouse	Thayer (NERI Tract 166-30)	Unstabilized ruin	4c	Not evaluated
None	None	Fayette County Bottling Company Ruins	Beury	Unstabilized ruin	4d	Not evaluated
None	None	Beury Ice House Ruins	Beury	Unstabilized ruin	4d	Not evaluated
None	None	Sewall Superintendent's House Ruins	Sewall	Unstabilized ruin	4a	Not evaluated
None	None	Sewall Engine House Ruins	Sewall	Unstabilized ruin	2d	Not evaluated
None	None	Sewall Cokeyard Office Ruins	Sewall	Unstabilized ruin	2f	Not evaluated
None	None	Sewall Coke Ovens Ruins	Sewall	Unstabilized ruin	2f	Not evaluated
None	None	Sewall White Church Ruins	Sewall	Unstabilized ruin	4c	Not evaluated
None	None	Fire Creek Company Store Ruins	Fire Creek	Unstabilized ruin	4b	Not evaluated
None	None	Fire Creek Coke Ovens Ruins	Fire Creek	Unstabilized ruin	2f	Not evaluated
None	None	Railroad Tracks and Ties, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Unstabilized ruin	3a	Not evaluated
None	None	Railroad Directional Markers, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Unstabilized ruin	3a	Not evaluated

Tabular Summary of Management Information

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
None	None	Bridge Supports, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Unstabilized ruin	3a	Not evaluated
S-052	80356	Prince Brothers General Store (Berry Store)	Prince (NERI Tract 155-30)	Standing structure	5c	Listed (4-17-86)
None	None	Prince Brothers Residential Property Fence	Prince (NERI Tract 155-30)	Standing structure	5c	Not evaluated
S-054	None	Thomas Bowles Greenhouse	Quinnimont (NERI Tract 128-01)	Standing structure	5e	Not evaluated
S-055	None	Thomas Bowles Outhouse	Quinnimont (NERI Tract 128-01)	Standing structure	5e	Not evaluated
S-056	None	Thomas Bowles #1 Storage	Quinnimont (NERI Tract 128-01)	Standing structure	5e	Not evaluated
S-057	None	Thomas Bowles #2 Storage	Quinnimont (NERI Tract 128-01)	Standing structure	5e	Not evaluated
None	None	Thomas Bowles Hogpen	Quinnimont (NERI Tract 128-01)	Standing structure	5e	Not evaluated
S-058	None	Judy Bowles House	Quinnimont (NERI Tract 128-01)	Standing structure	5e	Not evaluated
S-059	None	Robert Bowles House	Quinnimont	Standing structure	5e	Not evaluated
S-060	None	Robert Bowles Chicken House	Quinnimont	Standing structure	5e	Not evaluated
S-061	None	Robert Bowles Garage	Quinnimont	Standing structure	5e	Not evaluated
S-062	None	Robert Bowles #1 Storage	Quinnimont	Standing structure	5e	Not evaluated
S-063	None	Robert Bowles #2 Storage	Quinnimont	Standing structure	5e	Not evaluated
S-064	None	Robert Bowles Outhouse	Quinnimont	Standing structure	5e	Not evaluated
S-065	None	Opal Kessler House	Quinnimont (NERI Tract 128-01)	Standing structure	5f	Not evaluated
None	None	Opal Kessler Chicken Coop	Quinnimont (NERI Tract 128-01)	Unstabilized ruin	5f	Not evaluated
None	None	Opal Kessler Water Tanks	Quinnimont (NERI Tract 128-01)	Standing structure	5f	Not evaluated
S-069	None	Samuel Plumley #1 Storage	Quinnimont	Standing structure	5f	Not evaluated
S-070	None	Samuel Plumley #2 Storage	Quinnimont	Standing structure	5f	Not evaluated
None	None	Samuel Plumley Fowl Barn	Quinnimont	Standing structure	5f	Not evaluated
None	None	Samuel Plumley Ruins/Foundations	Quinnimont	Unstabilized ruin	5f	Not evaluated

CHAPTER TWO: COAL INDUSTRY HISTORIC CONTEXT

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
None	None	Samuel Plumley Walkway	Quinnimont	Unstabilized ruin	5f	Not evaluated
None	None	Quinnimont Church	Quinnimont	Standing structure	5d	Not evaluated
S-071	None	Willis House	Quinnimont (NERI Tract 128-01)	Standing structure	5f	Not evaluated

CHAPTER THREE: RAILROAD INDUSTRY HISTORIC CONTEXT

NARRATIVE HISTORY

Summary

Geographic Boundaries: New River Gorge National River

Chronological Period: 1870s - 1940s

The historic context for the railroad industry in New River Gorge National River focuses on the construction and operation of the C & O Railroad and feeder branch lines that served to stimulate development of the New River coal field as well as the lumber industry in the region. Lacking river transportation and local industries to stimulate production, development of the "smokeless" or low volatile coal of the New River field did not commence until completion of the C & O Railroad through the New River area in 1873.

The coming of the railroad to the New River Gorge brought dramatic change to the region. After millennia during which the rugged physical environment had limited human activity in the area, the railroad opened the pristine beauty, natural resources, and mineral wealth of the New River Gorge region to broad human access. Prior to the railroad, transportation into and out of the isolated and desolate region had been so difficult that the area had witnessed no large-scale human activity. After the railroad was constructed, numerous coal mining operations and towns, as well as lumber camps, were established in the remote region as the inhospitable gorge turned into a beehive of industrial activity. A commercial center established at Thurmond and a railroad center at Hinton were the foci of railway activity in the New River Gorge region.

Introduction

This historic context for the railroad industry in New River Gorge National River is based in part on a study prepared by Paul D. Marshall & Associates, Inc., of Charleston, West Virginia, in 1981. Volume II of this study, entitled *A Cultural Research Project: The New River Gorge National River, West Virginia* (pp. 170-77), provides a historical overview of the principal themes and resources related to the railroad industry within the boundaries of the national river.

Several subsequent studies that augment the overview of the railroad industry in the Marshall report deserve mention. Among the most important of these studies are: *Historic American Engineering Record, Chesapeake and Ohio Railroad: Thurmond Yards*, HAER No. WV-42, by Billy Joe Peyton, 1988, and *Institute for the History of Technology and Industrial Archaeology, West Virginia University, New River Gorge National River, Thurmond Passenger Depot and Offices, Historic Structure Report*, by Billy Joe Peyton et al., August 1991. Although a secondary work written for the general reading public, one of the most useful books for this historic context is Eugene L. Huddleston, *Riding That New River Train: The Story of the Chesapeake & Ohio Railway through the New River Gorge of West Virginia* (Alderson, West Virginia, The Chesapeake & Ohio Historical Society, Inc., 1989).

Historic Development of Railroad Industry in Its National and State Contexts

Development of West Virginia Railroad Network and Its Relationship to the National Railway System. Railroads had a tremendous impact on the economic development of the United States during the 19th century, linking the various regions of the country with a complex web of interconnecting rail lines. The railroads provided the nation with a faster and more efficient means of transportation and enabled it to develop its natural resources and transport its raw materials and manufactured products to market.¹

What was true for the nation was also true for West Virginia. Railroads had a significant impact on the economic development of the state, providing for development of its natural resources, particularly coal and lumber, and enabling those resources to reach regional and national manufacturing centers. Thus, the state, which had lacked suitable transportation outlets for its resources before the coming of the railroads, became a significant contributor to the growing industrial development of the nation during the late 19th century. The development of these resources in turn led to a rapid influx of population to the state and the establishment of mining towns and lumber camps in previously isolated and largely unsettled areas.² The importance of railroads on the economic development of the future state of West Virginia had been demonstrated before the Civil War by the Baltimore and Ohio, which had been completed to Wheeling on the Ohio River in 1852, and by the Northwestern Virginia, which connected Grafton and Parkersburg.

C & O Railroad. The Chesapeake and Ohio was the first great railroad in southern West Virginia. Designed to link the Atlantic with the Midwest agricultural region via the New, Kanawha, and Teays valleys, it grew out of two older lines, the Virginia Central, completed from Chesapeake Bay to Covington in 1867, and the languishing Covington and Ohio. The proposed line was revitalized by Collis P. Huntington, a western railroad magnate, and the Chesapeake and Ohio was completed on January 2, 1873, thus connecting Chesapeake Bay with the Ohio River at Huntington. The railroad led to development of vast coal and lumber resources of the hitherto isolated New and upper Kanawha river regions. The first coal from the New River field was shipped from Quinimont mines over the railroad in 1873, and the C & O eventually became the world's greatest coal carrier.

Other West Virginia Rail Lines. After the Panic of 1873, other railroad entrepreneurs turned to West Virginia coal fields and timberlands. In 1881, Frederick J. Kimball of Germantown, Pennsylvania, joined with Philadelphia capitalists to purchase the Atlantic, Mississippi and Ohio Railroad, a floundering combination of three old Virginia lines. Kimball developed his holdings into the Norfolk and Western Railroad to open the Pocahontas coal field and serve as the nucleus of a great coal-carrying transportation system. He opened the New River branch of the railroad in 1881-82, and the first Pocahontas coal reached Norfolk in March 1883. Extensions were completed to the Flat

1. For an overview of the historical development of railroads in the United States see *Dictionary of American History*, Vol. VI, pp. 24-37.

2. Otis K. Rice, *West Virginia: The State and Its People* (Parson, West Virginia, McClain Printing Company, 1972), pp. 217-25.

Top coal field in 1886, to Kenova on the Ohio River, in 1892, and later to Columbus and Cincinnati.

Unique among West Virginia railroads was the Virginian, completed in 1909 by Henry H. Rogers, an associate of John D. Rockefeller and a Standard Oil magnate who completed the \$40,000,000 line with his own resources. Instead of following the meanderings of mountain valleys, the Virginian made maximum use of gravity and the downward slope of the terrain from the coal fields to the Atlantic coast by bridging rivers and tunneling through mountains. As a coal carrier from the upper Guyandotte area to Norfolk via Roanoke, it became a formidable competitor to both the Chesapeake and Ohio and the Norfolk and Western. The Virginian extended its lines to Deepwater, 30 miles east of Charleston, where they connected with the Kanawha and Michigan, and reached the New River and Winding Gulf coal fields. Later, with electrification of the line between Mullens and Roanoke, Virginian rails carried some of the largest locomotives and heaviest freight trains in the world.

Other rail lines stimulated the economic growth of West Virginia. Two railroads that tapped West Virginia coal and timber, the Western Maryland and the Coal and Coke, sprang from the dreams of Henry Gasaway Davis. Begun as the West Virginia Central and Pittsburgh Railway, the line was completed to Gormanville in 1883, to Elkins in 1888, and later to Beverly and Belington. In 1905, as part of the Western Maryland system, it was extended to Durbin to join the Chesapeake and Ohio and on to Webster Springs.

With the Charleston, Clendenin, and Sutton Railway as its nucleus, the Coal and Coke Railroad was completed by Davis and Stephen B. Elkins in 1906. It provided a much needed north-south route through the heart of the state and connected with the Western Maryland at Elkins and with the Kanawha and Michigan at Charleston. The 175-mile line, later part of the Baltimore and Ohio system, assured central West Virginia coal an outlet on the Great Lakes and an alternate route to Atlantic ports.

In 1893, the Kanawha and Michigan connected Corning, Ohio, and the Great Lakes with Gauley Bridge via Point Pleasant and Charleston, thus giving new economic impetus to coal mining on the north side of the Kanawha. Later, as part of the New York Central, the line was built to Nallen and Enon.

The West Virginia and Pittsburgh Railroad, organized by Johnson N. Camden in 1890, tied the Baltimore and Ohio, which leased it for 99 years, to the Chesapeake and Ohio by way of Weston, Clarksburg, Buckhannon, Sutton, and Richwood. The Baltimore and Ohio also acquired another Camden line, the Monongahela Railroad, built in 1889-90 between Clarksburg and Morgantown to develop intervening coal fields.³

3. Otis K. Rice, *West Virginia: A History* (Lexington, University Press of Kentucky, 1985) pp. 184-86. For more data on the Norfolk and Western and the Virginian railroads see Joseph T. Lambie, *From Mine to Market: The History of Coal Transportation on the Norfolk and Western Railway* (New York, New York University Press, 1954); Tams, *Smokeless Coal Fields of West Virginia*, pp. 19-23; Sullivan, *Coal Men and Coal Towns*, pp. 61, 75, 81; Rice, *West Virginia: The State and Its People*, pp. 219-21; and Charles H. Ambler, *West Virginia: The Mountain State* (Englewood Cliffs, New Jersey, Prentice-Hall, 1940), pp. 335-38.

Historic Development of Railroad Industry in Its Local Context

Construction of the C & O Railroad. When the route of the C & O Railroad was constructed westward during the post-Civil War years, the United States was in the midst of its industrial revolution. It was the age of steam and the nation needed a ready supply of fuel to power its factories, heat its homes, and drive its ever-expanding transportation systems. Wood had served these purposes in the country's earliest years, replaced by anthracite coal when the great northeastern hardwood forests were depleted. And then, when the railroads breached the Appalachians, a seemingly inexhaustible supply of bituminous coal was readily available.⁴

The coal seams in the "smokeless" coal fields of southern West Virginia are of the highest bituminous quality, and as such they were in great demand in the late 19th and early 20th centuries as clean, hot burning fuels. Tapping the black mineral in the southern West Virginia coal fields was relatively easy, but loading and shipping the resource was a different story. Before the C & O Railroad opened up the "smokeless" coal fields, including the New River Gorge region, there was no economical or efficient method to market the coal.

The first plan to open up the New River Gorge region was advanced long before the railroad made it a reality. As early as 1784, George Washington proposed the New River as a route for a canal through the "Central Line" of Virginia to run the length of the James River, over the Appalachians and down the Greenbrier, New, and Kanawha rivers to the Ohio. This all-water route, wholly within the Commonwealth of Virginia, would provide a direct route between Tidewater and the Ohio River and a connecting link to the Mississippi River, New Orleans, and the Gulf of Mexico. The all-water route was envisioned as Virginia's answer to New York's Erie Canal which linked the eastern seaboard with the Great Lakes and ultimately the Mississippi Valley.

The railroad was the greatest obstacle to any canal construction plans. In 1828 construction of the Baltimore and Ohio Railroad was begun under the leadership of Baltimore merchants seeking a direct transportation link to the Ohio River. The Baltimore and Ohio became the pioneering railroad in the United States and the training ground for a legion of civil engineers, some of whom would later work on the Chesapeake and Ohio. While the Baltimore and Ohio was under construction, Virginia pressed ahead with the James River and Kanawha Canal until it reached the headwaters of the James River at Buchanan

4. There are numerous published sources relative to the construction, operation, and development of the Chesapeake and Ohio Railroad. Among the best publications are: James Poyntz Nelson, *The Chesapeake and Ohio Railway* (Richmond, Virginia, Lewis Printing Co., 1927); Charles W. Turner, *Chessie's Road* (Richmond, Virginia, Garrett & Massie, Incorporated, 1956); Charles W. Turner, *Chessie's Road*, 2nd ed. with additions by Thomas W. Dixon, Jr., and Eugene L. Huddleston (Alderson, West Virginia, The Chesapeake & Ohio Historical Society, Inc., 1986); Thomas W. Dixon, Jr., *Chesapeake & Ohio: Superpower to Diesels* (Newton, New Jersey, Carstens Publications, Inc., 1984); Thomas W. Dixon, Jr., *Chesapeake & Ohio Standard Structures* (Clifton Forge, Virginia, The Chesapeake & Ohio Historical Society, Inc., 1991); Patrick C. Dorin, *The Chesapeake and Ohio Railway: George Washington's Railroad* (Seattle, Superior Publishing Company, 1981); Charles Bias, "Building the Chesapeake and Ohio Railroad Through the New River Region," *Proceedings, New River Symposium*, 1982, pp. 168-75; Charles Bias, "The Completion of the Chesapeake and Ohio Railroad to the Ohio River, 1869-1873," *West Virginia History*, XL (Summer 1979), pp. 393-403; and Eugene L. Huddleston, *Riding That New River Train: The Story of the Chesapeake & Ohio Railway Through the New River Gorge of West Virginia* (Alderson, West Virginia, The Chesapeake & Ohio Historical Society, Inc., 1989).

in 1851, one year before the Baltimore and Ohio reached the Ohio at Wheeling. The canal would never be completed over the Appalachians.

Virginia continued to struggle with its link from Chesapeake Bay to the Ohio, but it remained unwilling to commit to a railway system. Thus, the mineral wealth of the New River Gorge lay untapped until the C & O Railroad was constructed through the gorge and eventually to Charleston, Huntington, and Cincinnati.

The C & O Railroad was the successor of the Covington and Ohio Railroad, which had been organized as an extension of the Virginia Central. The latter railway had been incorporated in 1850 as the successor of the Louisa Railroad, which had obtained its charter in 1836. At the outbreak of the Civil War in 1861, the Virginia Central was operating to Jackson's River, ten miles east of Covington, and by 1867 it had been completed to Covington. Work on the Covington and Ohio, which had been abandoned during the war, was resumed in 1867 under charters of incorporation secured from both the Virginia and West Virginia state legislatures in 1865. After securing financial aid necessary to meet the heavy costs of construction, commissioners appointed by the two states contracted with the Virginia Central to undertake construction west from Covington in 1868. Under this contractual arrangement the name of the railroad was changed to the Chesapeake and Ohio to indicate the transportation link connecting the waters of Chesapeake Bay and the Ohio River.

General William C. Wickham, president of the newly-organized company, succeeded in attracting the interest of Collis P. Huntington, a railroad magnate who with Leland Stanford had organized and directed the Central Pacific Railroad in constructing the western portion of the first transcontinental railroad, completed in 1869. Huntington and his associates signed a contract in November 1866 assuring successful completion of the Chesapeake and Ohio. On June 9, 1870, the latter railway acquired the Blue Ridge Railroad from the Commonwealth of Virginia, which had constructed the rail line through the mountains. The state legislature of Virginia further aided the new road in 1868 by authorizing townships to hold special elections to determine whether they would purchase stock. The railroad also received aid from the sale of public land.

The decision of the Virginia legislature to aid the railroad encountered considerable opposition. In 1872, for instance, the *Greenbrier Independent* published articles opposing the rail line, alleging that it transported whiskey, killed livestock and chickens, scared horses, and threw teamsters out of work.

The Chesapeake and Ohio requested additional engineering studies based on the Covington work and divided the remaining construction work into six districts: Allegheny, Greenbrier, First New River, Second New River, Kanawha, and Western. Construction along the New River proved so difficult that work was divided into two divisions, the first extending from Hinton to Stretchers Neck and the second from the west end of Stretchers Neck to Gauley.

To meet its construction timetable the Chesapeake and Ohio had its work crews, the majority of whom were blacks recruited from various southern states, particularly

Virginia, and other border states,⁵ avoid difficult tasks and lay temporary track over difficult streams and uncompleted cuts. Numerous slides slowed construction and tunnels had to be dug through the rugged terrain. Materials for construction were brought over land in wagons or down the Greenbrier in bateaux. The Allegheny section was not completed until the Lewis Tunnel, which took 14 months to construct, was finished in July 1873. The Kanawha and Western sections were contracted in 1870, and the line was completed to Charleston by December 1871 and Kanawha Falls by June 1872. The Great Bend Tunnel was a major task in the Greenbrier division. Extending some 6,500 feet, the tunnel was completed in May 1872 and by August 1873 that entire division was in operation.⁶

Carving a trunk line through the precipitous New River Gorge posed a monumental engineering challenge to the new railroad company. The most feasible grade for a railroad through the mountains was by nature's own path, down the Greenbrier River to the New and on to the Kanawha. The path of the C & O Railroad followed for the most part the route of the proposed extension of the James River and Kanawha Canal, and the C & O purchased its right-of-way directly from the defunct James River and Kanawha Canal Company.

The "V" shaped New River Gorge had little flood plain and thus posed a monumental engineering challenge. This difficulty is given systematic illustration in a table that divides the West Virginia portion of the river paralleled by the C & O into three sections determined by rate of fall in the river:

Hinton to Thurmond	7.8 ft/mile
Thurmond to Hawk's Nest	13.3 ft/mile
Hawk's Nest to Gauley	17.6 ft/mile

The 33-mile section of the New from Hinton to Thurmond was the easiest to construct, with the exception of Stretchers Neck Tunnel, required by an "entrenched meander" of the new stream on its old flood plain. For the section from Thurmond to Hawk's Nest, the existence most of the way — from Nuttall to Hawk's Nest — of a thick conglomerate sandstone ledge at or near the top of the gorge resulted in a constant threat of slides. From Hawk's Nest to Gauley the narrowing of the gorge and the huge cliff lining it near water level caused H. D. Witcomb, chief construction engineer, to complain:

For the first time the line between Miller's Ferry [Hawk's Nest] and the mouth of New River was run with the curves; and in the course of the survey, which was exceedingly difficult and tedious, it was found that at... Blue Hole, drift had been deposited at recent date 68' above low water, and several feet above the grade formerly run. This drift was found on a shelf of rock under a projecting cliff, where it was evident the river alone could have placed it. It was, of course, necessary to change the grade at this point, and to some [extent] the alignment. Very fortunately our maximum grade of 21' per mile was sufficient to reach the grading in progress on the Kanawha Division.... At the Blue Hole, the river, after

5. Simmons, Rankin, and Carter, "Negro Coal Miners In West Virginia," pp. 62-63.

6. Bias, "Completion of the Chesapeake and Ohio Railroad to the Ohio River," pp. 396-98, and Hennen and Teets, *West Virginia Geological Survey, Fayette County*, pp. 9-11.

falling 20' to the mile for 5 consecutive miles, and for a part of the distance at a much greater rate, turns sharply to the right more than 120 degrees, and then passes between sandstone cliffs 425' apart at the level of the high water mark. This is the narrowest pass we have yet measured in the New River Valley, and the water in extreme floods rises more than 20 feet higher above its ordinary surface than at any other point where our line touches it. With these facts before us, it was only prudent to throw the line into cutting at points exposed to the current; and to do this it became necessary to pass in the rear of overhanging masses at some points, and to tunnel others. Four of these tunnels will probably be made, the longest about six hundred feet.⁷

The difficulties facing the Chesapeake and Ohio engineers as they surveyed the line through the gorge were aptly described by James Poyntz Nelson, one of the surveying engineers who later wrote a history of the railroad undertaking. He noted:

...Dragging chains and carrying instruments, clambering over boulders and cutting through the underbrush and heavy trees that obstructed the establishment of the line; hanging suspended and held by ropes on the face of cliffs and slopes too steep to stand on; taking measurements and holding rods and signals while engineers below took observations with their theodolites and other instruments, these difficulties were accompanied by many discomforts. There were no roads and no houses and no people, except here and there a hunter and his hut; nothing but a wilderness of rocks, trees, undergrowth, and the river which because of its rapids, falls, and dangerous currents offered no facilities for communication. Supplies were brought to the tops of the cliffs and let down with much trouble.⁸

Another danger associated with the construction work in the gorge was drowning. One commentator noted:

When the contractors went to work, they of course, needing large quantities of supplies, employed the river boats to bring them; but even they had to transport everything from a few landings on horses' backs; they brought boats, and used them until several men were drowned; and so treacherous is the river that it was presently found necessary to absolutely forbid the men to bathe in it.⁹

The cost of construction in human terms was brought home to Huntington when Scott Hammond, his teen-aged nephew, drowned in the New River on July 20, 1870.

The principal difficulties of the First New River Division were the hard beds of sandstone just west of Sandstone Falls and Stretchers Neck Tunnel, while those of the Second Division were centered primarily at the Narrows, the most inaccessible part of the line where excavation was not only difficult but extremely hazardous.

7. Annual Report, Chesapeake and Ohio Railroad, 1871, quoted in Huddleston, *Riding That New River Train*, pp. 24-25. Ultimately, only three tunnels would be constructed through the Narrows.

8. Quoted in *ibid.*, p. 26.

9. Quoted in *ibid.*, p. 27.

The two New River divisions were far more expensive to construct than the other divisions of the Chesapeake and Ohio. The First Division, for example, cost \$397,040 and the Second, \$654,608. By contrast, the Greenbrier Division cost \$267,239 and the Kanawha \$47,068. Whitcomb attributed the excessive costs of the New River divisions to slides and underestimation of the construction difficulties. In 1873 he reported to the company's stockholders:

The two New River divisions have cost your company largely in excess of the original estimates caused in part by slides from the mountains and in part from the small amount of work obtained for the price of a day's labor, but chiefly by the work being of a much more substantial character than was at first contemplated.¹⁰

The problems at Stretchers Neck were unusual and costly. The difficulties were described in detail by Engineer Whitcomb in 1871:

The tunnel through Stretcher's Neck, which is 1,900 ft. in length [now at 1588 ft], and which saves about four miles in distance, was put under contract in November last [i.e., in November 1870].... It is worked from an opening at the Eastern Portal and from a shaft near the Western Portal. While a bench of the cut on the western approach was being excavated, and before the intended portal had been reached, a heavy slide took place on the north slope, which threatened to involve a part of the ground which it was intended to tunnel. [It was impractical to remove the slide to get down to solid rock in order to have an open cut, so the engineers "sunk a shaft in rear of the slide and carried it down to the tunnel heading."] The heading was then enlarged to double track size and securely timbered [so that part of the tunnel was built through the slide material]. ...The remainder of the tunnel is in rock which has thus far required no support.¹¹

The problems Whitcomb outlined were not the last ones to be encountered at the curved tunnel, however, for blasting at the heading disturbed the alignment of work already done.

In another report to the stockholders of the Chesapeake and Ohio in August 1873, eight months after the last spike had been driven on the rail line between Covington and Huntington, Whitcomb observed that to get the track open by January 29 it had to be "laid over or around unfinished excavations and embankments on the lower New River." He also re-emphasized the problem with slides, a recurring theme not only during construction but during later railroad operations along the river:

As it was desirable to open the road for business at the earliest practicable day, a large force was employed, working at many points night and day at that inclement season, reducing the unfinished cut and removing the slides which are common...at that season of the year. Some of the slides were of considerable size, and the material difficult to move. Some of the cuts to be removed were in solid

10. Quoted in *ibid.*, p. 27.

11. Quoted in *ibid.*, p. 27.

rock, where at every blast the track had to be removed and then relaid to allow the passage of trains. The road was open for business in March, but until June the trains could not be run with regularity. Since then there has been no serious interruption.... It is, perhaps, within the truth to say that the materials which for the most part compose the slopes on New River can be moved at half the cost in the dry season, while during the past winter and ensuing spring... we were compelled to work in this material night and day, and frequently to the point of exhaustion, in order to keep the trains running. The large mass of these slides is now removed, and it is not probable that the troubles of the past year will occur again. For the most part the material was deposited in embankments, which are avoided by curves, or crossed by trestles, in most cases on the regular grade. The cost of completing the roadbed will not be large, and the work can be done without inconvenience during the current fiscal year.¹²

In his history of the Chesapeake and Ohio, Nelson reasoned that the instability of the mountainsides above the tracks in New River Gorge was primarily the result of blasting during construction. He commented:

The slope of the hillside was generally very steep, extending far up to the foot of the cliffs. The nicely balanced natural forces that operated to resist the powerful action of gravity and which had been sufficient to hold the conglomerated and loosely connected masses in place as years and centuries passed were no longer able to hold the conditions against the disturbing effects of gunpowder explosions and against the action of wintry elements, water, frost, and thaws on the suddenly disturbed and loosened material.¹³

Rock slides had occurred in the gorge long before the coming of the railroad, depositing debris, rocks, and boulders along the shores of the New River, some of which proved to be major obstacles to construction of the rail right-of-way. One giant boulder, for instance, lodged in the path of the proposed rail line about one mile east of present-day Fayette Station. This rock, dubbed "Whitcomb's Boulder," was a huge chunk of sandstone, similar to the thick bed that forms the top of the gorge at Nuttall and which gradually dips toward Gauley. A Chesapeake and Ohio booklet published in 1885 told its story:

Among the many evidences of the difficulties with which the constructors of the ...Railway had to cope, this huge mass of rock stands like a monument. This immense fragment had rolled down to its present resting place, and was a veritable mountain of obstruction immediately on the only practicable route for the railroad; too big to remove, and it being impossible to go around it, the difficulty was solved by cutting and blasting into its side, making a veritable half tunnel, and the passing train goes partly under the rock.¹⁴

As the height and weight of railroad equipment increased, more material was blasted from the face of the rock to permit safe clearances, but the large boulder close to the tracks

12. Quoted in *ibid.*, p. 28.

13. Quoted in *ibid.*, pp. 28,30.

14. Quoted in *ibid.*, pp. 32-33.

continued to symbolize the tremendous undertaking of constructing the railroad through the gorge.

Given the difficulties of construction through the gorge, work fell behind schedule, and at times workers were in short supply. Nevertheless, by driving work crews around the clock and passing unfinished excavations the connecting rails were laid January 29, 1873, thus completing the 419.3-mile rail line extending from Richmond, Virginia, to the Ohio River at Huntington, West Virginia. The meeting point for the last spike was the bridge at Hawk's Nest, about three miles east of the present U.S. 19 New River Bridge. The Chesapeake and Ohio brought a special trainload of officials and dignitaries to drive the last spike. The special train carrying President Wickham proceeded westward to Charleston and Huntington. At Charleston speeches and a large fireworks display celebrated the event, and at Huntington a barrel of James River water brought from Richmond was poured into the Ohio, thus symbolizing the union of the two waters via railway connection.¹⁵

Construction crews were kept on to complete the remaining cuts and remove slides. The railroad was not officially opened for business until March 1873, and operations continued on an irregular basis into the summer. It was not until September that the rail line was turned over to the company's transportation division for operation. Construction of the Chesapeake and Ohio was costly. While engineers for the earlier Covington and Ohio had estimated the cost of their proposed line to be some \$11,000,000, the original Chesapeake and Ohio engineering estimates had projected lower figures. Actual cost of the C & O, however, turned out to be \$23,394,263.¹⁶

Aside from the Baltimore and Ohio Railroad, which ran to the northwest across northern West Virginia, the Chesapeake and Ohio when built was the only trunk line in the state. Its construction through the rugged New River Gorge resulted in the establishment of Hinton and Thurmond as railroad towns and opened for development the entire New River Gorge region.

Construction of the Chesapeake and Ohio was timely. Nationwide, the demand for coal was growing at an exponential rate as America's prime source of fuel to power its industry and railroads and heat its homes. The interdependence between the railroad and coal cannot be overestimated because steam was the prime mover and coal the fuel which stoked the boilers of America's engines. The Quinnimont mines, under the supervision of Joseph L. Beury, shipped the first coal from the gorge in late 1873, and coal quickly became the dominant industry in the New River region. Rapid industrialization of the area changed the once isolated and largely pristine area into a grimy and bustling industrial region abounding with coal, coking, and timber operations. As industrial operations prospered, a corresponding rise in population occurred, resulting in an extensive array of coal mines and company towns, coking establishments, and lumber camps, and a society unusual for its cultural diversity in a remote area.

15. Peters and Carden, *History of Fayette County*, p. 245.

16. Bias, "Completion of the Chesapeake and Ohio Railroad to the Ohio River," p. 400, and Peters and Carden, *History of Fayette County*, pp. 245-46.

Operation of the C & O Railroad. Despite its impact on the New River region the Chesapeake and Ohio's early operations were troubled. The railroad was completed just as the nation was entering an economic depression generally known as the Panic of 1873. Early coal production was relatively light as it took a period of time for the hitherto untapped New River coal field to be developed. Coal markets were also slow in developing, and limited capital plagued the coal industry for more than a decade. During the 1870s local passenger service needs were light as evidenced by a condensed C & O timetable for 1876 that listed only three passenger stops in the gorge at Hinton, Quinnimont, and Hawk's Nest.¹⁷ Only a few freight trains operated during the 1870s, and vandalism apparently undermined early rail operations. With heavy debts and serious cash flow problems, the Chesapeake and Ohio fell into a three-year receivership during the mid-1870s.

Although coal was seen as a potential future commodity to enhance the financial prospects of the railroad, much of its early freight consisted of lumber and agricultural products, such as hay, corn, potatoes, bacon, butter, and wool. Chesapeake and Ohio management, having unclear and somewhat ambivalent expectations and objectives for the railroad in the New River region, did little initially to develop the coal resources in the New River field that would later prove the principal source of the railroad's financial strength.¹⁸

Nevertheless, shipments of coal over the C & O Railroad increased from 135,906 tons in 1874 to 230,444 tons in 1875. Most of the coal went to the James River wharves for the eastern coastal trade. Virginians began to switch from wood to coal for heating, and local retail dealers along the line began to stock large supplies. The C & O used considerable quantities of coal itself, and other railroads in Virginia, belatedly switching from wood-burning locomotives, began to purchase C & O coal. By 1876 twenty-five mines were operating along the road.

That same year the C & O established a coal marketing organization in New York and required all mines shipping to tidewater to sell to the C & O Coal Agency. Mines in the New River field, with no access to river shipping and western markets, had no choice but to accept the C & O's terms. The sales agency bought the coal at the mines and received favorable shipping rates from the railroad. Profits were divided between the coal agency and the railroad.

By 1881 coal companies along the C & O were shipping to eastern cities such as Portland, Boston, New York, Philadelphia, Baltimore, and Washington. Along the line at such cities as Lynchburg, Danville, Farmville, Richmond, and Norfolk, retail agents bought coal. By trans-shipment arrangements with other railroads, C & O coal entered southern markets at Charlotte, Raleigh, and Atlanta. Southern railroad customers included Elizabethton, Lexington, and Big Sandy; Kentucky Central; Richmond and Allegheny; Shenandoah Valley; Virginia Midlands; and Richmond, Fredericksburg, and Potomac.

17. Chesapeake and Ohio Railroad, *Condensed Timetable*, 1876, quoted in Institute for the History of Technology and Industrial Archaeology, West Virginia University, *New River Gorge National River, Thurmond Passenger Depot and Offices, Historic Structure Report*, by Billy Joe Peyton et al., August 1991, p. 35.

18. Bias, "Completion of the Chesapeake and Ohio Railroad to the Ohio River," pp. 401-03.

Another of the hindrances in the development of the seaboard trade was removed in May 1882 when the C & O completed an extension to Newport News, providing a needed deepwater port. Thereafter, heavy-draft steamers with greater tonnage capacities began to replace the sailing schooners in the coal-carrying trade, and ocean-going vessels steamed into Hampton Roads to replenish their bunkers.

Throughout the 1870s, however, New River coal remained of minor significance in national markets. Mining operations remained small, and the fortunes of the C & O were subordinated to Huntington's greater goal of constructing a southern transcontinental line linking his Southern Pacific Railroad in California with the eastern seaboard. Less concerned with developing freight revenue than with constructing and occupying a strategic route, Huntington and the C & O failed to keep pace with the expanding potential of the new coal field, lagging far behind in meeting operators' demands for more coal cars, loading equipment, trackage for sidings at the mines, and branch or feeder lines.

Huntington stuck doggedly to his original design. Walking a thin line between bankruptcy and solvency, he risked large blocks of stock and his personal credit to finance construction of new lines and purchase of old ones, always with the goal of creating a continuous line from Los Angeles to Newport News. By 1884 his combination east of the Mississippi ran from New Orleans to Louisville and across Kentucky to a junction with the C & O at Huntington. He secured control of the Kentucky Central, providing the C & O access to Cincinnati. Many of the properties of the New Orleans to Newport News line had been starved to capital and were in poor physical condition. Moreover, the route was too circuitous to be competitive. Freight from the west arriving in New Orleans could be moved eastward more cheaply by water. Recognizing the failure of his dream, Huntington eventually abandoned his eastern roads. The Chesapeake and Ohio defaulted on its bonded debt in 1887, and shortly thereafter Huntington sold his stock to a Drexel-Morgan syndicate. Under the new management, the C & O's career as a leading coal carrier began in earnest.¹⁹

During the presidency of M.E. Ingalls from 1888 to 1900, the Chesapeake and Ohio took steps to build up its coal traffic. Although still hampered by its past financial difficulties and burdened by the economic downturn known as the Panic of 1893, the C & O began construction of branch rail lines extending up the tributaries and valleys from its mainline along the New River to tap outlying coal deposits. Thus the C & O promoted extensive development of the New River coal field and enhanced its profitability as a leading coal carrier in the eastern United States.

By the early 1900s the C & O was "essentially a coal road." In his *The Kanawha and New River Fields of West Virginia, U.S.A.*, Neil Robinson observed in 1904:

52.89% of the entire freight movement over its 1,641 miles of track during the year ending June 30, 1904, was represented by the coal and coke production originating on the line. Extensive piers have been erected at Newport News for loading coal destined to coast and foreign ports. Connections are made at Richmond, Charlottesville, Basic and Lynchburg for Eastern and Southern States; at Gauley Junction for the interior of Ohio, Toledo, and Detroit; at Ashland for

19. Thomas, "Coal Country," pp. 66-70.

points reached by the Detroit Southern; and from the company's terminals at Louisville and Cincinnati shipments are made to the West over all of the roads entering those cities.

The commodity from which a trunk line derives its principal revenue naturally receives the greatest consideration from the management; and if consumers and dealers in distant States are interested in the coals and cokes of the Kanawha and New River districts they are assured of an active interest on the part of the railway company in undertaking a suitable adjustment of freight rates. The home consumption amounts to a very small percentage of the annual output, and special care is therefore given to business originating beyond the boundaries of West Virginia.

During September of that year more than 67,000 tons of coal per day were shipped over the C & O from the Kanawha and New River fields.²⁰

Coal, while the prime source of revenue for the C & O Railroad, was not the sole moneymaker for the line. Since the railroad was the only efficient and economical mode of transportation in and out of the region as well as between the boom towns in the gorge, it carried considerable amounts of timber and agricultural products and passengers. For instance, the C & O Railroad's *Industrial Guide and Shipper's Directory* of 1906 shows some 36 stations between Hinton and Hawk's Nest.²¹

Although many factors have helped shape the New River region's fortunes, none has proven so significant as the coming of the railroad and the subsequent exploitation of the coal reserves along its route. In 1927, a typical year, the C & O's total revenue tonnage was 82.55 percent coal. Aside from the World War II years, this ratio held fairly steady through the end of the steam era. Thus, the railroad and coal industries were interdependent, because steam was the prime mover and coal the fuel that stoked the boilers of America's engines.²²

Between the 1870s and the 1930s the New River Gorge was a bustling industrial region abounding with coal, coking, and lumber operations. Dozens of boom towns sprang to life virtually overnight. Development stretched up the tributaries of the New River, following spur lines built to tap outlying coal deposits. An extensive network of rail corridors and branch lines linked the region, with coal, freight, and passengers a regular sight.

The New River region's rapid rise to industrial prominence, in part as a result of the coming of the railroad, was followed by a period of swift decline. Following World War I a series of changes hit the region, diminishing the role of the railroad to a fraction of what it had been in earlier times. A paved road network was developed, bus lines were established, and private automobiles became increasingly available. The coal company towns began to disappear as these developments took place because miners no longer

20. Robinson, *The Kanawha and New River Coal Fields of West Virginia*, pp. 18-19.

21. Chesapeake and Ohio Railway Company, *Official Industrial Guide and Shipper's Directory* (General Freight Department, 1906), quoted in Institute for the History of Technology and Industrial Archaeology, *Thurmond Passenger Depot*, p. 35.

22. Institute for the History of Technology and Industrial Archaeology, *Thurmond Passenger Depot*, p. 35.

needed to live within walking distance of the mines. In place of company operated stores a modest private enterprise began to supply goods and services to the local population. The overall result of these changes was a growing outmigration to the surrounding plateau. Thus, the C & O mainline and its branches became less important to the transportation needs of the region. The declining significance of the railroad in the region would be exacerbated by declining coal production during subsequent decades.

The watershed for the railroad industry, however, came in the 1950s when dieselization, like mine mechanization, eliminated thousands of jobs. Railroaders were displaced by diesel technology, with its engines more economical and easier to operate. Diesels were capable of traveling long distances without costly and extensive repairs and were many times more fuel efficient. Diesels saved the C & O Railroad 28 percent in operating costs in 1955, which translated to a savings of some \$25,000,000.²³

Dieselization rendered obsolete such traditionally-skilled workers as machinists, pipefitters, boilermakers, and blacksmiths and changed the face of railroading in America, the end result being a massively scaled-down work force. The layoffs and early retirements common during the transitional years were felt in towns up and down the C & O line. Larger towns with a more diversified economy, such as Clifton Forge, Virginia, and Huntington, West Virginia, fared better than smaller settlements, such as Hinton and Thurmond, whose economy was almost entirely dependent on the railroad. For railroad towns like Hinton and Thurmond, the change from steam to diesel ended an era.²⁴

Short Rail Lines and C & O Branch Lines in the New River Gorge Region. Although the C & O Railroad did not begin construction of its first branch line in the New River region until 1890, the earliest short rail line off the railway's main trunk was built in 1873. This short feeder line was constructed one and one half miles up Laurel Creek by the Low Moor Iron Company for its furnace at Quinnimont. After 1890, however, major branch lines were built wherever there was access off the main trunk to coal deposits. Some branch lines were constructed by the Chesapeake and Ohio, while others were taken over by the railroad after their completion by coal operators. Other branch lines were jointly owned and/or operated. Some branches were constructed as independent competitors with the C & O, but were eventually absorbed by the railroad, while at least one short line retained its independence.

The Chesapeake and Ohio's interest in constructing and acquiring branch lines was undoubtedly stimulated by the potential for lucrative profits as well as the appearance of rival railroads in southern West Virginia. The Norfolk and Western became a major coal carrier in the 1880s and 1890s, connecting the Pocahontas and Flat Top coal fields to the eastern seaboard at Norfolk. The Virginian became a formidable competitor of both the Chesapeake and Ohio and the Norfolk and Western during the early 1900s when its lines connected the New River, Winding Gulf, and Logan (or Guyandotte) coal fields to Norfolk. Unlike Chesapeake and Ohio management, both competing railroads saw the potential of lucrative profits from transporting coal and undertook from the start to

23. "What Makes C & O Grow?", *Tracks*, XLI (April 1956), p. 6.

24. Institute for the History of Technology and Industrial Archaeology, *Thurmond Passenger Depot*, pp. 35-38.

control coal lands and promote development of the coal industry in southern West Virginia.

A number of short rail lines and branch lines off the Chesapeake and Ohio main trunk were constructed across lands within or near the present-day authorized boundaries of New River Gorge National River. These lines include:

Gauley Subdivision — The Gauley Branch was constructed by the C & O board of directors in 1893-94. The line extended eight miles from Gauley Station, crossing the New River at the Narrows about one mile above the mouth of the Gauley, to and up the south side of the Gauley River to a point opposite the mouth of 20-mile Creek. From the latter location the Open Fork Subdivision was constructed to Caterboro in 1904 and the Gauley and Rich Creek Subdivision in 1916. In 1913 the C & O acquired the capital stock of the Gauley and Meadow River Railroad, which ran from Rich Creek Junction up the south side of the Gauley River for some three miles. In 1916 the C & O began construction of a branch on this extension some five and one half miles to Agnew.

Hawk's Nest Subdivision — This branch, a standard gauge railway, was constructed by the C & O in 1890. It extended some 3.4 miles eastward along Mill Creek from Hawk's Nest to the mines of the Gauley Mountain Coal Company at Ansted, traversing a rise in elevation of more than 600 feet by a continuous heavy grade, the maximum being an almost steady 4.2 percent grade.

Kenneys Creek Subdivision — In 1891 an agreement was made between John Nuttall and the C & O for the construction by the former of a railroad from Nuttall Station on the mainline to his tract of 25,000 acres of coal land. The C & O agreed to take the road after completion and charge standard transport rates with a reasonable added charge for service on the branch. The line was completed some five miles to Tothwell in 1893 and extended an additional two miles to Lookout in 1904. From the mouth of Kenneys Creek, where the branch met the C & O mainline, to Lookout, the actual distance is four miles, but the additional length was necessary because of a long switchback northeastward from Kenneys Creek along the steep east wall of the gorge. The switchback attained the elevation needed to overcome the rapid fall in Kenneys Creek in the lower one-and-one-half miles of its course.

Southside Subdivision — This branch, extending from the south side of the New River opposite Thurmond (Southside Junction) to Bridge Junction at the south end of the mainline bridge near Sewall, was completed in 1894 by the C & O as part of its strategy to prevent the Norfolk and Western from building further down the New River from Glen Lyn, Virginia, a town on the Virginia-West Virginia border. Prior to construction of this 12.6-mile rail line, the C & O built a bridge over the New River at Thurmond in 1888-89, enabling an early section of this branch from Arbuckle Creek to connect with the C & O mainline at Thurmond. Some five miles of this branch became part of the south mainline after the mainline bridge was built near Sewall in 1907.

Loup Creek Subdivision — The branch up Loup Creek (often called Dunloup Creek to distinguish it from another Loup Creek) extended from Southside Junction opposite Thurmond to Glen Jean and on to Macdonald (Mt. Hope) some 11 miles distant. It was completed by the C & O in 1893-94.

Kanawha, Glen Jean & Eastern Railroad — This railroad, constructed in 1913 by coal operator William McKell of Glen Jean, extended southward from Glen Jean on the Loop Creek Branch of the C & O to Macdonald. It had a short branch line extending southward from Macdonald to Tamroy at the head of Dunloup Creek in Raleigh County. Its total length, including the Raleigh County extension, was some 15 miles. Angered by the C & O freight rates, McKell extended the railroad through a tunnel to a connection with the Virginian Railway at Pax in 1915. Some years later, in 1940, the railroad was acquired by the C & O.

Manns Creek Railroad — The Manns Creek Railroad, a three-foot gauge rail line constructed in 1886, extended from Sewall on the C & O mainline eastward along Manns Creek to Clifftop, some eight and one half miles distant. In Manns Creek Canyon many places required blasting away cliffs for 10 to 20 feet and the construction of rock retaining walls. To gain further elevation the roadbed followed the Glade Creek ravine away from Manns Creek for nearly a mile, before crossing 35 feet above Glade Creek on a spectacular 224-foot-long framed timber trestle that nearly doubled back on itself. The railroad, which was later extended an additional three miles to Landisburg, was owned and operated by the Babcock Coal & Coke Company. It served the firm's coal mines at Clifftop, coke ovens at Sewall, and sawmill and planing mills at Landisburg. The old roadbed of the rail line now serves as a county road through Babcock State Park.

White Oak Railway — This railroad, constructed between 1902 and 1906, extended northward some 10.3 miles from White Oak Junction on the Loup Creek Subdivision of the C & O to Lochgelly. In 1912, the C & O and the Virginian jointly leased the railroad, which then served as the White Oak Branch of the former connecting with its Loup Creek Subdivision at White Oak Junction, one-half mile from Glen Jean.

Rend Branch — The Rend Branch, constructed by W.P. Rend between 1901 and 1904 and conveyed by him to the C & O in the latter year, extended some 4.6 miles westward from a connection with the Loup Creek Subdivision at the end of the bridge opposite Thurmond along Arbuckle Creek to Minden. The rail line involved a switchback on Dunloup Creek, a parallel stream about one mile east of Arbuckle Creek, thus gaining several hundred feet for the approach to Minden, location of the largest coal mine on Arbuckle Creek. The old roadbed presently serves as the Thurmond-Minden Trail (one segment of the Mary Draper Ingles Trail) in New River Gorge National River.

Piney Creek Subdivision — The Piney Creek Subdivision, which included a bridge over the New River just west of Prince and a railway extending some 13 miles up Piney Creek to Raleigh, was completed in 1901. Within several years the line had been extended as additional 14 miles to Lester and Sullivan. The 6.69-mile portion of this short line between Beckley Junction and Prosperity, operated by the Piney River and Paint Creek Railway, was acquired by the C & O and after 1918 operated jointly by the C & O and the Virginian.

Laurel Creek Branch — In 1873 the Low Moor Iron Company constructed a 1.5-mile rail line up Laurel Creek from the C & O mainline at Quinnimont to its mines above the river. In 1890 the branch was extended some 4.8 miles to tap the coal mining operations at Brownwood. In 1899 the C & O took over operation of the railroad when its owner, the Quinnimont Coal Company, went into receivership. The latter resumed operation of the railroad in 1902, extending the line to Layland by 1904. Upon its completion the rail line was conveyed to the C & O which began operation of the road as its Laurel Creek Branch in 1905. This branch was some 6.3 miles in length, ascending more than 900 feet by a continuous grade which attained a maximum rate of 3.87 percent.

Glade Creek & Raleigh Railroad — This road, constructed primarily for transportation of lumber, was built by the Blue Jay Lumber Company about 1898. A three-foot narrow gauge rail line, it extended up Glade Creek some 13 miles from a connection with the C & O at Glade Station. Much of the rail line was acquired by the Raleigh and South Western Railway in 1906 and thereafter by the C & O in 1910.

Sewell Valley Railroad — The Sewell Valley Railroad, which later became part of the Nicholas, Fayette & Greenbrier Railroad, was controlled by the Meadow River Lumber Company at the time of its incorporation in 1907. The railroad extended from Meadow Creek Station on the C & O mainline northeastward along Meadow Creek and Sewell Creek to Rainelle. The railroad, which served the lumber mills at Rainelle, Honey Dew, and Nallen, was acquired by the C & O in 1927, one year prior to establishment of the Nicholas, Fayette & Greenbrier Railroad. The latter railroad was jointly owned and operated by the C & O and New York Central following acquisition and consolidation of the Sewell Valley Railroad and several other short lines.²⁵

Development of Railroad Towns in the New River Gorge Region. With the coming of the C & O Railroad to the New River Gorge region five principal towns having a direct relationship to the railroad industry were established in the area. These towns — Hinton, Thurmond, Quinnimont, Prince, and Fayette/South Fayette — became notable not only as railroad shipping points but also as settlements having significant railyard operations and structural elements embodying a distinctive style of industrial railroad architecture, featuring Victorian-style board and batten framed structures.

Aside from these five towns there were numerous other locations along the Chesapeake and Ohio mainline in the gorge where railroad-related structures were constructed. The aforementioned distinctive architectural style was employed by the Chesapeake and Ohio for stations, depots, signal stations, employee residences, and other structures associated with operation and maintenance of the mainline. Many coal settlements had a railroad depot along the C & O tracks, but some depots along the right-of-way were located where there were no houses, mines, or other developments. The depot at South Fayette Station was an example of such railroad-related construction.

25. Huddleston, *Riding that New River Train*, pp. 71-91; Dixon, *Chesapeake & Ohio: Superpower to Diesels*, p. 66; Lane and Schnepf, *Sewall*, pp. 9,12; Peters and Carden, *History of Fayette County*, pp. 243-49; and P.E. Gallagher, *Map and Directory of the New River Coal Field, Fayette and Raleigh Counties, West Virginia* (Norfolk, Virginia, Tidewater Publishing Company, 1906).

Other railroad structures built where there were no other developments were necessitated by the system designed to control train movements over busy lines around the end of the 19th century. The "block system," as it was called, replaced the original "time interval" system which had been based solely on timetables and train orders. In the "block system" each division was divided into a number of short sections or "blocks." The manually-controlled system, first set up on the New River Subdivision from Hinton to Handley, required a signal tower beside the track at the beginning of each block with a man, known as an operator, in charge of the signal for that section. The towers were operated 24 hours daily. Because his tower was connected by telephone or telegraph with the next block office, each operator could control entry to his own block, thus helping to assure safety of operations. Later, the signals would be operated by the trains with each rail having an electric track circuit, thus eliminating the need for an operator to oversee personally that particular block. The "block system" became practical along the New River Subdivision especially after 1907 when the mainline was double tracked with the exception of Stretchers Neck Tunnel and the Narrows between Cotton Hill and Gauley. Some 22 blocks were established between Hinton and Hawk's Nest as part of the original "block system" on the New River Subdivision.

Further automation of rail operations on the New River Subdivision came in the 1950s with installation of the centralized traffic control system permitting remote control of switch throwing. This system, together with longer trains, allowed for considerably more traffic than did the "block system." Thus, by the 1970s segments of the New River Subdivision became single track again, including the Stretchers Neck Tunnel which had been double-tracked in 1934.

The early "block system" required numerous operators. Structures housing the operators were built near the section of tracks for which the operators were responsible. Often these structures were separated far from railway depots.

At some towns in New River Gorge the depots were utilized for passenger and freight as well as train operations. Examples of such combination structures were built at Fire Creek and Stone Cliff in 1894. The depots at these towns were more imposing structures than elsewhere because a standard small depot design was combined with an octagonal tower, or cupola, atop it.

The historical development of Hinton, Thurmond, Quinnimont, Prince, and Fayette/South Fayette, demonstrates, in part, the impact of the railroad industry on the New River Gorge region. While these towns possess examples of railroad architecture, they also exemplify the ways in which the railroad industry influenced the historical demographic and socioeconomic patterns of the area.

Hinton — Hinton, the principal town and county seat of Summers County, became the most significant settlement along the C & O Railroad between Charleston and the Virginia-West Virginia state line after its selection by the railway as a division headquarters and a major switching yard and maintenance complex. The town, located on the C & O mainline on a terrace on the east bank of the New River, lies some two miles below the mouth of the Greenbrier River and just south of present-day New River Gorge National River. The railroad determined that the accessibility of the Hinton town site relative to the New River and nearby Greenbrier and Bluestone river valleys and its

location with respect to potential industrial growth as a result of the expanding coal and timber operations in the region made it an ideal spot for a major railway operations center.

Although Isaac Ballengee had settled in the Hinton vicinity in the late 18th century, only six families lived in the area when the railroad was completed through the gorge in 1873. The C & O Railroad acquired the future site of Hinton at public auction in 1871, conveying all of the property except what it needed for railroad operations and five other lots to the Central Land Company, thus laying the groundwork for the development of the town. The company laid out the town site into 178 lots which were sold beginning in 1874. The next several years witnessed a rapid rise in population and increasing commercial establishment in the town as the railroad and developing coal and timber industries contributed to a remarkable change in the hitherto rural landscape of the New River Gorge region. Hinton, where the Summers County Courthouse was constructed in 1875, was incorporated in 1880; and its early years of incorporated history witnessed the development of city government facilities and services, including construction of a city hall, jail, and water system.

The C & O Railroad shops and railyard at Hinton were completed on the narrow shelf of land between the New River and the hills to the north on August 1, 1892. The railyard, which underwent several upgrades during its first several decades of operation, included a coaling station, turntable, machine shop, powerhouse, roundhouse with 17 engine stalls, rail car repair shop holding 40 cars, and ancillary structures. By the mid-1920s the roundhouse employed 370 men, of which 225 were classified as skilled workmen, and the car shop employed 107 skilled craftsmen. The first railway passenger station in Hinton was a one-story frame building constructed immediately opposite the town ferry. In 1900 this structure was converted into a freight depot, and a large brick depot and office building was constructed. Near the site of the future depot the C & O constructed a large Young Men's Christian Association building, one of the earliest such structures in the nation, in 1891.

Operationally, Hinton served a central role in railroading operations on the New River Subdivision. The railyard provided facilities where locomotives used on the subdivision to the west, which were generally lighter, could be changed for the heavier and more powerful engines used for the Allegheny grades to the east. Long trains of empty coal cars were dispatched west from Hinton to Handley, with manifests extending to Russell. Conversely, loaded coal trains, originating west of Handley, moved east to Hinton. The job of supplying rail transportation to the mines along the New River was complex, because some coal from the area moved east and some west. Nevertheless, all the trains that carried coal out of the New River coal field originated either at Hinton or Handley, with "set offs" and "pick ups" being made along the way at such places as Meadow Creek, Quinnimont, Thurmond, Sewall, and Gauley.²⁶

Industrial and commercial activity, fueled by railroad operations and expansion, led to accelerated population growth, challenging the Hinton government with the task of providing facilities and services to its growing population. A tremendous building boom

26. Huddleston, *Riding that New River Train*, p. 99.

boom ended during the nationwide economic downturn in 1907-08, although several notable structures were built in subsequent years. The population of Hinton was about 6,000 in 1907, but the town grew to 8,800 by 1925.

The coal and lumber industries in the New River Gorge region kept the trains rolling and the economy of Hinton stable. The changeover from steam to diesel power for railroad locomotives as well as the declining production of the New River coal field in the 1950s led to massive layoffs of railway personnel at Hinton, and the population and economy of the town declined.

In 1984 the Hinton Historic District, consisting of numerous structures dating from the 1870s to the early 1900s, was listed in the National Register of Historic Places in recognition of its significance as a commercial and industrial center. The architecture of the historic district is significant because its industrial and commercial buildings are representative of the major building booms which occurred during the last two decades of the 19th century and the first two decades of the 20th century, and its residential architecture represents a mix of traditional vernacular forms, American Four-Square, eclectic Victorian, and Classical Revival styles.²⁷

Thurmond — Located in the northern portion of New River Gorge National River, Thurmond has a significant history as one of the key railroad centers for shipping "smokeless" coal on the C & O Railroad during the late 19th and early 20th centuries. At the peak of activity in this remote community, as many as 200 railroaders worked in the offices, railyard, and engine repair house, and Thurmond generated millions of dollars in freight and revenue annually. Although the town declined as a railroad hub with the introduction of diesel technology, it retains much of its historic character and reflects the period of its prominence. In addition, Thurmond contains the only remaining major intact railroad resources within the national river; the railroad yard in the town still contains the depot, sidings, and many of the yard structures from the historic era. In addition, extant commercial structures in the town reflect the significance of Thurmond as a thriving business center during the heyday of coal mining and railroad operations in New River Gorge from the 1870s to the 1930s.

The presence of the C & O Railroad in New River Gorge promoted establishment and growth of coal and lumber operations, all of which relied on the railroad for transportation and shipping access. The railyard operations at Thurmond were the key to the railroad's success in the New River coal field. The town was in an advantageous position because it could be reached by bridge from the west side of the gorge, enabling coal cars to be brought directly down Arbuckle and Dunloup creeks through Southside Junction and straight into town, where they could be attached to C & O trains on the mainline.

27. U.S. Department of the Interior, National Park Service, National Register of Historic Places Inventory — Nomination Form, "Hinton Historic District," prepared by Paul D. Marshall, September 30, 1983. For further information on the history of Hinton see Paul D. Marshall & Associates, Inc., *Hinton Historic & Architectural Survey* (Charleston, West Virginia, September 30, 1983), pp. 1-58; Paul D. Marshall, "Hinton Historical District," *Proceedings, New River Symposium*, 1984, pp. 85-90; Huddleston, *Riding That New River Train*, pp. 95,98-99; and David B. Reger and Paul H. Price, *West Virginia Geological Survey: Mercer, Monroe, and Summers Counties* (Wheeling, West Virginia, Wheeling News Lith. Co., 1926), pp. 52-53.

The town of Thurmond was named for William Dabney Thurmond, a native of Virginia who had moved to Fayette County in 1842 and acquired a 73-acre tract of property on the east side of the New River in 1873, the year the C & O Railroad completed its mainline through the New River Gorge. A single house stood on the site when the triple-span iron truss railroad bridge was constructed in 1888-89 just east of Thurmond's property, providing access to the coal-rich west side of the river. Later in 1889 the first branch line was opened from the Thurmond Coal Company mine near Arbuckle Creek, thus setting the stage for a permanent C & O presence at this important crossroads of river and rail.

As the first loads of New River coal rolled into Thurmond in 1889, construction commenced on the assembly yards at the bustling town site. Clerical, technical, and supervisory personnel descended on the emerging town to launch Thurmond's boom era while immigrants and blacks manned the labor crews. To meet the lodging needs of the railroad personnel, Thurmond's family began to construct houses near the tracks and on the slopes behind the town. In total, more than 30 dwellings were constructed, the structures ranging in size from four to ten rooms.

Thurmond had 175 residents by 1898, and several years later it boasted a Western Union and Adams Express office, a telephone exchange and district offices of the Chesapeake and Potomac Telephone Company, two general stores, offices of two coal companies, a restaurant, drug store, saloon, two milliners, a law office, wholesale distributor, shoemaker, jeweler, photographer, meat processing plant, field office for the notorious Baldwin-Felts Detective Agency, and a three-story, 35-room brick hotel. In 1911 the town constructed a jail.

Thurmond's west side grew quickly after the Dun Glen Hotel, a 4-1/2-story, 100-room showplace, was opened in 1901 by coal baron Thomas G. McKell. This hostelry, connected to the railroad bridge by a viaduct, served as the social center of Thurmond and the New River Gorge until it was destroyed by fire in 1930. Coal operators, railroad executives, and others transacting business in the gorge stayed at the Dun Glen, while locals flocked to it for dances and social gatherings. Gambling, violence, and illicit sex flourished in the McKell saloons, while the town of Thurmond, which was incorporated in 1903, remained "respectable" under William Thurmond's control. That same year McKell incorporated the west side of the river, known as Southside Junction, as part of his coal town Glen Jean.

A small community of blacks developed in the Dun Glen area over the years, and they established a literary society that held meetings in the employees' living quarters of the Dun Glen Hotel. The success of the literary society led to organization of a Sunday School and then a church by 1914. After outgrowing its limited quarters in the Dun Glen, the black church moved its meetings across the river to a rooming house in Thurmond. Around 1918 the blacks' church services were moved back across the river to a school building near the Dun Glen Hotel. With the help of McKell they were provided a piece of ground near the hotel in the early 1920s on which they erected a church structure, generally referred to as the Southside Junction Black Church.²⁸

28. For more data on the history of this black church see Interview of Rev. Steward H. Frazier by Paul J. Nyden, November 12, 1980, New River Gorge National River, Oral History, Vols. 20-22, Tape 22, pp. 23-24.

The central business district of Thurmond began in 1904 with construction of the Mankin-Cox Building. The Goodwin-Kincaid Building was completed two years later, and with construction of the four-story building that later housed the National Bank of Thurmond, the town's commercial block was complete.²⁹

In 1889 the C & O Railroad constructed a four-track railyard operation at Thurmond. During the next several decades the railyard was expanded and a variety of structures were built, making it one of the principal rail operations centers throughout the entire C & O system. The structures included passenger and freight depots, turntables, water columns, towers, and tanks, an engine repair shop, a sand tower, sand drying house, and sanding station, offices and warehouses, switches for both the east and west yards, a coal tower and coaling station, a bunkhouse, and numerous sheds and support structures.

In 1904 Thurmond was fourth on the entire C & O line in total revenue receipts. By 1910 it was first, producing \$4,878,607 in freight and passenger revenue (4,283,641 tons of freight and 76,541 passengers). In contrast, Cincinnati's total revenue that year was \$1,816,392, Richmond earned less than \$500,000, and Charleston \$172,488. The entire C & O system in 1910 earned \$24,901,200 in revenue, nearly 20 percent of which was produced by Thurmond. The Hinton Division accounted for \$10,896,765 of that total, of which sum Thurmond was responsible for 45 percent. In 1911 Thurmond was first on the C & O line in revenue with 3,697,277 tons of freight shipped, and in 1913 it produced eight times as much revenue as Richmond and twice that of Cincinnati. These statistics demonstrate that New River coal was the lifeblood of the Chesapeake and Ohio and that Thurmond was the heart that kept the railway circulating.

Between 1910 and 1930 railroad activity at Thurmond was at its peak, with as many as 200 railroaders working three 8-hour shifts in the yards. At the height of its activity 20 passenger trains arrived and departed daily at Thurmond. By 1930 the population of the town reached 450.

Thurmond's significance as a revenue producer for the C & O declined during the 1930s because of mechanization, the Great Depression, and various other factors. This decline was accompanied by the closing of commercial services and the burning of the Dun Glen Hotel in 1930. Not until diesel replaced steam engines, however, did Thurmond completely lose its importance as a center for railroad operations. Because it was the world's largest hauler of coal, the C & O held on to steam longer than any other railroad. Finally, in 1949, the company ordered 146 diesel engines. When the last steam engine was retired in the New River Gorge during the 1950s, the era of steam power ended and the railroad town of Thurmond fell into disuse and deterioration.³⁰

29. For more data on the Thurmond commercial block see U.S. Department of the Interior, National Park Service, *Historic Structure Report, Thurmond Commercial Buildings, New River Gorge National River, West Virginia*, by Sally Small, Louis Torres, and Larry Reynolds, August 1992, pp. 7-27.

30. Historic American Engineering Record, *Chesapeake and Ohio Railroad: Thurmond Yards*, HAER No. WV-42, by Billy Joe Peyton, 1988, pp. 8-19; Institute for the History of Technology and Industrial Archaeology, *Thurmond Passenger Depot*, pp. 20-61; and U. S. Department of the Interior, National Park Service, *Development Concept Plan/Interpretive Prospectus, Thurmond, New River Gorge National River, West Virginia*, September 1992, pp. 3, 9-10. Other sources to be consulted include: *Fayette Journal, Special Edition, Historical, Industrial* November 2, 1911, pp. 66-67; Walter R. Thurmond, "The Town of Thurmond, 1884-1961," West Virginia Collection, Colson Hall, West Virginia University, Morgantown; Walter Robert Thurmond

In 1984 the Thurmond Historic District was listed in the National Register of Historic Places. According to the nomination form, the town was significant

for its extraordinary commercial vitality in the early twentieth century in spite of extreme inaccessibility. For thirty-five years, Thurmond, located in the heart of the New River Gorge, was inaccessible except by railroad. Yet as the chief railroad center on the Chesapeake and Ohio (C&O) Railroad serving portions of the fabled coal fields of southern West Virginia, Thurmond produced more tonnage and revenue than Cincinnati and Richmond combined. The town had not a single street, yet boasted two banks, two hotels and a thriving commercial block. Architecturally, the town is significant for its railroad architecture and for its vernacular worker housing and simple commercial buildings, not because they have great style or beauty, but for what they say about the thriving life in the West Virginia coal fields for some sixty years.³¹

Quinnimont — The town of Quinnimont, named from the Latin words for "five mountains" because of the five peaks visible from the river bottom where it lies, was founded in 1870 when the Quinnimont Charter Oak and Iron Company was established to build and operate an iron furnace at the site. In 1873 the operation was expanded by Joseph L. Beury to include coal production, and his mines were the first to ship coal from the New River Gorge over the recently completed C & O Railroad. The following year a post office was established at the town, and the C & O erected a depot.

During the 1890s and early 1900s the settlement, which was located along the C & O mainline, became the terminus and switching railyard facility for the Piney Creek and Laurel Creek branch lines. With the growth of Beckley as a regional trade center, up the Piney Branch, there were increasing numbers of refrigerator, box, tank, and hopper cars set off at Quinnimont. Lumber operations in the surrounding hills also contributed to the rail traffic passing through Quinnimont.

As railroad traffic increased through the area, the C & O developed a significant railyard operations center in the spacious wye at Quinnimont. Wye tracks were scarce along the New River because the lack of bottom land generally prohibited them. Within the symmetrical twin legs of the wye at Quinnimont, a railyard and supporting structures took shape beginning in the 1890s. On the mainline at the east end of the wye was the centerpiece of the layout — a two-story Victorian-style board and batten combination yardmaster and operator's office/signal tower that was constructed in 1896 and razed in the 1980s. Other structures built in the wye during the late 19th and early 20th centuries included a depot, depot annex, freight house, engine storage spurs, boiler house (which also served as a sandhouse), cab track, water tank, and switching tracks.

Witschey, "Smokin' Guns and Smokeless Coal, Thurmond, West Virginia, New River Boom Town," *Proceedings, New River Symposium*, 1983, pp. 9-13; Dale S. Earnest, "Thurmond, WV-My Boyhood Home Town," *Proceedings, New River Symposium*, 1986, pp. 77-85; Catherine L. Henderson, "Thurmond," *Wonderful West Virginia*, LII (December 1988), pp. 26-31; and Larry S. Richmond, "Thurmond Revisited," *Wonderful West Virginia* LIV (June 1990), pp. 20-23.

31. U.S. Department of the Interior, National Park Service, National Register of Historic Places — Nomination Form, "Thurmond Historic District," prepared by R. Eugene Harper, September 15, 1983.

By 1900 the population of Quinnimont had nearly reached 400, many of its residents working for the C & O Railroad and the two branch lines that intersected the mainline at the town. The settlement had several prosperous business enterprises, including ice and meat companies and a hotel. In 1909 the Quinnimont Baptist Church was established and served as a community church, being used at times by visiting ministers from other denominations. The town continued to prosper, and during World War I it was one of the busiest terminals in the C & O system. By 1919 the town had more than 500 residents. A tally kept by the C & O during a traffic study in 1928 found that on June 7 of that year 64 trains arrived, departed, or passed through Quinnimont.

After suffering the effects of the Great Depression during the 1930s, the Beury heirs sold their interests in the business enterprises at Quinnimont to the M. E. Crisp Lumber Company in 1944. This company ceased operations in 1953; and, with the decline in New River coal field production and the dieselization of the C & O Railroad locomotives, the once bustling railroad town declined as its residents were forced to seek employment elsewhere.³²

Prince — In 1870 two brothers, William and James Prince, purchased a 300-acre tract at the foot of Batoff Mountain. Shrewd businessmen, the brothers foresaw that the C & O Railroad, which was under construction, would have to purchase a right-of-way through the property. Before the railroad arrived, the Prince brothers erected a home and a grocery and dry goods store (which was entered in the National Register of Historic Places in 1986) in anticipation of the business coming with the arrival of the railroad. When the C & O bought the right-of-way, the Prince brothers included a stipulation that Prince would be a regular stop on the C & O mainline through the gorge. In 1880 the C & O erected a railroad station and telegraph office at Prince, and the first post office was established in 1889. Two years later the Royal Coal & Coke Company opened a mine at Royal on the west side of the New River and began moving coal across the river by an aerial hoist, dumping it into railroad cars at Prince.

Although the town never had more than 250 residents, the amount of freight and the number of passengers passing through the town made it a prosperous community. In 1900 a bridge was constructed across the New River near Prince, affording a connection between the Piney Branch Subdivision and the C & O mainline. Thus, Prince became an important link between the emerging regional trade center of Beckley and the C & O Railroad. The passenger station at Prince was replaced by new structures in 1916-17 and again in 1946, and its telegraph office was razed in the 1970s. The present station survives as the only manned station between Charlottesville, Virginia, and Charleston, West Virginia.³³

32. Bragg, *Window to the Past*, p. 102; Huddleston, *Riding that New River Train*, pp. 100-08; Peters and Carden, *History of Fayette County*, pp. 544-47; and Leona G. Brown, "Quinnimont: Going Back to a New River Town," *Goldenseal*, XVI (Fall 1990), pp. 23-29.

33. Bragg, *Window to the Past*, p. 102; Peters and Carden, *History of Fayette County*, pp. 544-47; Huddleston, *Riding that New River Train*, pp. 101-02; and U.S. Department of the Interior, National Park Service, National Register of Historic Places Inventory — Nomination Form, "Prince Brothers General Store," prepared by William E. Cox and Rodney S. Collins, January 29, 1986.

Fayette/South Fayette — Fayette and South Fayette, on the east and west sides of the New River, respectively, came into existence soon after the completion of the railroad through New River Gorge. Although both settlements began as mining camps, the towns owed much of their growth to the railway. Landowner Martin Blume traded a portion of his property on the east side of the river to the C & O as a right-of-way in exchange for free passenger rights. Blume soon founded the Fayette Coal & Coke Company and opened the Fayette Mine. A post office was established at Fayette in 1875, and the population continued to increase, reaching 400 by 1910.

Across the river the community of South Fayette emerged after the Low Moor Iron Company opened a mine. The two towns were connected by an iron truss bridge built across the river in 1889 to join one of the early roads in Fayette County. Thereafter, a freight/passenger depot was constructed at South Fayette, and it became one of the largest such facilities along the rail line in the gorge. In 1906 the C & O acquired additional land near the depot from the Low Moor Iron Company and constructed a section foreman's house (now known as the Cole House) which was determined eligible for listing in the National Register of Historic Places in 1992. During the 1920s the Fayette Station Road was constructed from South Fayette to the county seat at Fayetteville, thus enhancing the passenger business at the depot. The South Fayette freight station and depot were closed in 1963 and subsequently razed.³⁴

Postscript

As the coal operations in the gorge played out and the Chesapeake and Ohio turned from steam to diesel locomotives, the region's socioeconomic forces changed. People left the area, human activity declined, and nature reclaimed her domain. The branch rail lines and many of the structures associated with the operation of the C & O mainline were no longer needed and fell into disuse and decay. Virtually all of the track on the branch lines has been removed, leaving only remnants of rail line cuts, embankments, trestles, and culverts. Many of the early railroad structures associated with the operation of the C & O mainline no longer needed for modern rail operations have been razed. But the C & O Railroad remains and while its functions have changed, it is still the primary access to many parts of the gorge and for the foreseeable future will remain the primary transportation artery through the region.

PROPERTY TYPES

Introduction

The construction and operation of railroads has had a significant impact on the natural and built environments of southern West Virginia — an area that includes New River Gorge National River — from the 1870's to the present time. The railroad literally blasted

34. Bragg, *Window to the Past*, p. 100, and Determination of Significance, New River Gorge National River, West Virginia, "The Cole Property," October 6, 1992, Files, Cultural Resources Management, Mid-Atlantic Regional Office, Philadelphia, National Park Service.

its way into and through the gorge, rearranging the lowlands to meet its grades and make way for its associated infrastructure.

The coming of the C & O Railroad to the New River Gorge in 1873 brought dramatic change to the region. After millennia in which the rugged physical environment had limited human activity in the area, the railroad opened the beauty and mineral wealth of the New River to the outside world. After the railroad came, numerous coal mining operations and company towns were established in the region to produce large quantities of coal and coke, and lumber companies set up camps to log large areas of the heavily timbered region. A commercial center (Thurmond), a railroad center (Hinton), and lesser railroad-related settlements, such as Quinimont, Prince, and Fayette/South Fayette, focused industrial and transportation activity in the area. During the 20th century coal and lumber resources played out, economic forces changed, people left, and towns deteriorated and disappeared. But the railroad remains, and although its functions have changed, it continues to serve as the primary access to many parts of the gorge and the principal transportation route through the gorge.

Typology of Known and Expected Property Types

The typology of known and expected types for the railroad industry context includes:

1. Primary Railway Roadbed Structures/Features
 - a. Rail line components — rail bed, tracks, crossties
 - b. Roadbed structures — bridges, tunnels, culverts, drainage structures, trestles
 - c. Roadbed engineering features — cuts, fills, embankments
2. Secondary Railway Support Facilities
 - a. Railway operations — powerhouses, engine houses, switches, signal towers, block signal bridges, water stations, coaling towers, sanding stations, repair shops, sidings, yards, depots, stations, roundhouses, offices, bunkhouses, manager's houses
 - b. Rolling stock
3. Railroad Service Towns/Centers
 - a. Houses/residences of railroad operators/managers and ancillary outbuildings
 - b. Houses/residences of railroad workers and ancillary outbuildings
 - c. Community buildings
 - d. Private manufacturing/commercial buildings
4. Buildings in Incorporated Towns Associated with the Railroad Industry
 - a. Houses/residences of railroad operators and managers and ancillary outbuildings
 - b. Houses/residences of railroad workers and ancillary outbuildings
5. Government Facilities Associated with the Railroad Industry

Known and Expected Distribution of Property Types

Primary Railway Roadbed Structures/Features. The primary roadbed components — rail bed, tracks, crossties — provide the essential elements of the roadbed over which trains pass. Roadbed structures, such as culverts and bridges, allow the roadbed to cross rivers, streams, and bodies of water, tunnels enable the rail line to cut through mountainous

terrain and extensive rock outcroppings, and drainage structures provide for roadbed drainage. Engineering features, such as cuts, fills, and embankments, enable the roadbed to extend through uneven/rugged terrain on passable sloping gradients.

Smaller branch and subdivision railways, many of which were constructed by independent companies and later taken over by the C & O and other large transportation conglomerates, connected major mining or logging operations with the C & O's mainline. These feeder lines took the most direct path to the mines and lumber camps, following the most level contours of the often rugged landscape.

Secondary Railway Support Facilities. Secondary railway support facilities are tied to railroad operations. The most visible of such facilities in the New River Gorge are on the mainline of the C & O Railroad. Powerhouses, roundhouses, water stations, coaling towers, engine houses, and sanding stations enabled the steam-powered railways to operate, while signal towers and block signal bridges promoted safety and effective train movements through the control of switches and signals. Stations and depots were involved with passenger and freight functions, while repair shops, sidings, and yards provided facilities for train maintenance. Offices, managers' houses, and bunkhouses were designed to provide work space for railroad management and on the job quarters for railway workers. Rolling stock, including locomotives and rail cars, are basic to transportation.

The C & O Railroad was the primary railway line through New River Gorge. Thus, the most visible railroad-related structures/features are associated with the C & O mainline. A distinctive railroad industrial-style emphasizing board and batten framed structures, designed for utilitarian purposes and easy assemblage, could be found at one time throughout the length of the mainline. The original architecture used by the C & O, however, has been reduced as a result of changes in railroad operations, modernization programs, and gradual deterioration until only a few examples of the unique C & O architectural style remain. Notable examples of early C & O railroad architecture remain primarily at Thurmond and Hinton.

Railroad Service Towns/Centers. Although the railroad corporations did not establish company towns in New River Gorge, such as those constructed by the coal companies, towns/centers and settlements whose economy was dominated by the railroads emerged with the construction and development of the railways. The railroad service center of Hinton developed as did a railway maintenance and operations center at Thurmond, and both towns became commercial centers as a result of their railroad based economies. Quinimont prospered as a result of railroad operations; and several other settlements in the gorge, such as Prince and Fayette/South Fayette, became the focus of economic activity as a result of railroad development.

Houses and ancillary outbuildings for both railroad operators/managers and workers are perhaps the most common remnant of railroading in these service towns and centers. Although many have been altered drastically since construction, some that possess integrity remain. Included under this property type are outbuildings, yards, fences, and other structures situated on the house lot.

Community buildings, such as schools, churches, and community centers, are less prevalent than houses. Those that survive are generally easy to locate, but some have been modified to such an extent that they have lost much of their integrity.

Railroad service towns/centers in New River Gorge contained private manufacturing/commercial concerns. Owned or controlled by the railroads, together with the coal operators, these facilities represented business diversification within a railroad center setting. Private manufacturing/commercial buildings, such as those at Thurmond, tended to be substantial structures and thus a significant number that possess integrity remain.

Buildings in Incorporated Towns Associated with the Railroad Industry. Part of the legacy of railroads in southern West Virginia are the lives and architecture of the railway operators, managers, and workers, some of whom lived in the major towns in the region. Residences of the operators and managers remain, but locating them and clearly identifying them with a specific personality may prove difficult. Residences of the railroad workers are known, can be identified, and remain along the CSX right-of-way. The Cole House at South Fayette has been acquired by the park. The park owns another section foremen's house, and numerous ones are located along nearby railway spurs in private lands.

Government Facilities Associated with the Railroad Industry. Government facilities, such as hospitals, were constructed at widely scattered sites throughout southern West Virginia to serve the needs of miners and railroad workers. As their mission was later taken over by institutions, such facilities either were adapted to other uses or fell into decay.

Present Conditions of Property Types

The historic right-of-way completed through the New River Gorge region by the C & O Railroad in 1873 is for the most part still in use by the C S X Transportation Company. Thus, the primary railway roadbed structures/features and secondary railway support facilities associated with the C & O's operation have, by necessity, been subject to continuing maintenance, improvement, replacement, or modernization to meet the needs of an expanding railway network that would become the world's leading coal carrier. Many of the roadbed structures/features, while easy to locate, reflect post-World War II development and adaptation.

Evidence of many of the branch and subdivision lines can be found in terms of their roadbeds, cuts, embankments, and culverts, but most, if not all, of the tracks and crossties have been removed. While many of the structures and engineering features associated with the roadbeds of these lines have fallen into decay or been removed, their former rights-of-way are potentially useful as a resource in "rails to trails" initiatives.

Because the Chesapeake and Ohio's mainline through the New River Gorge is still in use, the secondary support structures associated with its operation have, by necessity, been subject to continuing maintenance, replacement, or improvement as the railway modernized its operations in the 20th century. For instance, some structures that were designed to service the railroad's steam-powered locomotives became obsolete during the 1950's after the C & O turned to diesel power. Many of the distinctive railway board and

batten framed structures that could be found at one time along the entire length of the mainline have been replaced by more substantial brick structures or by more modern functional buildings, leaving notable examples of the earlier framed structures only at Thurmond and Hinton. Most railroad support structures lasted as long as they served a purpose — whether it was their original function or an adapted function. As a general rule the C & O has not kept obsolete support structures, and many have been razed in recent decades. Nevertheless, roundhouses, stations, depots, repair shops, and offices, especially in railroad service towns/centers, have a high probability of survival.

Buildings and structures associated with the railroad industry, which might have survived in a different environment, have deteriorated rapidly in the humid New River climate. Many structures have been subjected to vandalism, salvage by area residents, and "pot-hunting" by artifact collectors, as well as the destructive effects of rapid and dense vegetation growth.

TABULAR SUMMARY OF MANAGEMENT INFORMATION

This tabular summary of management information includes key data for each historic property related to the railroad industry context in New River Gorge National River that has been surveyed by the cultural resources management staff of the former Mid-Atlantic Regional Office. During fiscal year 1992, a survey by MARO was conducted of structures acquired by the National Park Service from 1982 to 1992 to begin the draft List of Classified Structures for the national river. Information on each structure (including structural landscape features and ruins) was collected from land acquisition records, local histories, journals, newspapers, and oral interviews. Compilation of information for the draft LCS is an ongoing process.

Data for the structures listed in the tabular summary is from the draft LCS. This information will change as further studies and fieldwork are undertaken and Determinations of Eligibility and National Register of Historic Places nominations are completed. The names of the structures in the tabular summary were given at the time of the fieldwork and often represent the name of the most recent owner of the property rather than a historic name. Some of the structures' names will change as a result of the research for this historic context study as well as research that may be undertaken in the future.

CHAPTER THREE: LUMBER INDUSTRY HISTORIC CONTEXT

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
N-001	80364	Pugh House	Thurmond	Standing structure	3a	Listed (1/27/84)
N-002	80340	Mankin-Cox Building	Thurmond (NERI Tract 164-27)	Standing structure	3d	Listed (1/27/84)
N-003	80365	Goodwin-Kincaid Building	Thurmond (NERI Tract 164-27)	Standing structure	3d	Listed (1/27/84)
N-004	80341	National Bank of Thurmond	Thurmond (NERI Tract 164-27)	Standing structure	3d	Listed (1/27/84)
N-006	80447	Stone Structure	Thurmond (NERI Tract 164-27)	Standing structure	3d	Listed (1/27/84)
N-007	80366	Erskine Pugh House, Rental	Thurmond	Standing structure	3b	Listed (1/27/84)
N-008	80367	Thurmond Passenger Depot and Offices	Thurmond	Standing structure	2a	Listed (1/27/84)
N-009	None	Baptist Church (Black Church)	Southside Junction	Standing structure	3c	Not evaluated
N-058	80942	Cole House	South Fayette (NERI Tract 153-07)	Standing structure	3a	Determined eligible (10/6/92)
N-058A	80943	Cole Outhouse	South Fayette (NERI Tract 153-07)	Standing structure	3a	Determined eligible (10/6/92)
None	None	Cole Woodshed	South Fayette (NERI Tract 153-07)	Standing structure	3a	Determined eligible (10/6/92)
None	None	Cole Chicken Coop/Storage Building	South Fayette (NERI Tract 153-07)	Standing structure	3a	Determined eligible (10/6/92)
N-079	None	Trestle No. 1, Thurmond-Minden Trail	Between Thurmond & Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	1b	Not evaluated
N-080	None	Trestle No. 2, Thurmond-Minden Trail	Between Thurmond & Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	1b	Not evaluated
N-081	None	Trestle No. 3, Thurmond-Minden Trail	Between Thurmond & Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	1b	Not evaluated
N-082	None	Trestle No. 4, Thurmond-Minden Trail	Between Thurmond & Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	1b	Not evaluated
N-083	None	Trestle No. 5, Thurmond-Minden Trail	Between Thurmond & Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	1b	Not evaluated
None	None	Railroad Tracks & Ties, Thurmond-Minden Trail	Between Thurmond & Minden (NERI Tract 144-11 and/or 140-08)	Unstabilized ruin	1a	Not evaluated
None	None	Railroad Directional Markers, Thurmond-Minden Trail	Between Thurmond & Minden (NERI Tract 144-11 and/or 140-08)	Unstabilized ruin	1b	Not evaluated
None	None	Bridge Supports, Thurmond-Minden Trail	Between Thurmond & Minden (NERI Tract 144-11 and/or 140-08)	Unstabilized ruin	1b	Not evaluated
N-168	81342	Philip McClung House	Thurmond (NERI Tract 165-09)	Standing structure	3b	Listed (1/27/84)
N-169	81343	Philip McClung House - Rental	Thurmond (NERI Tract 165-12)	Standing structure	3b	Listed (1/27/84)
N-170	81344	Philip McClung House - Home Place, Rental	Thurmond (NERI Tract 165-13)	Standing structure	3b	Listed (1/27/84)
N-179	81345	Tom Kelly House	Thurmond	Standing structure	3b	Listed (1/27/84)
N-181	81346	Sid Childers/Margie Richmond House	Thurmond	Standing structure	3b	Listed (1/27/84)
N-182	81347	Fatty Lipscomb House	Thurmond	Standing structure	3b	Listed (1/27/84)
N-182A	81354	Fatty Lipscomb's Retaining Wall	Thurmond	Unstabilized ruin	3b	Listed (1/27/84)

Tabular Summary of Management Information

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
N-182B	81353	Fatty Lipscomb's Yard Fencing	Thurmond	Unstabilized ruin	3b	Listed (1/27/84)
N-183	81348	Marilyn Brown House	Thurmond	Standing structure	3b	Listed (1/27/84)
N-186	81349	Sidney Ward House	Thurmond	Standing structure	3b	Listed (1/27/84)
N-190	81350	Homer Nicely/Charles H. Ashley House	Thurmond	Standing structure	3b	Listed (1/27/84)
N-191	81351	Ashley Garage	Thurmond	Standing structure	3b	Listed (1/27/84)
N-193	81352	Ashley Shed	Thurmond	Standing structure	3b	Listed (1/27/84)
S-054	None	Thomas Bowles Greenhouse	Quinnimont (NERI Tract 128-01)	Standing structure	3b	Not evaluated
S-055	None	Thomas Bowles Outhouse	Quinnimont (NERI Tract 128-01)	Standing structure	3b	Not evaluated
S-056	None	Thomas Bowles #1 Storage	Quinnimont (NERI Tract 128-01)	Standing structure	3b	Not evaluated
S-057	None	Thomas Bowles #2 Storage	Quinnimont (NERI Tract 128-01)	Standing structure	3b	Not evaluated
None	None	Thomas Bowles Hog Pen	Quinnimont (NERI Tract 128-01)	Standing structure	3b	Not evaluated
S-058	None	Judy Bowles House	Quinnimont (NERI Tract 128-01)	Standing structure	3b	Not evaluated
S-059	None	Robert Bowles House	Quinnimont	Standing structure	3b	Not evaluated
S-060	None	Robert Bowles Chicken House	Quinnimont	Standing structure	3b	Not evaluated
S-061	None	Robert Bowles Garage	Quinnimont	Unstabilized ruin	3b	Not evaluated
S-062	None	Robert Bowles #1 Storage	Quinnimont	Standing structure	3b	Not evaluated
S-063	None	Robert Bowles #2 Storage	Quinnimont	Standing structure	3b	Not evaluated
S-064	None	Robert Bowles Outhouse	Quinnimont	Standing structure	3b	Not evaluated
S-065	None	Opal Kessler House	Quinnimont (NERI Tract 128-01)	Standing structure	3a	Not evaluated
None	None	Opal Kessler Chicken Coop	Quinnimont (NERI Tract 128-01)	Unstabilized ruin	3a	Not evaluated
None	None	Opal Kessler Water Tanks	Quinnimont (NERI Tract 128-01)	Standing structure	3a	Not evaluated
S-069	None	Samuel Plumley #1 Storage	Quinnimont	Standing structure	3a	Not evaluated
S-070	None	Samuel Plumley #2 Storage	Quinnimont	Standing structure	3a	Not evaluated
None	None	Samuel Plumley Fowl Barn	Quinnimont	Standing structure	3a	Not evaluated
None	None	Samuel Plumley Ruins/Foundations	Quinnimont	Unstabilized ruin	3a	Not evaluated
None	None	Samuel Plumley Walkway	Quinnimont	Unstabilized ruin	3a	Not evaluated
None	None	Quinnimont Church	Quinnimont	Standing structure	3a	Not evaluated

CHAPTER THREE: LUMBER INDUSTRY HISTORIC CONTEXT

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
S-071	None	Willis House	Quinnimont (NERI Tract 128-01)	Standing structure	3c	Not evaluated
None	None	Glade Creek Road	Glade Creek Drainage	Graveled road cut	3a	Not evaluated
S-052	None	Prince Brothers General Store (Berry Store)	Prince (NERI Tract 155-30)	Standing structure	1a	Listed (4/17/86)
None	None	Prince Brothers Residential Property Fence	Prince (NERI Tract 155-30)	Standing structure	3d	Not evaluated
N-076	None	McKendree Hospital Ruins	McKendree	Unstabilized ruin	5	Not evaluated

CHAPTER FOUR: LUMBER INDUSTRY HISTORIC CONTEXT

NARRATIVE HISTORY

Summary

Geographic Boundaries: New River Gorge National River
Chronological Period: 1870s-1940s

The historic context for the lumber industry in New River Gorge National River focuses on the harvest of the bountiful timber resources of the region. Although some lumber operations had been conducted in the area since the early years of settlement in the late 18th century, large-scale development and exploitation of the extensive timber resources did not commence until completion of the C & O Railroad through the gorge in 1873. Lumber soon became one of the dominant industries in the New River region as timber operations dotted the hillsides and plateaus of the area. Branch railway lines stemming from the C & O mainline and the construction of other trunk lines, such as the Norfolk and Western and the Virginian, provided ready access of raw materials, such as timber, to eastern markets. The heyday of the New River lumber industry, extending from the 1880s to the early 1910s, witnessed extensive logging of the region's vast timber resources by large corporations, producing large quantities of lumber in operations that stripped the land and cut virtually all of the virgin stands of forest. To provide for the work force necessary to man such large operations, laborers were recruited and entire towns and lumber camps were constructed by the timber companies, thus contributing to a society unusual for its cultural diversity in a remote area.

Introduction

This historic context for the lumber industry in New River Gorge National River is based in part on a study prepared by Paul D. Marshall & Associates, Inc., of Charleston, West Virginia in 1981. Volume II of this study, entitled *A Cultural Research Project: The New River Gorge National River, West Virginia* (pp. 178-94), provides a historical overview of the principal themes and resources related to the lumber industry within the boundaries of the national river.

Two other principal sources provide considerable data on the historical development of the lumber industry of West Virginia in its state and national contexts. These works are: Roy B. Clarkson, *Tumult on the Mountains: Lumbering in West Virginia, 1770-1920* (Parsons, West Virginia, McClain Printing Company, 1964), and A. B. Brooks, *West Virginia Geological Survey: Volume Five, Forestry and Wood Industries* (Morgantown, West Virginia, Acme Publishing Company, 1910).

Historic Development of the Lumber Industry in Its National Context

The great American forest, with coniferous arms that encircled a central hardwoods belt, stretched from the Atlantic Ocean, with occasional open meadows, to the edge of the

Great Plains. Early logging during colonial times gave winter employment to farmers and their work animals, who labored to remove this forest to create arable land and provide a variety of forest products. Timbers and boards were used to construct buildings, fences, furniture, and farm implements. If logs were piled up and burned, the ashes could be scattered as fertilizer, used to surface primitive roads, or sold to soapmakers and glassmakers. It was a wooden world, and scarcely any part of colonial life was not based on wood.

While the pioneer settler cut all the trees that shaded his lands, the commercial lumberman tended to specialize in a single species of tree, both in logging and in milling. Beginning in New England, for example, the lumberman logged the white pine in ever-widening swathes north from Maine into New Brunswick and west into Pennsylvania. By the 1830s the white pine in the great pineries of Michigan, Wisconsin, and Minnesota was falling to the lumberman's ax, and by the 1890s the pursuit of this tree led the lumbermen to the forests of the Northwest. During the same decade other lumbermen crossed the Great Lakes into Canada or changed species and began to cut the Norway pine and other previously neglected species. Still others moved South to stands of Southern pine or cypress or jumped to the West Coast, where the redwoods, Douglas fir, and Port Orford cedar awaited cutting. Southern forests also provided oak for the stout warships of the Old Ironsides era, and the pine barrens of the Carolinas provided pitch, tar, and turpentine.¹³⁰

Historic Development of the Lumber Industry in Its State Context

Timber Development in West Virginia Region: Colonial Period-1880s. Like other pioneer settlers in the United States, the forests in present-day West Virginia played an important role in the daily lives of generations of mountaineers who equated the recession of forests with progress. These settlers destroyed valuable trees indiscriminately in clearing land constructing buildings. In his study entitled *West Virginia: Its History, Natural Resources, Industrial Enterprises and Institutions*, Virgil A. Lewis described the destruction of the state's forests by the early settlers:

The early settlers needed bread, and mother earth must supply it for there was no other source from which it would come. This meant the clearing of land and the consequent destruction of the forest for there was no market for its products. Its removal from the "improvement" was one of great labor but the process was simple. This work was usually done in the winter. First the underbrush was grubbed and piled in heaps; then the fallen timber — logs already down — was cut into proper lengths to be borne or drawn together; timber to be split for rails was felled and chopped into "rail-cuts," eleven feet long, which were drawn along the line where the fences were to be built; the smaller timber, say all under a foot in diameter, was now cut down and chopped into suitable lengths for handling;

130. *Dictionary of American History*, Vol. IV, pp. 203-04. For more data on the historical development of the lumber industry in the United States, see James Elliot Defebaugh, *History of Lumber Industry of America* (2 Vols., Chicago, The American Lumberman, 1906), and for information on the forests of the Eastern United States, see E. Lucy Braun, *Deciduous Forests of Eastern North America* (Philadelphia, Toronto, The Blackiston Company, 1950).

next the "brush-heaps" were burned, and, this done, all the neighbors for miles around were invited to the "log rolling;" from ten to thirty assembled at early morning, in the "clearing;" a captain or leader was chosen; the men with strong *hand-spikes, made usually from the dogwood of the hills, rushed to work with a hurrah;* there were trials of strength and the logs, great and small, were rolled or carried, and "heaps" constructed, one after another, until this had extended over the entire "clearing" and the work was done. Then these were burned. But there still stood, high over all, the giants of the forest — great towering oaks, poplars, walnuts, maples, pines, and hickories — all to be "deadened" that the shade of their foliage might be destroyed, and when "the leaves were as large as a squirrel's ear" the oaks were "belted" deeply through the "sap" and the hickories and others "peeled" around, and then left to die and decay, fall and be burned years after. Thus was destroyed the timber on millions of acres of West Virginia forests, which would now be worth millions of dollars — destroyed to make room for the grain field and the herd, the support of the families of the early settlers.¹³¹

Both before and after the Civil War many farm families in present-day West Virginia region began to engage in occasional timber cutting for sale to local sawmills. Almost every mountain county had at least one sawmill, which usually was combined with the gristmill located along the banks of the stream. Early industrialists selected choice trees for American and British shipyards, made millions of barrel staves and hoop poles for markets in Baltimore and the Ohio Valley, and sent out vast quantities of tanbark.

Nevertheless, sawmills in West Virginia were comparatively few and of small capacity. In 1869, for instance, there were only 348 sawmills in the state, of which only 150 were operated by steam and 185 by water. The mills employed 1,613 persons at an annual wage approximating \$400,000, and the total value of their products was less than \$1,700,000.

By 1870 some 20 to 30 steam-powered mills were located along the Baltimore and Ohio Railroad in the northern part of the state, each cutting an average of 3,000 lumber feet per day. The Baltimore and Ohio also served barrel factories, which produced from 150 to 200 barrels per day, and shipped large quantities of dressed and seasoned staves to Baltimore and New England cities. There were also lumber mills and factories on the Ohio River and its tributaries. In 1880, there were 472 sawmills, most of them first class and steam driven, operating in West Virginia, or 124 more than in 1870, when more than half of the sawmills were operated by water power. The number of wage earners employed was 2,128 with a total wage of some \$460,000, and the value of the timber produced amounted to nearly \$1,750,000. Except along the Baltimore and Ohio Railroad, the chief method of transportation in the area westward of a line extending from Valley Falls, Taylor County, to the Kentucky state line, by way of Bulltown and Kanawha Falls, was by rafting sawlogs and crossties and floating lumber, staves, tanbark, and hoop poles in small barges on the larger streams.

The rafting of sawlogs and crossties was an important occupation on the Little Kanawha, Elk, Guyandotte, Big Sandy, Cheat and Tygart valley rivers and Middle Island Creek

131. Virgil A Lewis, comp., *West Virginia: Its History, Natural Resources, Industrial Enterprises and Institutions* (Charleston, West Virginia, Commission of the Louisiana Purchase Exposition, 1904), p. 279.

during the post Civil War period. Raft capacities varied from about 35 to 70 logs, depending upon the size of the streams. In 1881, for instance, more than 40,000,000 board feet of lumber was rafted down the Guyandotte, most of it for mills at Cincinnati and other towns along the Ohio. Lumber, staves, hoop poles, and tanbark were usually sent out in small barges.

Log drives were common on the Greenbrier, Cherry, and Shavers Fork of the Cheat rivers, as well as on other streams that did not lend themselves to rafting. During the summer, construction crews built splash dams across smaller streams; woodsmen cut and trimmed trees into logs, which filled the impounded waters; and other workmen built arks, some 70 to 100 feet long, with cabins and bunks for rivermen. The log drive began as soon as winter ice in streams broke up and the main floes passed. Then the gates of the flash dams were opened, and the rushing waters carried the logs swiftly downstream. Rivermen kept the logs adrift until they reached great booms, where they were caught. Shantyboat residents and others living along the stream earned money by capturing stray logs for their owners. West Virginia law permitted booms in all unnavigable streams except the Cheat in Monongalia County and the Elk in Kanawha County, gave companies the right to condemn land for booms, and provided stiff penalties for thefts of logs.

Despite these timber operations, however, the market for sawed lumber had been localized prior to the 1880s, and the technology employed, consisting of whipsaws, water-powered sash saws, and steam driven circular sawmills, had limited capacities. Thus, the amount of timber cut made only a slight impact upon the region's vast forest reserves and allowed West Virginia forests a reprieve from the onslaught that would occur later.

Of all West Virginia's natural resources, none was so directly available and so evenly distributed as her forests. In 1870 these covered 14,000,000 acres and about seven-eighths of her surface. Some 10,000,000 acres were still virgin forest, and not including ample allowances for domestic uses, the value of her forest growth was estimated at \$500,000,000. The largest and most valuable trees were oaks and poplars; walnut, cherry, sycamore, ash, chestnut, chestnut oaks, and locusts were found in less abundance. If the region could be described as the home of deciduous timber, there were also white pines, hemlocks, and spruces of remarkable size and growth.

Such a storehouse of virgin timber could not remain long untapped in a nation moving rapidly toward industrialization. Following upon the heels of the promoters, the railroad builders, and the mineral men were agents representing northern lumber barons who had begun to eye the Appalachian timberlands, including those of West Virginia. By the late 1870s the timber resources of the Northeast and Great Lakes had begun to diminish as a result of industrialization and population growth, and northern lumber producers began to search other areas of North America for their timber supplies. While some looked to the virgin woodlands of Canada and others to the pine and cypress forests of the lower Mississippi and the Gulf Coast, many timber interests turned to the southern mountains for their future source of hardwoods. At first, they were content to acquire only the superior trees, but between 1890 and 1920 the lumber barons purchased and cut over large tracts of mountain timberland, devastating the region's forests in some of the most frenzied timber booms in American history. For thousands of mountaineers in West Virginia and throughout the Appalachians, the coming of the timber industry not only meant the loss of valuable woodland, but it meant the introduction of one of the first

major forms of nonagricultural work, along with coal, as well. With the coming of the lumber "boom" era, the settlers and mountaineers in the region supplemented their incomes by working in the timber mills. In many areas of Appalachia — especially the noncoal regions — the arrival of the lumbermen heralded the beginning of a new age that would change the physical and socioeconomic character of the region.

Timber Boom in West Virginia: 1880s-1920. With the introduction of the bandsaw and the extension of the railroads into remote areas of West Virginia, the timber industry entered a new phase in the state during the 1880s. Largely confined to the Baltimore and Ohio Railroad and to the tributaries of the Ohio River in earlier periods, the industry now pushed into the mountainous areas of the interior in an assault on the forests that would reach unprecedented proportions during the next several decades. Narrow-gauge logging railroads that used Heuler, Shay, and Climax engines fed to larger lines such as the Baltimore and Ohio, Chesapeake and Ohio, and West Virginia Central and Pittsburgh. The coal industry abetted the lumber industry, becoming one of the largest forestland owners in West Virginia, consuming timber for mine props, headers, wedges, ties, cars, and houses. To fill the growing demand for lumber, bandsaws, costing upwards of \$60,000, could cut 100,000 to 140,000 board feet of lumber and consume timber from 17 acres of forestland per day.

With the coming of the railroads and the band saw, lumber companies, chiefly from New York, Pennsylvania, Michigan, and Minnesota, bought most of the choice timberlands of West Virginia, usually at two to five dollars an acre. A yellow poplar tree, for instance, which perhaps cost 50 cents, might yield 2,000 board feet of lumber, which sold for 80 to 100 dollars per thousand board feet. With such lucrative profits to be garnered, the out-of-state corporations entered the state and swept the forests before them.

The most extensive logging operations in West Virginia were established in the central and eastern sections of the state in Tucker, Pocahontas, Nicholas, and Randolph counties. These timber developments gave rise to lumber "boom" towns such as Davis, Cass, Richwood, Evenwood, and Laneville.¹³² One of the largest concerns in the state, the Blackwater Boom and Lumber Company at Davis in Tucker County, operated a triple band mill.

Many areas in southern West Virginia, however, also experienced significant timber booms during the late 19th century. Most of the counties contiguous with the lines of the Chesapeake and Ohio and Norfolk and Western railroads in the southern part of the state began to market lumber soon after the completion of those rail lines. The major absentee land companies of that section — the Flat Top Coal Land Association, the Beaver Coal Company, and the Guyandotte Coal Land Association — leased land not only for coal mining but for timber production as well. The land that was not purchased by the railroads or the coal men was quickly bought up in the 1890s by commercial timbermen. According to the West Virginia State Board of Agriculture in 1900, "alien owners"

132. Because it is essentially unaltered, Cass, constructed by the Cass Lumber Company on the Greenbrier River, is a good example of the lumber "boom" town complete with a mill and associated rail lines. It is one of the few sites remaining that has existing structures and mill equipment associated with large scale lumbering and presently comprises a portion of Cass Scenic Railroad State Park.

controlled 75 percent of the saleable timber in Wyoming County, 66 percent of that in Logan County, 60 percent in Mingo County, and 40 percent in McDowell County.

Large lumber companies operated throughout southern West Virginia. In the Tug and Guyandotte valleys three companies controlled most of the lumber production: the Little Kanawha Lumber Company, a Maine corporation; the Yellow Poplar Lumber Company; and C. Crane and Company of Cincinnati. A double band mill operated by the Saint Lawrence Boom and Manufacturing Company at Ronceverte consumed much of the white pine cut in the Greenbrier Valley. The W. M. Ritter Lumber Company, owned by William McClellan Ritter of Pennsylvania, held large tracts of timberland in Mingo, McDowell, Wyoming, and Mercer Counties, West Virginia, as well as land in nearby Pike County, Kentucky, and Buchanan County, Virginia. Ritter constructed his first sawmill in 1890 at Oakvale in Mercer County and later built one of the only company-owned timber towns in southern West Virginia at Maben in Wyoming County. Before the end of the great timber boom, the Ritter Lumber Company became one of the largest hardwood producers in the country and the owner of timberlands in almost every state of the Appalachian South.

One of the largest operations in the state and the largest hardwood lumber mill in the world was established by Thomas Ward and John Raine, Pennsylvania lumbermen, in 1910 at Rainelle, located at the junction of Sewall Creek and Meadow River in Greenbrier County. The Meadow River Lumber Company acquired some 75,000 acres of timberland and constructed a triple band mill at the site and built the Sewall Valley Railroad connecting the mill and the lumber town with the Chesapeake and Ohio mainline at Sewall on the New River.

Lumber operations increased dramatically in West Virginia during the 1880s and 1890s, and the timber industry became one of the most important elements of the state's economy. The value of the industry to the state can be seen in statistics compiled by the West Virginia State Board of Agriculture for the year 1900:

The latest available statistics show there were 950 establishments having a capital of \$10,421,570.00; with 5,327 employees whose earnings aggregated \$1,828,558.00; the cost of material being \$5,584,717.00, and the value of all products \$10,612,837.00. Every one of those items has more than doubled in the last ten years.

There were 407 Logging Camps with a capital of \$4,757,919.00; having 45 employees whose salary aggregated \$29,484.00; and 2,784 wage earners, whose earnings amounted to \$898,387.00, with miscellaneous expenses of \$587,554.00; cost of keeping animals, \$471,459.00; and contract work aggregating \$316,095.00 — a total of \$1,385,039.00; with a production in saw-logs and other items valued at \$3,333,531.00.

There were 929 Saw-mills with a capital of \$5,293,975.00; having 240 employees whose salaries aggregated \$194,639.00; and 4,823 wage earners whose earnings amounted to \$1,657,436.00; the miscellaneous expenses amounted to \$319,111.00; the total cost of material to \$4,763,929.00; and the total value of all products being \$9,390,818.00.

There were 179 planing mills with a capital of \$1,173,349.00, having 41 employees whose salaries aggregate \$28,681.00; and 872 wage earners, whose earnings amounted to \$347,855.00; miscellaneous expenses were \$41,170.00; the cost of material \$1,882,790.00; the total value of all products being \$2,583,799.00.

From the above it is seen that in Logging Camps, Saw Mills, and Planing Mills, was an invested capital of \$11,225,243.00; employees numbering 8,805, whose earnings amounted to \$3,156,482.00, and a total valuation of products of \$15,476,271.00.

That same year the Bureau of the Census reported on the status of the lumber industry in West Virginia. This agency noted:

The entire area of West Virginia lies on the Allegheny Plateau, which in a general way, slopes from the east line of the State north-westward to the Ohio and Big Sandy rivers. The higher parts of this plateau are timbered with white pine, hemlock and hardwoods, while lower down the slopes the proportion of hardwoods increases, and the lower slopes were originally covered with forests of these species. Lumbering has been most active in the western part of the State near the Ohio River, where considerable areas have been cleared for cultivation. .

Until recently West Virginia has not been important in the lumber industry, but during the last ten years the value of its product has more than doubled. The principal species cut are hardwoods, and of these, white oak and poplar chiefly. .

The wooded area of West Virginia is estimated at 18,400 square miles, or 73 per cent of the area of the State, and most of this occupied by timber of merchantable size and quantity.¹³³

The lumber industry of West Virginia reached its peak during the period between 1907 and 1917 when lumber production exceeded 1,000,000,000 board feet annually. In 1909, the peak year, 83 band mills were in operation, and production soared to 1,483,000,000 board feet.

In his study of forestry and wood production for the West Virginia Geological Survey in 1910, A. B. Brooks described the impact of the lumber industry on the state's economy:

In West Virginia there are 14,000 men, earning about \$9,000,000 a year, engaged in logging and operating the band saw mills alone. Add to this 5,000 men who work on smaller operations, 5,000 in planing mills and other wood-working establishments, and 2,000 more in tanneries, pulp mills, chemical factories, etc., and we have a total of 26,000 men earning approximately \$16,000,000 a year. Beside these there is a large

133. J. B. Garvin, comp., *West Virginia Agricultural Resources and Possibilities* (Charleston, West Virginia, The Tribune Printing Company., 1907), pp. 102-04.

number of men, such as carpenters, salesman, jobbers and others, who are indirectly furnished with employment through the lumber industry.¹³⁴

In 1919 West Virginia ranked third among the states in hardwood production but 17th in lumber of all kinds. The state led the nation in the amount of lumber produced from chestnut and yellow poplar. Oak, chestnut, hemlock, yellow poplar, maple, and spruce, in that order, made up the bulk of the state's timber products. During the year there were 773 sawmills operating in the state, 243 less than the number in use during 1909.

By 1920 most of West Virginia's virgin timber was gone, and the lumber industry began a precipitous decline, reaching a Depression low of 135,000,000 board feet in 1932. Lumber production rebounded during the post-World War II era, reaching 411,000,000 board feet in 1950, a total slightly more than one-fourth of the production in the peak year of 1909. Despite the declining importance of her timber industry, however, West Virginia ranked seventh among the states in the production of hardwood in 1950. By the mid-1950s band saw mills were in production at Bluefield, Clarksburg, Kenova, Charleston, Williamson, Rainelle, Richwood, Pineville, Camden-on-Gauley, Swandale, Dixie, and Riverton. Tanneries at Frank and Marlinton in Pocahontas County, Petersburg in Grant County, and Parsons in Tucker County used West Virginia-produced tanbark, and West Virginia-produced pulpwood was exported in considerable quantities, although depletion of hemlock, the source of tanbark, forced the closing of most tanneries. By midcentury several companies had built kilns to convert slabwoods into charcoal, a commodity in increasing demand for indoor and outdoor fireplaces. Some prosperous towns, such as Richwood and Rainelle, survived the changes, but others, including Davis and Cass, suffered the loss of their economic base and steady decreases in population. In spite of efforts at reforestation and conservation during recent decades in West Virginia, timbering and related industries, like coal mining and other extractive industries, left a legacy of depleted resources, scarred terrain, and fleeting prosperity.¹³⁵

Historic Development of the Lumber Industry in Its Local Context

The lumber industry left a legacy of "boom and bust" in the New River Gorge region much as it did in the state at large. After completion of the C & O Railroad in 1873 and the later construction of branch rail lines beginning in the 1890s, the New River Gorge

134. A. B. Brooks, *West Virginia Geological Survey: Volume Five, Forestry and Wood Industries* (Morgantown, West Virginia, Acme Publishing Company, 1910), p. 20.

135. The principal sources used for the preparation of this state context for the lumber industry include: Rice, *West Virginia: A History*, pp. 197-98; Rice, *West Virginia: The State and Its People*, pp. 252-58; Roy B. Clarkson, *Tumult on the Mountains: Lumbering in West Virginia, 1770-1920* (Parsons, West Virginia, McClain Printing Company, 1964); Ambler, *West Virginia: The Mountain State*, pp. 456, 513; Ambler and Summers, *West Virginia: The Mountain State*, pp. 437-40; Eller, *Miners, Millhands, and Mountaineers*, pp. 86-112; West Virginia University, Agricultural Experiment Station, College of Agriculture, Forestry, and Home Economics, *Primary Wood Industries of West Virginia*, Bulletin 461, by W. H. Reid, W. W. Christensen, A. W. Goodspeed, and N. D. Jackson, June 1961, pp. 5-7, 34-35; Richard C. Davis, *Encyclopedia of American Forest and Conservation History* (New York and London, Macmillan Publishing Company and Collier Macmillan, Publishers, 1983), II, pp. 687-88; and Anson, "A History of the Labor Movement in West Virginia," pp. 13-14. For a description of a typical logging camp in West Virginia, as well as the typical lifestyle of loggers in the state, see Clarkson, *Tumult on the Mountains*, pp. 62-77.

area became the scene of large timber operations. The region underwent tremendous change, not only as its coal resources were extracted but also as its relatively pristine timber lands were harvested during a lumber boom that extended primarily from the early 1880s to the late 1910s. Throughout this boom period large portions of the region's forest lands were felled, and lumber towns and camps bustling with activity grew up almost overnight when great sawmills were brought in. Flourishing uproariously for a time, these boom towns waned and disappeared as the timber was cut and the mills were moved to other locations, leaving only deserted buildings, rail lines, and mill foundations. The lumber industry contributed to the growth and development of railroading in the gorge as such railroad centers and towns as Thurmond, Hinton, Quinnimont, and Prince became significant sites associated with the shipment of lumber products to markets outside the gorge.

Lumber Operations in Fayette County. In his study on forestry and wood industries for the West Virginia Geological Survey in 1910, A. B. Brooks described the original timber resources of Fayette County. He observed that the topography of the county promoted "the growth of valuable forests" and commented further:

Originally the low and fertile lands of the Gauley and of that portion of the Great Kanawha within the county, were characterized by the abundance of yellow poplar, black and white walnut, white and red oaks, sweet buckeye, basswood, cucumber and white ash, as well as the less valuable sweet gum, sycamore, river birch, honey locust, and others. On the clays of the higher areas such species as maples, white oak and beech predominated, with fringes of hemlock along the water courses and with scattered clumps of pitch pine and scrub pine growing on dry ridges and along the sandstone outcrops.

Brooks also provided a synopsis of the historical development of lumber operations in the county. Among his comments in this regard were the following:

Some of the best yellow poplar, black walnut and other timber growing along the Great Kanawha and the Gauley rivers was cut and rafted out about 50 years ago. The New river is too rapid for even the successful drifting of single logs and, as there was no other means of transportation then, the bulk of the timber in the interior remained until a later date. A large number of staves were cut in a wasteful manner on Laurel creek about 35 years ago and several small steam and water mills were in operation before that time. Two sash saw mills, at least, existed in the county as early as 1835. Timber cutting on a large scale for commercial use did not begin until about 1885. The industry has continued without interruption and at an increasing rate until the present day. The greater part of the timber so far taken has been sawed by portable stove and lumber mills located throughout the county. These have delivered their lumber over branch railroads, wooden tram roads and, by means of wagons, over country roads, to the various stations along the Chesapeake and Ohio railroad and, more recently, to Belva, Gauley Bridge and other stations on the Gauley branch.

Large requisitions have been made upon the timber by the 150, or more, coal companies operating within the county. The quantity of timber used in mining, through a long series of years, for posts, caps, headers, ties, tipples and buildings,

is enormous. In the judgment of those men best acquainted with the present situation the time is near when the scarcity of both timber and water will become alarming if, indeed, it is not already so. A number of coal companies, however, are taking steps to preserve the remnant of less valuable but rapid-growing timbers still standing in the extensive cut-over forests. . . .

The present lumber industry embraces the operations of 2 large band mills located within the county and a third located near the eastern line in Greenbrier county, together with the smaller operations of about 25 portable mills. These have a combined capacity of not less than 250,000 feet per day. The large mills are engaged in the removal of timber from the remaining virgin tracts and the small mills are cutting wherever a few thousand feet of timber can be brought together.

Brooks described the state of existing forest conditions in the county, noting that approximately 10 percent of its land had been cleared and that 446,000 acres remained in forest. Only about 53,000 acres, however, were virgin timber. According to Brooks, the balance was

cut-over and woodlot forest owned by coal and lumber companies and by farmers. It is estimated that there is an average stand of about 2,500 feet per acre of the less valuable kinds of timber, such as black gum, beech, sugar and red maple, birch, etc. yet remaining on the cut-over and woodlot land, but that at least 80 per cent of the value of the original forest has been removed. Areas aggregating 200,000 acres, or more, of cut-over lands lie chiefly in the southern and western parts of the county and are largely owned by coal companies. The principal virgin forest areas lie in the region of Big Sewell mountain, in the eastern part of the county, and, farther north, along the Meadow river.¹³⁶

It was estimated that some 75,000,000 board feet of lumber were sawed by mills in Fayette County during 1910. Among the leading lumber companies were the Sewall Lumber Company, the J. W. Mahan Lumber Company, Mankin and Sutphin, P. M. Snyder, Coleman and Ferrell, Hogg Lumber Company at Glen Jean, and J. W. Coleman.¹³⁷

Among the lumber mills established in the New River Gorge region during the timber "boom" era were a bandsaw operation at McKendree and a circular saw and planing mill at Glen Jean, the former built by the L. O. Steinbeck Lumber Company and the latter by the Hogg Lumber Company. During the early 1900s, J. R. Beatty developed an extensive lumber-cutting operation in the Grandview vicinity and constructed one of the largest sawmills in southern West Virginia at the site. To transport the lumber to market, Beatty constructed a railroad and erected the world's first overhead log skidder near the present-day main overlook at Grandview. The skidder could move logs up to 12 inches in

136. Brooks, *West Virginia Geological Survey, Volume Five, Forestry and Wood Industries*, pp. 137-38.

137. *Fayette Journal, Special Edition, Historical, Industrial*, 1911, p. 6.

diameter and 125 feet long from the top of the mountain to the railroad on the canyon floor below.¹³⁸

The most significant timber operation in the gorge, however, was located in the Sewall Mountain area. In 1871 the first general store was opened at Sewall by Arnold Midelburg, an Austrian immigrant. Midelburg purchased timber lands in Manns Creek Valley and set up a sawmill at the mouth of the creek where it emptied into the New River at Sewall. He operated his timber business along with his mercantile trade and was reportedly the first person to ship lumber from New River Gorge.

The Sewall Lumber Company was established in 1908, and its acquisition of 7,400 acres of timber land assured it a vital stake in the burgeoning timber boom. A large bandsaw mill and supporting "boom town" were constructed by the summer of 1909 at the junction of Glade and Laurel creeks about three miles south of Clifftop. The town, consisting of some 30 dwellings, a store, and office buildings, was named Landisburg after H. M. Landis of Pittsburgh, Pennsylvania, secretary-treasurer of the Sewall Lumber Company. A narrow gauge railway was built from Clifftop to Landisburg, and two Climax-g geared locomotives were purchased to pull the log and lumber trains. An agreement was signed with the Longdale Iron Company to allow the Sewall Lumber Company to haul lumber from Landisburg via the Manns Creek Railway to Sewall, where it would be transferred to C & O Railroad cars.

Experienced lumbermen were recruited, and the mill, having a daily capacity of 50,000 to 60,000 board feet, was placed in operation during the fall of 1909. At first, the nearby timber was felled, trimmed, and hauled to the Landisburg mill log pond by teams of oxen or horses. Soon, however, the distances became too great for this mode of haulage, and temporary railway lines were laid up the creeks and valleys in an ever-widening radius from the mill. A tracklaying crew of 15 men (in 1910 all Italian) was hired to prepare the roadbeds for these temporary lines.

By 1910 Landisburg had a population of 210. The town featured a company store, community center which also served as a church, school, and company doctor.

Meanwhile, the Longdale Iron Company had leased its coal mines at Clifftop in 1906, and in 1912 the mines were reorganized as the Glade Coal Works Company under a lease to R. M. Smith, general manager of the Sewall Lumber Company. When this enterprise foundered, the Babcock Coal and Coke Company, a subsidiary of the Babcock Lumber Company of Pittsburgh, was incorporated as a West Virginia enterprise on September 28, 1912. On March 8, 1913, a deed was signed with the Longdale Iron Company to transfer control of about 8,000 acres of land, including the coal mines, coke ovens, and Manns Creek Railway, to the new corporation for \$142,000. When the Sewall Lumber Company filed for bankruptcy in 1914, its assets, which included 11,400 acres of timber land south of the former Longdale Iron Company's property, were acquired by the Babcock Coal and Coke Company.

138. Clarkson, *Tumult on the Mountains*, p. 32; Brooks, *West Virginia Geological Survey, Volume Five, Forest and Wood Industries*, p. 445; and U.S. Department of the Interior, National Park Service, *Development Concept Plan/Environmental Assessment/ Interpretive Prospectus, Grandview, New River Gorge National River, West Virginia (Draft)*, January 1993, pp. 12, 15.

The lumber business flourished under Babcock for 17 years. Additional land was leased or purchased, and logging railway spurs radiated further and further from Landisburg. A large overhead skidder was purchased to transport logs from difficult mountainside terrain to central points, where the logs could be placed on railway cars by mechanical log loaders. Additional geared locomotives were acquired to handle the increasing traffic.

Logging crews lived in lumber camps composed largely of shanty cars. Camps were moved frequently to keep pace with the advancing onslaught against the virgin timber. Some 40 camps appeared and disappeared again, spotted throughout the 40,000 acres that the Babcock Coal and Coke Company ultimately logged.

The sawmill at Landisburg was expanded to a double band mill in 1914, increasing its production to some 100,000 board feet per day. A barrel stave mill, a lath mill, and a planing mill supplemented the main mill for production of specialty lumber products. Total employment reached 300 men during the Babcock operation of Landisburg.

By 1929 Babcock had harvested all available timber on its 40,000-acre holdings, bounded roughly by the New River on the west, Bracken's Creek on the north, Loops Road on the east, and Danese on the south. Hemmed in by other large lumber operations and unable to secure further land leases or purchases, the Landisburg mill was closed on February 28, 1929, and the town was quickly deserted as its residents moved to other lumber operations.¹³⁹

Lumber Operations in Raleigh County. In his aforementioned study on forestry and wood industries for the West Virginia Geological Survey in 1910, A. B. Brooks described the forest conditions in Raleigh County prior to the coming of the lumber industry. Among other observations he noted:

This county, with its greatly diversified surface, has been and is still the natural home of many species of valuable timber trees. White pine once grew in abundance on about 50,000 acres lying at an elevation of from 2,500 feet to 3,000 feet on the waters of Glade creek and Piney river. This area, with its extension into Mercer county, formed one of the three principal bodies of white pine to be found within the state. Outside of the white pine belt, hemlock is the only softwood growing in large quantities. Yellow poplar and the oaks, principally white oak, are the most abundant of the valuable hardwoods. . . .

Brooks also discussed the operations of the early lumber industry in the county. He noted:

Little can be said concerning the early cutting of lumber in Raleigh county. The first lumber, sawed by hand and on 3 or 4 rude water saw mills, was used by the comparatively few early settlers for domestic purposes. Not until 10 years or more after the close of the Civil War were portable steam saw mills put into operation in the county. These, for a number of years, sawed but little. From about 1888, however, numerous mills of all sizes have been brought in. . . .

139. Lane and Schnepf, *Sewell*, pp. 19-23, and Peters and Carden, *History of Fayette County*, pp. 630-33.

Many of the owners of small mills who operated in the county several years ago met with only indifferent success and often failure. Mills were brought in and erected at great expense and the lumber frequently had to be hauled on wagons a distance of 20 or 25 miles to the railroad. To this excessive cost of manufacture and the lack of proper shipping facilities are attributable, chiefly, the results to operators mentioned above.

The principal shipping points for lumber have been Prince, McDonald and Raleigh, at first, and later the various stations along the Virginian railroad, and Surveyor on the Chesapeake and Ohio railroad.

Most of the large streams of Raleigh are too rough and rapid for the rafting or drifting of logs. A few were drifted out, however, on the Coal river waters, 20 years ago or more and a few at the same time on the waters of Paint creek.

At the time he prepared his study the lumber industry in the county was flourishing because of the construction of rail lines into the heart of its timber lands. Brooks noted:

With the completion of the Virginian railroad through the county in 1907, and with the extension of the Chesapeake and Ohio branch to Lester in the same year, the lumber industry was greatly increased. These railroads, with another branch of the Chesapeake and Ohio now being built from Pemberton down the Winding Gulf branch of Guyandot river, have entered the chief timber belt of the county. A band mill erected at Maben in Wyoming county in 1907 and the one at St. Albans, . . . are drawing their supply of logs from Raleigh county. These mills, including 3 band mills and numerous smaller mills now in operation, are making great inroads on the virgin forests. The combined capacity of all mills is not less than 60 million feet per year. If the cutting at this rate is continued for a few years the virgin areas will be cut over and the farmers' woodlots and the sparsely timbered areas ransacked for every valuable tree.

Based on his research, Brooks concluded that the county still had 117,600 acres of virgin forest. Some 112,500 acres consisted of cut-over forest, and the remaining 128,300 acres were cleared and woodlot lands belonging to farmers and other small property owners. Brooks observed further:

The virgin lands lie chiefly on the head waters of Piney river and on the waters of Guyandot in the southern part of the county, and on the waters of Big Coal river in the western part. Smaller areas are found in other places. The cut-over lands lie chiefly in the eastern part of the county. Large tracts are to be found, however, in the south-central, western and northwestern sections.

All the white pine has been taken out except an area of about 2,000 acres on Piney river, now being vigorously cut, and a very small area lying near to Beckley, the county seat. The parts of the white pine belt not frequently visited by fire are restocking with a good stand of young trees. On most of this area, however, especially south of Piney river, recent fires have killed all the young white pines that had made a start.

Forest fires, in general, have been most destructive on Beaver and Glade creeks and Piney river and on Clear Fork of Big Coal river. These burnt areas have only a meager growth of valuable young trees. Other cut-over lands have from 1,000 to 2,000 feet of merchantable timber per acre and a fairly good stand of young hardwoods.¹⁴⁰

Among the lumber concerns that conducted operations in the New River Gorge during the period between the late 1880s and 1910 were the Beatty Lumber Company and the Blue Jay Lumber Company. The former built a circular mill and cut white pine near Crow on Beaver and Glade creeks, while the latter established a band mill and cut over a large area of white pine and hemlock on Piney River and on Beaver and Glade creeks. These lumber operations gave rise to the establishment of lumber towns at Glade on the Fayette County side of the river and Hamlet on the Raleigh County side. These towns were apparently connected by a ferry until 1923 when a modern railroad bridge was constructed across the river.

Earlier in 1898 the Blue Jay Lumber Company, under the leadership of Azel Ford, constructed a three-foot narrow gauge railroad up Glade Creek to its sawmill at Glen Morgan, some 13 miles from a connection with the C & O mainline at Glade Station. The railroad was acquired by the Raleigh and South Western Railway in 1906 and later in 1910 by the C & O. Portions of its roadbed serve as a link in the Glade Creek Trail in present-day New River Gorge National River.¹⁴¹

By the late 1920s a sawmill had been established downstream from Hinton on the Raleigh County side of the New River in an area known as Longbottom just above Sandstone Falls. The sawmill was operated by the New River Lumber Company, a subsidiary of the Atlas Lumber Company of Cincinnati. The mill sawed hardwoods as well as some hemlock and spruce, producing an average of 35,000 board feet per day. A suspension bridge, constructed by the Board Lumber Company, connected the mill with the C & O mainline at a location also known as Longbottom on the Summers County side of the river. Wooden rail cars, pulled by a steel cable in the center of the track, carried the lumber on steel rails over the suspension bridge, each car carrying some 600 board feet of lumber. This operation closed during the mid-1930s.¹⁴²

Lumber Operations in Summers County. In his study on forestry and wood industries for the West Virginia Geological Survey in 1910, Brooks noted that the county "was not as well timbered, originally, as some of the other interior counties of the State." Much of the best timber, however, had been cleared by settlers and farmers before the lumber boom era of the late 19th century.

140. Brooks, *West Virginia Geological Survey, Volume Five, Forestry and Wood Industries*, pp. 257-61.

141. Roy Long and Gene Huddleston, "New River Crossings at Glade, West Virginia," *Chesapeake and Ohio Historical Magazine*, XXIV (May 1992), pp. 3-11; Roy C. Long, "Railroad Recollections: Glade and Hamlet, Villages of Yesteryear in the New River Gorge," *Hinton News*, 1991, Parts 1-5, "Glade and Hamlet," Newspaper Clippings in File, "H-14 Glade and Hamlet," historical files, NERI; and Huddleston, *Riding That New River Train*, pp. 85-86.

142. William E. Cox, *Life on the New River: A Pictorial History of the New River Gorge* (N.P., Eastern National Parks and Monuments Association, 1984), pp. 53-54.

Construction of the C & O Railroad paved the way for the beginning of large-scale lumbering in Summers County. Prior to the coming of the railroad there had been no shipment of logs or sawed lumber from the area, the timber cut being used almost exclusively for local purposes.

Beginning in the mid-1870s a large quantity of the best oak in the county was manufactured into split and sawed staves. Most of these wood products were sold to the Standard Oil Company through Theodore Arter, its purchasing agent who located at Hinton in 1875. In their 1876 study, entitled *Resources of West Virginia*, M. F. Maury and William M. Fontaine described the extensive lumber industry operations at Hinton:

. . . Some staves are . . . floated down from up New river, caught at Hinton and shipped by rail. . . Quite a large trade is carried on here in the lumber business. Large quantities of pipe staves of Oak, are shipped by rail to the East, and several thousand Walnut logs have been shipped both to the Eastern markets and to Europe, from the county within the last 18 months. There is a large saw mill at this point, owned by New York men, who ship pine (of a fine quality) lumber; also shingles, laths, etc. They deal extensively also in Poplar lumber and furnish the Chesapeake and Ohio Railroad, with railroad ties.¹⁴³

One of the first stave and lumbermen to enter Summers County was W. R. Johnston, a Pennsylvanian who established a mill on Beech Run and likely was the first to produce sawed oil barrel staves. The first split stave hogsheads made in the county were manufactured by Silas F. Taylor in the hollow known as Ben Bebbler (Van Bibber) on the headwaters of Lick Creek. Taylor and his sons floated the staves down Lick Creek to New Richmond (present-day Sandstone in New River Gorge National River) where they were loaded on Chesapeake & Ohio railroad cars for transshipment. Other early lumbermen in the county included M. Hutchinson in the lower Lick Creek area, J. Jones and sons along Laurel Creek, and the Grahams who established a mill at Keeney's Knob and hauled their sawed timber to New Richmond for shipment.

The first sawmill to operate at Meadow Creek (within the present-day New River Gorge National River boundaries) was established by a Mr. Moore from Pennsylvania, later to be succeeded by Benjamin F. Hall from Ohio and Owen Bearse, Jr., from Massachusetts. An extensive lumber operation was undertaken, and a tram railway was constructed several miles up the creek to transport the logs to the Chesapeake & Ohio Railroad mainline.

William James & Sons began lumber operations in the early 1870s, locating a mill on a pond in Avis near Hinton which was used for storing logs and boom purposes. Pioneers in the "boom" business, the firm soon floated its timber down the New River from dams it constructed across the Bluestone and Little Bluestone rivers to its mills at Avis. The firm continued to operate a large sawmill and a planing mill at Avis for more than 40 years.

A large lumber operation was begun by Evans & Company of Michigan in 1904 when the firm purchased 3,000 acres from the Barksdale family near Brooks, a village on the east side of New River within the present-day New River Gorge National River boundaries.

143. M. F. Maury and William M. Fontaine, *Resources of West Virginia* (Wheeling, West Virginia, The Register Company, Printers, 1876), p. 161.

Since the mid-1880s Barksdale had operated a lumber mill at Barksdale Station near Brooks along the C & O mainline.

During the early 1900s John W. Graham established a large planing mill at New Richmond along the C & O Railroad mainline. Oscar Honaker also engaged in the planing mill business at New Richmond and was later succeeded by the T. H. Lilly Lumber Company. Planing mills and lumber yards continued to operate at New Richmond and Brooks along the C & O mainline for more than a decade.¹⁴⁴

By 1910 the principal lumber enterprises in Summers County included a large band sawmill at Glenray and large circular sawmill at Hinton. In addition, several small stave sawmills operated in the county, and some 30 small mills were scattered throughout the county that operated irregularly, sawing small orders for area farmers.

The existing forest conditions in Summers County were described by Brooks in his aforementioned 1910 study. He observed:

There are about 3,800 acres of virgin forest remaining in the county. This lies in scattered areas of a few hundred acres each, principally on the waters of Bluestone river, in the southern part, and between Lick creek and Meadow creek on the north. One virgin area on the Bluestone, containing 200 acres, has about 60 per cent of white pine. In all the others hardwoods of various kinds predominate.

The cut-over forest lands comprise an area of about 7,800 acres. The largest area contains 4,000 acres and lies on Greenbrier river waters in the eastern part of the county. The other cut-over lands are scattered, like the virgin areas, in the southwestern, western, and northern sections.¹⁴⁵

PROPERTY TYPES

Introduction

The lumber industry had a significant impact on the natural landscape of West Virginia, especially between the early 1880s and the late 1910s. This was also true for the southern part of the state — a heavily-timbered area that includes New River Gorge National River. After completion of the C & O Railroad through the gorge in 1873, the area's extensive timber resources were exploited by large-scale logging operations, devastating the region's forest lands. Despite the historic impact of the lumber industry on the natural environment, however, its material legacy in the gorge is virtually non-existent, because of the transient nature of the industry and its extensive use of portable structures for logging operations.

144. James H. Miller, *History of Summers County: From the Earliest Settlement to the Present Time* (Parsons, West Virginia, McClain Printing Company, 1908), pp. 785-88.

145. Brooks, *West Virginia Geological Survey, Volume Five, Forestry and Wood Industries*, pp. 273-76.

Typology of Known and Expected Property Types

The typology of known and expected types for the lumber industry context includes:

1. Primary Production Facilities
 - a. Tree stumps
 - b. Cutting machinery and equipment
2. Secondary Production Facilities
 - a. Sawmills
 - b. Buildings, structures, and objects associated with lumber production
 - c. Sawmill plant internal transportation facilities
 - d. Lumber yards
3. Transportation Facilities
 - a. Railroad tracks, sidings, yards, and support structures
 - b. Rolling stock
 - c. Roundhouses, stations/depots, repair shops, offices
 - d. Logging roads and trails and associated structures
4. Logging Camp Facilities
 - a. Dormitories/bunkhouses with kitchens and dining rooms
 - b. Superintendent's/foreman's residences
 - c. Offices and ancillary outbuildings for management
 - d. Shops and outbuildings associated with maintenance and storage of equipment
5. Lumber Towns
 - a. Houses and ancillary outbuildings
 - b. Company stores
 - c. Community buildings
 - d. Private manufacturing/commercial buildings
6. Buildings in Incorporated Towns Associated with the Lumber Industry
 - a. Residences of lumber operators and managers and ancillary outbuildings
 - b. Residences of loggers and ancillary outbuildings
 - c. Private manufacturing/commercial buildings
 - d. Community buildings
 - e. Residences of railroad workers and ancillary outbuildings
 - f. Residences of railroad administrators and ancillary outbuildings

Known and Expected Distribution of Property Types

Primary Production Facilities. A logging operation is literally a manufacturing plant that devours the raw materials it harvests. Much of the primary production site, the trees in the logged area itself, have been removed and processed into a variety of timber by-products or burned as fuel. The logged area is generally denuded, the only remaining vestiges being the stumps of the cut trees. Denuded forest landscapes, however, are renewed over time as a result of natural forest regeneration. The primary production

machinery — the machines and equipment used to cut, saw, and load the felled trees — are portable so they can be taken to other logging operations once an area has been cut. Thus, little of this machinery and equipment is left at the site of a logging operation once it has been completed. Fragments of the machinery and equipment which may remain at the site are generally in ruinous conditions, having been scrapped or forgotten. These remnants are not commonly considered properties or sites.

Secondary Production Facilities. The most apparent remains of logging operations include sawmills as well as buildings, structures, and objects associated with lumber production at the mill site. The mills and associated support structures were designed to take raw-cut logs and manufacture wood products, such as barrel staves and lumber, for use by the coal mining and railroad industries or shipment to urban industrial centers in the eastern United States.

Sawmill plant transportation facilities consist of rail lines and rolling stock for movement of logs and lumber products between different points within the sawmill plant. Lumber yards, which include facilities for storing, loading, and skidding logs and lumber products, are an adjunct facility to sawmill plants.

The machinery associated with sawmills was portable, thus permitting it to be moved to new logging operations once an area was logged out. The structures associated with a mill site plant were also portable-type frame structures that could be easily dismantled and reassembled at a new site.

Since sawmills and related structures at the mill site were generally portable to accommodate the needs of the transient lumber industry, it is questionable whether any original secondary production facilities can be found, except perhaps in isolated areas of the gorge. Although no identified secondary facilities associated with the lumber industry have been found in New River Gorge National River to date, any remnants that might be found are likely to be in ruinous condition and their physical features and historic functions difficult to identify.

Transportation Facilities. Lumber was a bulk commodity in which transportation was essential both for production and marketing. Historically, many of the railroad companies played large roles in the development of the lumber industry in the New River Gorge region. The Chesapeake and Ohio was the primary railway line through the gorge, thus providing a means of transporting lumber products to markets throughout the eastern United States. Smaller branch and subdivision lines, many of which were built by independent companies and later taken over by the C & O and other large transportation conglomerates, played a key role in the lumber industry by transporting raw and finished timber products both to sawmills and the C & O mainline. Railroad tracks, sidings, and yards are easily located, while former railroad rights of way from which tracks have been removed are valuable as a resource in "rails to trails" initiatives. Rail lines in southern West Virginia were always the most direct path to logging operations or sawmills, following the most level contours of the rugged landscape. Rolling stock, including rail cars and locomotives, are basic to transportation. Roundhouses, stations/depots, repair shops, and ancillary support structures, especially in the service towns, have a high probability of survival.

Logging roads and trails (and associated structures), which provided access for men and materials between logging operations and lumber camps and towns as well as between timber-cutting sites and sawmills, were essential to the development of the lumber industry. These roads, however, were generally abandoned after logging operations ceased. Thus, many of the logging roads have been subject to erosion and dense overgrowth, making them difficult to locate and identify.

Logging Camps. Logging camps were established near the lumber operations for the loggers who spent the week in the forests felling trees and preparing the logs for shipment to sawmills. These camps included dormitories/bunkhouses with kitchens and dining rooms to house and feed the loggers, a residence for the superintendent/foreman, offices and ancillary outbuildings for management, and various shops and outbuildings associated with maintenance and storage of equipment.

Structures associated with logging camps were generally portable to accommodate the needs of the transient lumber industry, it is questionable whether any original logging camp facilities (or easily identifiable remnants thereof) can be found, except perhaps in isolated areas of the gorge. Although no logging camp features or sites have been found in New River to date, any remnants that might be found are likely to be in ruinous condition and their physical features and historic function difficult to identify.

Lumber Towns. While logging camps were built for the loggers who spent the week in the forests, the lumber towns were constructed by lumber companies to serve as base camps for extensive logging operations over a wide area. Although several coal company towns in the New River Gorge region had sawmills to cut timbers for use in the mines and to prepare lumber for buildings, three principal towns in the area — Landisburg, Glade, and Hamlet — were built by lumber companies. Lumber towns contained permanent residences for workers and managerial personnel at sawmills as well as for the loggers and their families. Located in the towns were company stores, general offices of the lumber company, community buildings such as schools and churches, and private manufacturing/commercial buildings to provide necessary services for their inhabitants.

To date no extant examples of lumber town buildings have been located and identified. Only a few ruins and broken foundations remain. Much of the material legacy of the lumber industry in New River Gorge has simply vanished since the passing of the timber era's heyday from the 1880s to the 1910s.

Buildings in Incorporated Towns Associated with the Lumber Industry. Part of the legacy of the lumber industry in southern West Virginia are the lives and architecture of the timber operators, many of whom lived in the major service towns in the region. Many residences of these operators and managers remain, but locating them and clearly identifying them with a specific personality may prove difficult. Residences of loggers in the service towns were unusual in the early period, since most lived in lumber towns during the most active years of the timber industry in the New River Gorge region. However, some may remain, if only from the later period.

Because the railroad industry was associated with the development of the lumber industry, buildings located in railroad towns are included under this property type. Private manufacturing/business buildings in the major service towns in the region tended

to be substantial structures and thus a significant number that possess integrity remain. Community buildings, such as churches, are usually easy to locate, but some have been modified or have deteriorated to such an extent that they have lost much of their integrity. Data concerning the known and expected distribution of residences of railroad workers and administrators is similar to that for coal operators/managers and miners.

Present Conditions of Property Types

Many historic properties related to the lumber industry in New River Gorge National River are best described today as historic archeological sites. Abandoned lumber operations, including their production facilities and associated logging camps and lumber towns, which might have survived as "ghost towns" in a different environment, have deteriorated rapidly in the humid New River climate. Most structures associated with the lumber industry were designed to be short-lived, portable, and meet pragmatic operational objectives, and many were constructed to provide for simple construction and quick dismantling and movement to new sites once lumbering operations ceased in a given area. Machinery for sawmills was portable and moved from area to area throughout the region with the ebb and flow of lumbering operations. Some historic lumbering sites in New River Gorge National River are located in areas where various forms of industrial or transportation system activities have occurred until the present time. In these areas, historic resources have often been removed as modern machinery or technology has replaced older equipment.

All historic properties associated with the lumber industry have been subjected to vandalism, salvage by area residents, and "pot-hunting" by artifact collectors, as well as the destructive effects of rapid and dense vegetative growth. Surveys have found no examples of extant lumber industry structures in New River Gorge National River; only a few ruins, broken foundations, and logging roads/trails remain. In the most isolated sections of New River Gorge, many sites associated with lumbering operations have disappeared entirely and have virtually returned to their preindustrial state.

While there are few historic properties associated with lumber industry in New River Gorge National River, several significant lumber sites are located on tributaries of the New River. The largest and most important lumber mills to be established on the New's tributaries were the Meadow River Lumber Company at Rainelle on the Meadow River and the Cass Lumber Mill at Cass on the Greenbrier River. Because it is essentially unaltered, Cass is a superb example of such a lumber town complete with mill structures and associated railways built during the decades when the lumber industry flourished in West Virginia. It is one of the few sites remaining that has extant structures and equipment associated with lumbering on a large scale. The Cass mill and associated structures have been rehabilitated and restored during the 1970s and 1980s by the State of West Virginia as a part of Cass Scenic Railroad State Park.

TABULAR SUMMARY OF MANAGEMENT INFORMATION

This tabular summary of management information includes key data for each historic property related to the lumber industry context in New River Gorge National River that

has been surveyed by the cultural resources management staff of the former Mid-Atlantic Regional Office. During fiscal year 1992, a survey by MARO was conducted of structures acquired by the National Park Service from 1982 to 1992 to begin the draft List of Classified Structures for the national river. Information on each structure (including structural landscape features and ruins) was collected from land acquisition records, local histories, journals, newspapers, and oral interviews. Compilation of information for the draft LCS is an ongoing process.

Data for the structures listed in the tabular summary is from the draft LCS. This information will change as further studies and fieldwork are undertaken and Determinations of Eligibility and National Register of Historic Places nominations are completed. The names of the structures in the tabular summary were given at the time of the fieldwork and often represent the name of the most recent owner of the property rather than a historic name. Some of the structures' names will change as a result of the research for this historic context study as well as research that may be undertaken in the future.

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
None	None	River Road (portion of WV 26)	Hinton to Sandstone (east bank of New River)	Asphalted road in historic road alignment	3d	Not evaluated
None	None	Glade Creek Road	Glade Creek drainage	Graveled road cut	3d	Not evaluated
None	None	Mill Creek Bridge	Parallel and adjacent to Glade Creek Road, spanning Mill Creek	Unstabilized ruin	3d	Not evaluated
N-001	80364	Pugh House	Thurmond	Standing structure	6f	Listed (1-27-84)
N-002	80340	Mankin-Cox Building	Thurmond (NERI Tract 164-27)	Standing structure	6c	Listed (1-27-84)
N-003	80365	Goodwin-Kincaid Building	Thurmond (NERI Tract 164-27)	Standing structure	6c	Listed (1-27-84)
N-004	80341	National Bank of Thurmond	Thurmond (NERI Tract 164-27)	Standing structure	6c	Listed (1-27-84)
N-006	80447	Stone Structure	Thurmond (NERI Tract 164-27)	Standing structure	6c	Listed (1-27-84)
N-007	80366	Erskine Pugh House, Rental	Thurmond	Standing structure	6e	Listed (1-27-84)
N-008	80367	Thurmond Passenger Depot and Offices	Thurmond	Standing structure	3c	Listed (1-27-84)
N-009	None	Baptist Church (Black Church)	Southside Junction	Standing structure	6d	Not evaluated
N-079	None	Trestle No. 1, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated
N-080	None	Trestle No. 2, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated
N-081	None	Trestle No. 3, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated

CHAPTER FOUR: LUMBER INDUSTRY HISTORIC CONTEXT

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
N-082	None	Trestle No. 4, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated
N-083	None	Trestle No. 5, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Standing structure	3a	Not evaluated
None	None	Railroad Tracks and Ties, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Unstabilized ruin	3a	Not evaluated
None	None	Railroad Directional Markers, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Unstabilized ruin	3a	Not evaluated
None	None	Bridge Supports, Thurmond-Minden Trail	Between Thurmond and Minden (NERI Tract 144-11 and/or 140-08)	Unstabilized ruin	3a	Not evaluated
N-168	81342	Philip McClung House	Thurmond (Tract 165-09)	Standing structure	6e	Listed (1-27-84)
N-169	81343	Philip McClung House, Rental	Thurmond (Tract 165-12)	Standing structure	6e	Listed (1-27-84)
N-170	81344	Philip McClung House, Home Place, Rental	Thurmond (Tract 165-13)	Standing structure	6e	Listed (1-27-84)
N-179	81345	Tom Kelly House	Thurmond	Standing structure	6e	Listed (1-27-84)
N-181	81346	Sid Childers/Margie Richmond House	Thurmond	Standing structure	6e	Listed (1-27-84)
N-182	81347	Fatty Lipscomb House	Thurmond	Standing structure	6e	Listed (1-27-84)
N-182A	81354	Fatty Lipscomb's Retaining Wall	Thurmond	Unstabilized ruin	6e	Listed (1-27-84)
N-182B	81353	Fatty Lipscomb's Yard Fencing	Thurmond	Unstabilized ruin	6e	Listed (1-27-84)
N-183	82348	Marilyn Brown House	Thurmond	Standing structure	6e	Listed (1-27-84)
N-186	81349	Sidney Ward House	Thurmond	Standing structure	6e	Listed (1-27-84)
N-190	81350	Homer Nicely/Charles H. Ashley House	Thurmond	Standing structure	6e	Listed (1-27-84)
N-191	81351	Ashley Garage	Thurmond	Standing structure	6e	Listed (1-27-84)
N-193	81352	Ashley Shed	Thurmond	Standing structure	6e	Listed (1-27-84)
S-052	80356	Prince Brothers General Store (Berry Store)	Prince (NERI Tract 155-30)	Standing structure	6c	Listed (4-17-86)
S-054	None	Thomas Bowles Greenhouse	Quinnimont (NERI Tract 128-01)	Standing structure	6e	Not evaluated
S-055	None	Thomas Bowles Outhouse	Quinnimont (NERI Tract 128-01)	Standing structure	6e	Not evaluated
S-056	None	Thomas Bowles #1 Storage	Quinnimont (NERI Tract 128-01)	Standing structure	6e	Not evaluated
S-057	None	Thomas Bowles #2 Storage	Quinnimont (NERI Tract 128-01)	Standing structure	6e	Not evaluated
None	None	Thomas Bowles Hogpen	Quinnimont (NERI Tract 128-01)	Standing structure	6e	Not evaluated

Tabular Summary of Management Information

PARK STRUC-TURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
S-058	None	Judy Bowles House	Quinnimont (NERI Tract 128-01)	Standing structure	6e	Not evaluated
S-059	None	Robert Bowles House	Quinnimont	Standing structure	6e	Not evaluated
S-060	None	Robert Bowles Chicken House	Quinnimont	Standing structure	6e	Not evaluated
S-061	None	Robert Bowles Garage	Quinnimont	Unstabi-lized ruin	6e	Not evaluated
S-062	None	Robert Bowles #1 Storage	Quinnimont	Standing structure	6e	Not evaluated
S-063	None	Robert Bowles #2 Storage	Quinnimont	Standing structure	6e	Not evaluated
S-064	None	Robert Bowles Outhouse	Quinnimont	Standing structure	6e	Not evaluated
S-065	None	Opal Kessler House	Quinnimont (NERI Tract 128-01)	Standing structure	6f	Not evaluated
None	None	Opal Kessler Chicken Coop	Quinnimont (NERI Tract 128-01)	Unstabi-lized ruin	6f	Not evaluated
None	None	Opal Kessler Water Tanks	Quinnimont (NERI Tract 128-01)	Standing structure	6f	Not evaluated
S-069	None	Samuel Plumley #1 Storage	Quinnimont	Standing structure	6f	Not evaluated
S-070	None	Samuel Plumley #2 Storage	Quinnimont	Standing structure	6f	Not evaluated
None	None	Samuel Plumley Fowl Barn	Quinnimont	Standing structure	6f	Not evaluated
None	None	Samuel Plumley Ruins/Foundations	Quinnimont	Unstabi-lized ruin	6f	Not evaluated
None	None	Samuel Plumley Walkway	Quinnimont	Unstabi-lized ruin	6f	Not evaluated
None	None	Quinnimont Church	Quinnimont	Standing structure	6d	Not evaluated
S-071	None	Willis House	Quinnimont (NERI Tract 128-01)	Standing structure	6f	Not evaluated
None	None	Prince Brothers Residential Property Fence	Prince (NERI Tract 155-30)	Standing structure	6c	Not evaluated

CHAPTER FIVE: EURO-AMERICAN SETTLEMENT/ AGRICULTURE HISTORIC CONTEXT

NARRATIVE HISTORY

Summary

Geographic Boundaries: New River Gorge National River
Chronological Period: 1790s - 1940s

The historic context for Euro-American settlement/agriculture in New River Gorge National River focuses on the settlement of the New River region by European-American pioneer farm families beginning in the 1790s and the subsequent development of a rural agricultural society in the isolated and remote New River area. The coming of the C & O Railroad in 1873 brought significant changes to the settlement patterns and rural agricultural character of the New River Gorge region. The railroad opened the gorge and surrounding area to the coal and lumber industries, and the captains of those extractive industries wasted little time in commencing the exploitation of the mineral and natural resource wealth of the region. The farmers in the gorge area, some of whom had been on the land for generations, were driven toward the ridges, thus exaggerating the settlement patterns established earlier by population pressures. Many of the farmers later returned to the valleys, but they did so on the terms of the new industrial society which invaded the region, coming back as miners, lumbermen, and railroad workers.

Overwhelmed by the industrialization of the region, agriculture has continued in a reduced role as a component of the area's socioeconomic structure. Much of the population in the New River Gorge region today has descended from the early pioneer stock that clung to the old farms or were natives who remained to work the mines, cut the forests, and operate the railroads.

Introduction

This historic context for Euro-American settlement/agriculture in New River Gorge National River is based in part on a study prepared by Paul D. Marshall & Associates, Inc., of Charleston, West Virginia, in 1981. Volume II of this study entitled, *A Cultural Research Project: The New River Gorge National River, West Virginia* (pp. 135-43), provides a historical overview of the principal themes and resources related to settlement/agriculture within the boundaries of New River Gorge National River.

Historic Development of Euro-American Settlement/Agriculture in Its National and State Contexts

Early Exploration. Prior to European exploration and settlement of present-day West Virginia, the area had been inhabited by Native American groups.¹⁴⁶ The earliest European exploration west of the Alleghenies in the area of West Virginia resulted from attempts to find transportation routes, hopefully navigable river routes, from the eastern seaboard through the mountains to the "South Sea," thereby presumably providing a route to the Indies. During one of the attempts to find a route to the "South Sea," the upper course of the New River reportedly was first discovered in 1641 by a group of English explorers including Walter Austin, Rice Hoe, Joseph Johnson, and Walter Chiles.

The most significant of the early exploration expeditions in present-day West Virginia, however, occurred in the autumn of 1671 and was sent out from Fort Henry, the present site of Petersburg, Virginia, by Major General Abraham Wood. Governor William Berkeley of Virginia commissioned Wood, who had explored the New River in 1654 and established Indian trading posts in the region, to reconnoiter west of the Alleghenies "for the finding out the ebbing and flowing of ye South Sea or of the water on the other side of ye mountains." Unable to make the trip himself, Wood dispatched an expedition consisting of Thomas Batts, Thomas Wood, Robert Fallam, Jack Neasam (an indentured servant of Wood), and several Appomattox Indian guides, including Perecute. They followed the Roanoke and Staunton rivers to the area of present-day Roanoke, Virginia, where they left Thomas Wood, who had become ill, at a village of friendly Tutelo Indians.

Beyond the Alleghenies they came upon a stream which, unlike others known to them, flowed westward rather than eastward toward the Atlantic Ocean. Sensing the significance of their discovery, they held a ceremony during which they formally took possession of all lands drained by the river's waters for the English crown. They named the new-found stream Wood's River in honor of Abraham Wood, but in time it would become known as New River.

Excited by their discovery, Batts and Fallam continued along the New River to a waterfall or rapids before turning homeward. Fallam kept a journal of their progress in which he described the country through which they passed and noted the miles they traveled each day. Careful study of the journal indicates that Batts and Fallam reached Peters' Falls near the present Virginia-West Virginia border, rather than the falls of the Kanawha as some writers have suggested. Although Batts and Fallam believed erroneously that they had found a route to the Indies, their discoveries had international implications because they were used in later years by England as a means of claiming the entire Ohio River Valley and its tributaries, including the New and Kanawha rivers, for Great Britain.

Following this earliest documented expedition and perhaps even years earlier, the lucrative potential for the fur trade as well as trade with trans-Allegheny Indians brought other European adventurers into present-day West Virginia and the region of New River Gorge National River. French traders visited the Ohio Valley during the late 17th century,

146. For more information on Native American habitation and activities in West Virginia and New River Gorge National River, see Paul D. Marshall & Associates, Inc., *A Cultural Research Project: The New River Gorge National River, West Virginia* (Charleston, 1981), Volume I.

and there is little doubt that some of them ventured into present West Virginia. Traders from other colonies along the eastern seaboard, who engaged in commerce with the Shawnee and Delaware, also visited the West Virginia region during the late 17th century.

The explorations of the fur traders and land seekers did much to provide information to settlers who later moved into the West Virginia area. These settlers would play a significant role in making West Virginia and the Ohio Valley English rather than French.¹⁴⁷

Early Settlement. While the reports of the early explorers encouraged settlement of present-day West Virginia, the activity of Governor Alexander Spotswood of Virginia was largely responsible for the movement of settlers into the western part of the colony. Spotswood visited the region in 1716 and brought back glowing reports of the land and its resources. The first settlers in the area were Welsh, Scotch-Irish, and German pioneers, who as early as 1719 came by way of Pennsylvania and Maryland, crossing the Potomac River near Shepherdstown. Although there are suggestions of earlier settlements, the first resident of record in present West Virginia was Morgan ap Morgan, a Welshman who moved west from New Castle County, Delaware, to Mill Creek near Bunker Hill in present Berkeley County in the eastern panhandle region about 1731.

Almost simultaneously with the Morgan settlement, German families began to establish themselves along the south bank of the Potomac and in the valleys to the southward. Their first settlement was at Mecklinberg, now Shepherdstown, West Virginia. By the time of the French and Indian War (1754-63), several thousand settlers, chiefly of German, Scotch-Irish, and English stock, had entered the eastern panhandle region, attracted by excellent farmland, bountiful hunting prospects, and the promise of religious toleration.

The first recorded settlement west of the Alleghenies in what is now West Virginia was established long the Greenbrier River in Pocahontas County near the present site of Marlinton by Jacob Marlin and Stephen Sewell in 1749. After the two partners argued about religious beliefs, they separated and Sewell explored regions to the south. In 1751, he crossed over the Big and Little Sewell Mountains, exploring Sewell Creek. Somewhere in the isolated region of present-day southern West Virginia, he is said to have been killed by Indians. Another early settlement in West Virginia was established in 1753 by Andrew Culbertson at Culbertson's or Crump's Bottom, now partially submerged under Bluestone Lake, south of New River Gorge National River.

Early in 1747 the Ohio Company was organized as a land speculation enterprise to promote settlement of the trans-Appalachian area, and in 1749 the company was granted some 500,000 acres in the area bounded by the Ohio and Great Kanawha rivers and the Allegheny Mountains on condition they be settled and a fort built. During the same period, the Loyal Company was granted 800,000 acres beginning on the line between Virginia and North Carolina, and the Greenbrier Company was granted 100,000 acres along the Greenbrier River.

147. Rice, *West Virginia: A History*, pp. 12-13; Rice, *West Virginia: The State and Its People*, pp. 22-26; and Peters and Carden, *History of Fayette County*, pp. 46-56. For more data on this subject, see David C. Roller and Robert W. Twyman, eds., *The Encyclopedia of Southern History* (Baton Rouge and London, Louisiana State University Press, 1979), pp. 1322 ff.

Christopher Gist was employed by the Ohio Company to reconnoiter and seek out good lands along the Ohio River and its tributaries, and during one of his journeys in 1750 descended the Ohio River from the Forks of the Ohio to the Falls of the Ohio at present Louisville, Kentucky. In late 1751, he explored much of central West Virginia between the Monongahela and the Kanawha and New rivers. He traveled down the Ohio River to the mouth of the Great Kanawha and ventured up that watercourse to the New and on to the mouth of the Greenbrier. Following a trail to the west of New River Gorge, Gist crossed the New River at Crump's Bottom.

The conclusion of the French and Indian War in 1763 determined English dominance of the territory now embraced by West Virginia. After Six Nations claims to most of trans-Allegheny West Virginia were extinguished by the Treaty of Fort Stanwix in 1768, settlers began to occupy the Monongahela, Kanawha, and Ohio valleys and the intervening hill country.

Frequent Shawnee raids in present Mercer and Greenbrier counties and the bordering counties of Virginia continued during the American Revolution. Thus, the settlers suffered repeated attacks from British-led Indian detachments resulting in abandonment of many settlements.

Following the American Revolution, the first plan for conquering the mountains and drawing the Ohio Valley and its tributaries into the economic orbit of eastern Virginia was proposed by George Washington to Governor Benjamin Harrison in 1784. Partly as a result of Washington's recommendations, the Virginia legislature, in 1785, established two internal improvement companies, one of which was the James River Company. Later known as the James River and Kanawha Company, this organization was charged with improving the James and Kanawha rivers and connecting them with a road that would facilitate communication and settlement. In 1790 the company completed a route, known as the Old State Road, from the James River to Kanawha Falls, and in 1800 it extended this thoroughfare to the Ohio River.

The area of present-day West Virginia was settled rapidly after the American Revolution. The first federal census of 1790 enumerated some 55,000 persons living in what is now West Virginia, and by 1800, the population had increased to some 78,000, nearly half of whom lived on the west side of the Alleghenies. Thus, by 1800, the settlements were sufficiently strong to fight off Native American raiding parties.

The Alleghenies played a significant role in determining the patterns of exploration and settlement of the transmontane West, but they exerted even more enduring effects in molding the features of pioneer life and in shaping the political, social, and economic thought of those who settled in their midst. In these upland regions, an unusually stubborn and unyielding nature imposed an abnormally prolonged frontier environment upon settlers and firmly implanted customs, folkways, lifestyles, and attitudes commonly associated with the American pioneering experience. The confining mountains and lack of broadly unifying river systems discouraged easy communication in early times and fostered a high degree of particularism among the people. With more than 20,000 of its 24,000 square miles lying within the Allegheny Highlands, present-day West Virginia was more completely a part of and bore more indelibly the stamp of this mountain frontier than any other state.

The lifestyles and folkways of the settlers in present West Virginia long remained distinctive features of their culture and later contributed to the ultimate separation of the state from Virginia during the Civil War. Neglected by the churches in the eastern seaboard colonial settlements and strongly influenced by the Great Awakening, the pioneer settlers severed former religious ties and became predominantly Methodist and Baptist. Politically they evinced an ardent nationalism, caused in part by the federal government's success in dealing with the Indians, its diplomatic accomplishments in Jay's Treaty (1794) and Pinckney's Treaty (1795), and purchase of Louisiana (1803). The nationalistic spirit was strengthened by the War of 1812, which stimulated western industry and gave rise to a need for internal improvements, banking facilities, and tariff protection. Completion of the National, or Cumberland, road, closely paralleling the northern boundary of the future state in 1818 brought in many new settlers as part of the growing nation's westward movement.¹⁴⁸

Agricultural Development: Late 18th Century to the Civil War. The vast forests that originally covered West Virginia provided cover for a great variety of game animals, ranging from bears, deer, and elk to small quarry, such as squirrels and wild fowl. From forest trees came various types of nuts as well as wild fruits, smaller plants added blackberries, raspberries, blueberries, wild grapes, and other delicacies to the pioneer diet. Matching the forests in their abundance were the streams which teemed with numerous kinds of fish.

Although most families began to clear land for crops immediately, they continued to rely on the forests and streams for part of their sustenance. The natural abundance and the difficulty in setting the plow to the land appear to have attracted to West Virginia a disproportionate number of the class of settlers that Frederick Jackson Turner, the noted frontier historian, called "pioneer farmers." These restless souls seldom remained in one place more than a few years. They lived chiefly by hunting and raising rangy cattle and razorback hogs, which they turned loose to feed upon natural grasses and the mast of the forests. They limited their agricultural production chiefly to corn and a few garden vegetables. They sought the advantages of the land and were wasteful of its seemingly unlimited resources.

Whereas "pioneer farmers" usually left their wilderness homes after a few years for greener pastures, the permanent settlers, the numbers of whom increased markedly during the early 19th century, had hopes of taming the wilderness and gazing upon their own teeming fields and hardy flocks and herds. Although many early settlers long relied upon the forests and streams for food, most turned increasingly to the produce of their lands. After building a crude cabin, the settler cleared a plot for a cornfield by girdling trees, which he later cut, and removing the undergrowth. Even before he grubbed out the stumps, which might require two or three years, he planted a crop of corn. The staff of pioneer life, corn was ground into meal for bread, including corn pone and johnnycakes, and served as roasting ears, hominy, mush, and dozens of other dishes. It provided feed for livestock and was the base of the common "hog and hominy" diet. The planting of wheat had to wait until stumps had been removed, and the soil had lost some of the

148. Otis K. Rice, "History of the New River Gorge Area," Typescript, Montgomery, West Virginia Institute of Technology, [1986], historical files, NERI, and Otis K. Rice, *The Allegheny Frontier: West Virginia Beginnings, 1730-1830* (Lexington, University Press of Kentucky, 1970), pp. 1-2.

nutrients that caused the grain to mature without forming a head. Oats, rye, and buckwheat, the latter grown chiefly in present Preston and Greenbrier counties, were other common grains. Potatoes, beans, squash, pumpkins, and other garden vegetables relieved some of the monotony of mealtime fare.

Permanent settlers bore the hardships and privations of frontier life, but generally aspired to replace the most primitive conditions and return to more sophisticated and comfortable ways as soon as possible. With industry and good fortune, their farms could be made to produce a variety of articles that might be sold for cash or traded for needed supplies or even luxuries. Bulky or perishable products could not be transported by packhorse, flatboat, or canoe to distant towns, but corn and rye could be made into whiskey, peaches into brandy, and apples into cider. Ready markets existed for these products, as well as for tallow, furs, hides, saltpeter, ginseng, and many native roots. During the early 19th century, western residents annually began to drive thousands of head of livestock, chiefly cattle and hogs, to eastern markets, such as Baltimore and Philadelphia.

Cash crops and various native products enabled the settler to acquire gunpowder, rifles, salt, and bar iron, but they also provided him and his family with their first luxuries. These items included linen, cloth, buttons, needles, thread, salt, pepper, chocolate, ginger, coffee, dishware, guns, knives, padlocks, and saddles.

The population of present West Virginia continued to increase during the several decades preceding the Civil War. Between 1820 and 1850, the white population increased from almost 177,000 to more than 302,000, while the black population grew more slowly, increasing by only five percent during the 1820s and 11 percent during the 1830s. The 1850s witnessed a population increase of nearly 75,000, with counties served by the Baltimore and Ohio Railroad and navigable rivers scoring the largest gains. The slave population declined from 20,500 in 1850 to less than 18,000 in 1860, and during the same period the number of free blacks increased from slightly more than 2,000 to almost 3,000.

Throughout the antebellum period economic life in West Virginia centered on agriculture. The amount and distribution of rainfall, length of the growing season, retention of moisture and soil fertility by vast forestlands, and rich lands along streams and in mountain valleys favored the cultivation of a wide variety of crops and the promotion of animal husbandry. Except for a few sections, notably the eastern panhandle where large landowners with diversified plantations made use of slave labor, most of West Virginia remained a land of yeoman farmers. While some farmers had prosperous holdings, farms in the recesses of the mountains were often of marginal quality and provided little more than mere subsistence for the settlers.

Although tied to agriculture, West Virginians perceived something of the economic possibilities of coal, timber, iron, salt, clay, and other resources. Inadequate investment capital, critical problems in transportation by both land and water, the absence of developed markets, and in some areas shortages of labor seriously retarded the development of natural resources. When West Virginia became a state in 1863, industry was yet in its infancy, but salt, timber, coal, and iron production even then offered a glimmer of a future in which the industrial sector of the economy would take precedence over agriculture.

The simple agrarian-woods economy of pioneer times continued to satisfy many West Virginia families during the antebellum period, but most aspired to a more comfortable existence. Their aspirations required greater attention to horticulture and stock raising and production of marketable products. German farmers set a worthy example for improvement of agricultural practices. Unlike others, who depleted the soil through wasteful methods, they attempted to preserve its fertility and made successive planting on tracts for fifteen years or longer. They sheltered and fed their livestock in winter and gave special attention to the construction of their barns.

Although improvements were introduced in agricultural practices, farming changed little in most mountainous areas of West Virginia prior to the Civil War. During the several decades before the outbreak of hostilities promoters of scientific agriculture decried the continuing rudimentary level of agriculture practice in present-day West Virginia.¹⁴⁹

Agricultural Development: 1860s-1900. When West Virginia entered the Union in 1863, it was a fairly homogenous rural state, with about 80 percent of its people engaged in general agriculture, including both horticulture and animal husbandry. A white population of approximately 335,000 was augmented by 13,000 black slaves and 3,000 free blacks. The subsequent incorporation of Jefferson and Berkeley counties raised the total white population to about 380,000, and the slave to about 18,000. By 1870 the total population had grown to more than 442,000, which included less than 18,000 blacks. The foreign-born population was less than 17,000, of which number 60 percent were natives of German states and Switzerland and 30 percent of Ireland.

Agriculture continued to be the chief economic dependence of West Virginians. The average size farm, 214 acres, was comparatively large in 1869, and West Virginians owned 2,600,000 acres of improved land. The total value of their farm property, including implements, was in excess of \$100,000,000, and the value of farm products exceeded \$23,000,000.

Corn was the most important crop, but wheat, oats, hay, particularly timothy and bluegrass, and potatoes were also produced in abundance. Small acreages were put to rye, and buckwheat flourished in higher elevations in Greenbrier and Preston counties. Tobacco, which had thrived in southwestern sections before the war, had begun to decline because of labor shortages and soil depletion. Sorghum, or Chinese sugar cane, was grown in most sections and converted into molasses, which was consumed at home. Maple sugar and maple syrup continued as important farm-related products.

Wheat and livestock dominated the marketable farm products of West Virginia. Wheat production gave rise to numerous flour mills along the upper Ohio River and the South Branch of the Potomac. Those on the Ohio shipped flour to Pittsburgh, Cincinnati, Louisville, New Orleans, and other inland cities, and those in the Potomac section supplied Washington, Alexandria, and other eastern centers. Baltimore, Richmond, Pittsburgh, and Cincinnati provided important markets for West Virginia livestock. The

149. *Dictionary of American History*, Vol. VII, pp. 281-82; Rice., *Allegheny Frontier*, pp. 1-32; Ambler and Summers, *West Virginia: The Mountain State*, pp. 26-37, 54-57, 118-19, 153-54, 175-76; Rice, *West Virginia: A History*, pp. 12-14, 18-19, 57-60, 80-81, 101-02; Rice, *West Virginia: The State and Its People*, pp. 22-36, 78-87, 273-76; and Thomas, "Coal Country," pp. 11-16.

western market for West Virginia whiskey declined as the temperance movement gained momentum in the United States. While insufficient attention to scientific practices hampered the development of commercial agriculture, improvements in strains of livestock and fruit growing were undertaken during the 1850s and 1860s.

After devastating setbacks during the Civil War, West Virginia agriculture revived rapidly with the return of peace. Between 1869 and 1879, the number of farms increased from 40,000 to 63,000, the number of acres of improved land rose by more than 1,000,000, and the value of farm lands increased by more than \$31,500,000. Average farm size, however, decreased from 214 to 173 acres, indicating a trend toward more intensive forms of agriculture. With the lifting of the depression in the late 1870s, the increased use of commercial fertilizers in the 1880s, the introduction of improved farm machinery, and greater attention to improvement of seed and breeds of livestock, agriculture began to surge forward.

Evidence of the new interest in agriculture lay in the cultivation of fruits, particularly the emergence of commercial orchards that featured a variety of apples and peaches. West Virginia cattlemen gave increased attention to improvement of livestock breeds. During the 1870s, Hereford cattle were introduced into Summers County and breeding stock, including Shorthorns and Aberdeen Angus, was sold throughout the state. Each year thousands of cattle were driven from the South Branch of the Potomac, Greenbrier, and upper Monongahela valleys into the glades of the Alleghenies, where they grazed during the spring and summer months before being sent on the hoof to eastern markets or returned by the graziers to their owners for wintering and further conditioning. The dairy business centered in the Northern Panhandle and favored Jersey and Holstein breeds.

Mechanization of farm work increased agricultural productivity in West Virginia during the late 19th century, but rugged terrain and the small-scale acreage of mountain farms prevented the use of machinery on a scale comparable with that of midwestern states. Axes, hoes, rakes, pitchforks, plows, harrows, horse mills, and tub mills common in pre-Civil War days remained on many farms. After the war, the "bull tongue plow," capable of throwing soil into rows where corn had been dropped by hand, enabled one man and a horse to do the work of three men covering the corn with hoes. The grain cradle generally replaced the sickle and about 1880 the stream thresher and horse-powered reaper became common.

Some of the most significant changes in West Virginia after the Civil War centered in efforts to retain or restore soil fertility. Very little commercial fertilizer was used before 1880, but its application increased some 300 percent by 1909.

West Virginia farmers embraced the Patrons of Husbandry, or Grange, a national organization established in 1867 to relieve the tedium of farm life and promote education and the self-improvement of rural Americans. The first lodge in West Virginia was formed in 1872 at Summit Point in Jefferson County, and by 1876 the number had grown to 378, with 10,752 members, or about 11 percent of the voting population of the state. The Grange was strongest in the north central counties of the state and weakest in the rugged, undeveloped region south of the Kanawha River. It advocated a state board of agriculture, establishment of a college of agriculture, aided in the creation of a Public Utilities Commission, and secured laws forcing the Baltimore and Ohio Railroad to abandon some

of its rate discriminations and requiring that railroad and the Chesapeake and Ohio to pay taxes on their West Virginia properties.

From the early 1880s until about 1897, when it was revitalized, the West Virginia Grange was in decline as a result of falling farm prices, exploitation of the state's resources by monopolies, continued discrimination against short hauls by the railroads, and an increase in farm tenancy. Many farmers turned to the Farmer's Alliance, which had already made headway in the western and southern states. At its height, from 1889 to 1892, the Alliance had organizations in 41 West Virginia counties and a membership of at least 10,000 in the state. Working primarily through the Democratic Party, the Alliance turned to political action advocating legislation that would increase the money supply and farm income as well as measures to promote the welfare of the rural farm population.

The year 1896 marked a turning point in West Virginia agriculture. The raising of crops and livestock on family-owned farms, once the backbone of the West Virginia economy, gave way during the 1870s - 1890s to extractive industries and manufacturing. Railroads opened new coal fields, oil and gas industries expanded, and timber production moved toward its peak years. Capitalists, urban workers, and labor unions gained dominance in political and economic affairs, and farmers, already becoming a minority, lost their last major opportunity in 1896 to wield genuine control over the destiny of the state and nation with the defeat of William Jennings Bryan, the Democratic candidate for president, by William McKinley and the Republican Party.

In spite of these changes, agriculture in West Virginia appeared economically healthy as late as 1900, employing 151,000 of the 326,000 gainfully employed persons in the state. The state had 93,000 farms, 78 percent of which were owned by their operators. Total cultivated farm acreage was nearly 5,500,000, or about 31 percent of the total land area of the state, and the total value of farm property was slightly less than \$204,000,000, of which some \$30,000,000 was for livestock. The value of industrial products, however, exceeded that of farm products by \$30,000,000, a clear indication of future trends.

One of the most striking changes lay in the increasing loss of self-sufficiency of West Virginia farmers. More and more farmers and their hired hands turned to the mines and factories for the major part of their income and kept their farms as residences and as sources of supplemental earnings. As the coal, oil, and gas industries penetrated rural areas, many farmers leased or sold part of their lands or mineral rights and resorted to more intensive and scientific agriculture on their dwindling acreages. In so doing, they contributed to destruction of the land, pollution of streams, and other environmental problems that would plague the state by the mid-20th century.¹⁵⁰

Agricultural Trends During the 20th Century. Despite the declining importance of agriculture, West Virginia farmers, like those nationally, generally remained prosperous until the end of World War I. Farm income compared so favorably with that of industrial workers during the pre-World War I years between 1909 and 1914 that the federal

150. Rice, *West Virginia: A History*, pp. 174-75; Ambler, *West Virginia: The Mountain State*, 1940, pp. 456-57, 486-89; Ambler and Summers, *West Virginia: The Mountain State*, pp. 261-63, 346-58, and Lewis, comp., *West Virginia: Its History, Natural Resources*, pp. 286-318.

government later used the period as a base for parity prices for several important agricultural commodities.

Many agencies assisted West Virginia farmers as they attempted to meet the demands of a changing order resulting from the increasing industrialization of the state. The West Virginia Farm Bureau, founded in 1918, replaced the Grange as the leading agricultural body in the state. In 1907 the 4-H Club movement began in Monroe County, stressing farm-related projects. A major achievement of farm organizations was the creation in 1891 of a bipartisan State Board of Agriculture. The new board pursued policies similar to those of the Grange and cooperated with the West Virginia Agricultural Experiment Station (established in 1888) and the West Virginia University College of Agriculture (established in 1895) in conducting farmers' institutes and publishing numerous farm bulletins. In 1911, the legislature replaced the board with a commissioner of agriculture elected by the people.

While agriculture continued to be the dominant economic interest of West Virginians during the early 20th century, the changed order resulting from industrialization necessitated a change in agricultural methods and emphasis, the most visible manifestation of which was a tendency toward smaller farms and more intensive cultivation. The total acreage of farm lands decreased by more than 600,000 during the decade 1900-10, while the number of farms increased by almost 4,000. The value of all farm property increased by nearly \$100,000,000 during the decade. Almost \$13,000,000 of this increase was for livestock, the largest categories of which were cows and heifers. In 1909, cereals, corn, wheat, oats, and related feed crops were valued at nearly \$16,000,000; hay and foliage products at almost \$7,500,000, vegetables at \$7,000,000; and fruits at more than \$3,000,000.

The 1920 census disclosed the continuation of these general trends for West Virginia agriculture. Between 1911 and 1920, the amount of farm land declined by some 450,000 acres, while the number of farms decreased by more than 9,000. The total value of all farm property, however, increased by more than \$180,000,000. By 1920 some 82 percent of the farms in the state were operated by their owners, most of whom were white and native born.

As elsewhere in the United States, depressed farm prices and markets resulted in conditions unfavorable to West Virginia agriculture during the 1920s. Though agricultural methods improved, the trend to intensive cultivation increased, and as a consequence, the total number of farms and owners decreased, and there was a noticeable trend to tenant farming. The number of farms in the state decreased to 82,640 in 1930, while total improved acreage increased to more than 6,500,000. The total value of all farm property was nearly \$412,000,000, of which some \$54,000,000 was for livestock. The size of farms averaged 106.5 acres (compared with a national average acreage of 157), and they had an average value of \$4,138. The farms were operated by nearly 67,000 owners and 15,400 tenants.

Agriculture steadily declined in relative importance in the economy of West Virginia after the Great Depression. Although the total state gross farm income reached an all-time high to date of \$192,700,000 in 1951, approximately 80 percent of the cash total was for livestock and livestock products sold. Because of declining production and lower average

prices received, gross farm income declined to about \$100,000,000 in the mid-1960s. The number of farms also declined gradually from the peak of 105,000 recorded in 1935 to 29,000 in 1970. The net farm income for the state (less than \$1,000 per farm) in 1970 was among the lowest in the nation, reflecting the fact that most farm families received more income from other sources than from agriculture. Under revised definitions of farms in 1978, the acreage of the state classified as farmland dropped from 4,600,000 to 4,200,000. During the 1970s, West Virginia ranked low among the states in the value of its grain crops, but it held relatively high positions in the value of its apples, peaches, and tobacco crops. Livestock maintained its prominent place in agriculture, with cattle and calves valued at about three times that of hogs and pigs. Chickens, particularly commercial broilers, and turkeys made up about 30 percent of the state's farm value. In addition, dairy products and eggs ranked high among farm products of the state.¹⁵¹

Historic Development of Euro-American Settlement/Agriculture in Its Local Context

Early Settlement in the New River Gorge Region. Following the Batts and Fallam expedition, there were several early documented penetrations of the New River Gorge region. Gabriel Arthur, a trading agent of Abraham Wood, was captured by the Tomahitten (or Cherokee) Indians and taken to a Mohetan village on the Kanawha River near the present cities of Marmet and Pratt in 1674. John Salling was reportedly captured by Indians in 1737 and taken across the New enroute to Cherokee towns. Peter Salley followed a trail west of New River Gorge National River on his way to the Ohio River in 1742.

Occupation and ownership of lands in the New River Gorge region encountered considerable confusion with respect to land surveys, patents, and titles. Large amounts of land were granted to men who served in the French and Indian and Revolutionary wars. Land grantees applied to officially-designated surveyors to have a tract set off, and this survey would be the basis for a future patent. It was not unusual for the same survey to be assigned several times before a patent was obtained. Further confusion resulted from trading of land warrants and speculative land sales. Early surveys were irregular and often inaccurate, and frequently the old patents contained more acreage than the grants provided.

Events leading to the aforementioned system of surveys, patents, and titles commenced in 1744 when the settlements on the western borders of Virginia, Pennsylvania, and Maryland began to push into Indian domain claimed by the Six Nations. Colonial leaders arranged for negotiations with Indian chiefs at Lancaster, Pennsylvania, during which agreement was reached that all lands lying between the Alleghenies and the Ohio would be purchased by the English for a payment of 400 pounds to the Six Nations. This

151. Rice, *West Virginia: A History*, pp. 178-79; Rice, *West Virginia: The State and Its People*, pp. 280-81; Ambler and Summers, *West Virginia: The Mountain State*, pp. 348-358; Ambler, *West Virginia: The Mountain State*, pp. 489ff., 513-14, 589-92; Writers' Program, Work Projects Administration, comp., *West Virginia: A Guide To the Mountain State* (New York, Oxford University Press, 1941), pp. 70-75; and Kenneth Ellis Bailey, "Some Changes In West Virginia Farming Between 1929 and 1959" (M. A. thesis, West Virginia University, 1964), pp. 1-108.

arrangement, completed on July 4, 1744, was known as the Treaty of Lancaster, and it set the stage for the advance of the western settlements.

As the frontier settlements moved westward, they continued to face problems with Native Americans. The Ingles and Draper families and other Scotch-Irish settlers, for instance, migrated from Pennsylvania and established a settlement, known as Draper's Meadows, near present Blacksburg, Virginia. Mary Ingles and Bettie Draper were captured during an Indian massacre of the settlement in 1755 and transported to the Ohio villages along the old Indian trails. Later Mrs. Ingles, leaving her newborn infant daughter behind, made her escape from the Indians and followed the Ohio, Kanawha, and New rivers back to a fort at "Dunkard Bottom," a short distance from the devastated Draper's Meadows settlement.

When the French and Indian War ended in 1763, the English, who had secured dominance over the trans-Allegheny region as a result of the hostilities, sought conciliation with Indian nations that had been allies of the French. They reached agreements that facilitated the settlement of western lands. Under terms of the Treaty of Fort Stanwix in 1768, Six Nations claims to most of trans-Allegheny West Virginia, including the New River Gorge region, were extinguished. Settlement began almost immediately, but the Shawnee claimed that the New River Gorge region was not Six Nations territory. They protested the invasion of their lands with bloody raids on the settlements until the end of the 18th century. In 1774, during Lord Dunmore's War, General Anthony Lewis led his militia along a trail to the east of the present national river to the Battle of Point Pleasant, where he defeated the Indians under Chief Cornstalk in an effort to halt Indian depredations against the expanding white settlements.

Early settlement practices of squatters — persons without legal title to the land whereon they located — in the New River region were informal and haphazard. The settler would find land that suited him and stake a claim known variously as a "brush," "tomahawk," or "corn" right. Most often the pioneer would claim a site near a spring, deaden some trees, enclose a clearing, and plant some corn. Sometimes he would cut his initials in a tree with his tomahawk. It was generally understood that the first man to grow a hill of corn on a claim was the owner of the land provided he did not claim too much. A maximum of 400 acres could be taken under a "corn" right, but he could be entitled to an adjoining 1,000 acres if he built a cabin and began farming the acreage. Periodically, government representatives visited the settlements, checked proof of "corn" rights, and issued certificates to the squatters. The certificate was then sent to Richmond, and if there was no other claim in six months, the governor would issue a "grant" or "patent" from the Commonwealth of Virginia.

The earliest recorded land survey in Fayette County was made for Henry Banks in 1785. The survey covered some 40,680 acres, including lands along the New River. A grant for the land was signed by Governor Edmund Randolph of Virginia on August 3, 1786. This was the first land grant and the largest ever made in present Fayette County. Nearly 70 land surveys and grants would be made in the present county between 1785 and 1800, resulting in patented lands in many parts of present New River Gorge such as, Manns, Glade, Laurel, High, Meadow, and Buffalo creeks, Big Sewell, Round Bottom, and other rich bottomlands along the New River and its tributaries as well as areas along the ridge top.

Early settlers, mostly of English, German, and Scotch-Irish descent, moved into the rugged New River Gorge region from the upper New River Valley and Piedmont areas of Virginia as well as Pennsylvania. Most settlers followed the familiar dendritic farm settlement pattern, first selecting the broad lands along the river and adjacent creeks and drainages. Although the first settlers were agriculturists, their farming was on a low-scale subsistence level. They took advantage of the wild game and natural foods of the surrounding forest lands to supplement their corn and vegetable production and provide other necessities of life.¹⁵²

During the early 19th century, as transportation and personal incomes improved, comforts and conveniences in the New River Gorge pioneer homes increased, but the earliest individual pioneer and settlement lifestyle was hard. The settler and his family depended almost entirely upon their own skills and surrounding natural world for survival. They tilled the soil, cleared the land, built their homes, made candles and salt, hunted, tanned leather, made shoes and clothing after having manufactured the thread and wax for sewing, prepared flax and wool for the loom, and wove cloth. The settler did his own blacksmithing and carpentry, made his furniture, and carved his bowls and dishes.¹⁵³

The first settlers in the area of present New River Gorge National River appear to have entered the region soon after the Revolutionary War. Apparently the first settlers in present Fayette County were a group of squatters who located near present-day Ansted about 1790. Among them were the families of James Lykens, William Parrish, James Taylor, and Bailey Woods. These people, interested in the potential of the land as well as the freedom to practice their Baptist beliefs, built the first residences as well as the first meeting house in the present county.

The first recorded settlement within the boundaries of present New River Gorge National River was established in 1798 by Peter Bowyer at the junction of Manns Creek and the New River. This location was near an Indian ford of the New River on a secondary trail that connected the prehistoric Midland and Paint Creek Trails. Here he built a cabin on the river bank, cleared a patch, and planted corn. After constructing a boat, he opened a ferry, operating it as a private concern for several years before the state legislature in Richmond granted him a license on January 18, 1806, to operate the ferry for hire. The settlement became known as "Bowyer's Ferry" until the completion of the C & O Railroad in 1873 when a station named Sewall was established at the ferry.¹⁵⁴

Following Bowyer other settlers moved slowly into the rugged and isolated New River Gorge region, first taking up land where there was enough bottom land to establish widely scattered subsistence farmsteads. The valley floor settlements gradually filled with

152. Peters and Carden, *History of Fayette County*, pp. 83-99; Miller, *History of Summers County*, pp. 249-65; John Nuttall, "Pioneering on Kenneys Creek," 1960 (Microfilm 2840, West Virginia Collection, Colson Hall, West Virginia University, Morgantown); and R. S. Solecki, "An Archaeological Survey of Two River Basins in West Virginia," *West Virginia History*, X (1948), pp. 338-44.

153. For more data on the pioneer lifestyle in the New River region, see Peters and Carden, *History of Fayette County*, pp. 100-22.

154. Peters and Carden, *History of Fayette County*, p. 614. More information on ferries and river crossings in the New River region may be found in Shirley Claymore Scott, "New River Crossings, Then and Now: Ferries and Bridges From the Narrows to Kanawha Falls," ca. 1986, historical files, NERI.

each generation and, as newcomers moved in and families expanded, people moved farther up the hollows where valleys were narrower and fields smaller. Finally in the middle to latter part of the 19th century, the land pressures pushed settlers on to the ridges and plateau areas.

During 1798 Andrew Lykens purchased land where present-day Page is located on Loup Creek. Up from the land of Lykens, John Spangler purchased property at present Kinkaid in 1810. By that year Peter Bowyer was the only resident in the vicinity of present-day Fayetteville, a site that was reportedly first settled by carpenter and joiner Seth Huse from New Hampshire. The first European-American to live in the present Mt. Hope vicinity was William Blake, Sr., who purchased some 3,062 acres in 1796 for 25 cents per acre. Aaron Stockton of New Jersey settled on the banks of the Kanawha River at present-day Glen Ferris in 1812. Eight years after Stockton settled at Kanawha Falls, and William Blake, Jr., built a house at present Oak Hill, thus becoming the first European-American settler of that village. By 1828 Jacob Kelly was operating a grist mill at Robson on lower Loup Creek, several miles below the homes of Andrew Lykens and John Spangler. One of the early pioneers in the present Fayetteville vicinity was Abraham Vandal, who obtained the site to establish Vandalia sometime between 1818 and 1825.

Other notable pioneers of the national river area included Jacob Smith who moved to the future site of Quinnimont in 1827 and Phillip Thurmond who moved his family to the Minden area in 1844. After operating Bowyer's Ferry for eight years, Charles Bibb bought a 300-acre tract at the present site of Gatewood in 1837. Isaac Sanner, whose "Round Bottom" deed was recorded in 1808, sold his property to John Gwinn, the seventh sheriff of Fayette County in 1855. This land, almost encircled by a wide bend in the New River between present Price and McKendree, would become the home of four generations of Gwinns before its abandonment in the 1980s. Sometime after 1846 the Daniel Griffin, Caleb Lively, and Adam Hutchinson families settled in the Meadow Bridge vicinity. Llewellyn W. James from Amherst County, Virginia, established the Sanger community three miles east of Oak Hill on Meadow Fork Creek in 1849. Alfred Beckley, who had graduated from the U.S. Military Academy at West Point in 1823, resigned his first lieutenant's commission in the army in 1836 to move his family to the lands he had inherited from his father at the future site of Beckley.

A 331-acre tract at present Sandstone Falls was granted to William Richmond, a Revolutionary War veteran, in 1796. Four years later Richmond acquired a 10-acre island in the New River. His son Samuel operated a mill and ferry at the falls in the early 19th century. The hamlet of Richmond Falls (later Richmond) on the east bank of the New River was named for John A Richmond, a grandson of William who settled 205 acres on the New at the mouth of Lick Creek in the 1850s.

An Irish Catholic settlement on the plateau above Sandstone began when Maurice Sullivan and his wife Margaret from County Kerry purchased 435 acres from John and Sara Gwinn in 1855. The settlement would expand as Irish immigrants came to America in the wake of disastrous potato famines in Ireland.¹⁵⁵

155. Information on early settlers and settlements in the New River Gorge region may be found in Hill, "Line Villages in Southern West Virginia," pp. 121-22; Walter R. Thurmond, "The Town of Thurmond, 1884-1961," in Walter Robert Thurmond Witschey, *The Thurmonds of Virginia* (Richmond, Gatewood Company, 1978), pp.

The road system in the New River Gorge region gradually improved, bringing with it better means of transportation for farmers' produce and livestock, mail delivery, trade goods, and improved creature comforts. The construction of new roads and turnpikes stimulated settlement of the region, and after completion of the Giles-Fayette-Kanawha turnpike about 1848 systematic settlement of the area commenced.¹⁵⁶

The increasing settlement of the New River region resulted in the need for more effective local governments. In 1831 Fayette County was carved out of Logan, Greenbrier, Nicholas, and Kanawha counties, and was named in honor of the Marquis de Lafayette. In 1837 the seat of the county was moved to Vandalia, or Fayetteville as the town would later be called. As the region's settlements continued to expand, Raleigh County with a population of 1,765, was carved out of Fayette County in 1850 and named for Sir Walter Raleigh. Later in 1871 Summers County (named after George W. Summers, a noted jurist and legislator) was formed from portions of Monroe, Mercer, Greenbrier, and Fayette counties, thus completing the political alignment of the three-county national river region.¹⁵⁷

Despite the continuing growth of the New River region population, the area remained thinly settled until the coming of the C & O Railroad and the emergence of the coal mining era in the 1870s. On the eve of the Civil War, for instance, Fayette County had a population of only 5,997, or 8.2 persons per square mile.¹⁵⁸

By the time of the Civil War, the New River region had a well-developed agricultural-based economy. In Fayette County, for instance, farming occupied the majority of heads of households in 1860. Sewell Mountain, the least developed district in the county, had the largest percentage of farmers (82%). Diversified development in the Kanawha District reduced farming to only 55.4 percent of heads of households. In the Mountain Cove and Fayetteville districts, farmers comprised 72.8 and 75.8 percent of heads of households,

87-106; Leona G. Brown, "Round Bottom: Home of the New River Gwinns," *Goldenseal*, X (Spring 1984), pp. 16-17; "A Daughter Remembers, From an Interview by William E. Cox," *Goldenseal*, X (Spring 1984), pp. 17-21; Lester Lively, *History of Summers County* (N.P., [1963]), pp. 2-4; Louis Berger & Associates, Inc., *Archaeological Testing For Boardwalk and Bridge Improvements at Sandstone Falls, New River Gorge National River, Raleigh County, West Virginia*, June 1989, pp. 13-17; Lois C. McLean, "Irish Mountain: The Story of a West Virginia Immigrant Community," *Goldenseal*, XVII (Spring 1991), pp. 47-56; Peters and Carden, *History of Fayette County*, pp. 533 ff.; Shirley Donnelly, "Early Settlers and Settlements in Fayette County," *West Virginia History*, X (January 1949), pp. 125-35; C. Shirley Donnelly, *Historical Notes on Fayette County, W. V.* [Fayetteville; privately printed, 1958], pp. 12-16; David E. Johnston, *A History of Middle New River Settlements and Contiguous Territory* (Radford, Virginia, Commonwealth Press, Inc., 1906); Robert Kelvin Holliday, *A Portrait of Fayette County* (Oak Hill, West Virginia, The Fayette Tribune, Inc., 1960), pp. 8-12, 93-105; John Cavalier, *Panorama of Fayette County* (Parsons, West Virginia, McClain Printing Company, 1985), pp. 84 ff.; Summers County Historical Society, *The History of Summers County, West Virginia, 1984* (Salem, West Virginia, Don Mills, Inc., 1984), pp. 8, 22-37; Patricia Givens Johnson, *The New River Early Settlement* (Pulaski, Virginia, Edmonds Printing, Inc., 1983); and Miller, *History of Summers County*, pp. 85-98; 361-63, 409-13.

156. More information on early roads and turnpikes in the New River region may be found in Paul D. Marshall & Associates, Inc., *A Cultural Research Project*, Vol. II, pp. 159-66.

157. Peters and Carden, *History of Fayette County*, pp. 143-49, 381-84; Charles B. Hedrick, *Memoirs of Raleigh County* (Beckley, West Virginia, Wood Printing Company, 1932), n.p.; Cavalier, *Panorama of Fayette County*, pp. 1-4, 9; Miller, *History of Summers County*, pp. 114-23; and E. Lee North, *The 55 West Virginias: A Guide to the State's Counties* (Morgantown, West Virginia, West Virginia University Press, 1985), pp. 20-21, 84-85, 92-93.

158. Louis Berger & Associates, Inc., *Historical and Archaeological Investigations, Canyon Rim Visitor Center Improvement Project, New River Gorge National River, Fayette County, West Virginia*, September 1990, p. 6.

respectively. In 1860 Fayette County harvested four principal staple crops — wheat, corn, oats, and potatoes. The average yield per acre was 10 bushels of wheat, 20 bushels of corn, 30 bushels of oats, and 100 bushels of potatoes. Grain, carted to local mills, yielded the flour and meal necessary for survival, although a percentage of the crop undoubtedly was converted into whiskey.

Upland soil was more suitable for grasses and grain, and thus by the coming of the Civil War livestock was becoming a cash business to boost the meager subsistence level incomes of the small farmers.¹⁵⁹

The agricultural-based economy of the New River Gorge region continued to expand until the coming of industrialization during the 1870s. Three years after the completion of the C & O Railroad through New River Gorge in 1873, M. F. Maury and William M. Fontaine analyzed the state of agriculture in West Virginia. Concerning Fayette County they observed:

The surface of Fayette, is hilly, mountainous, and high tableland. The hills and mountains usually are not precipitous, and have a fertile soil, the soil is a rich light loam, and a sandy loam, which is well suited for the culture of Tobacco. There are some fine bottom lands on Meadow River, the soil is 6 inches deep on the hills and 12 inches or more on the levels. The grains and crops, especially suited to the lands, are, Corn, Oats, Wheat, Rye, Tobacco, and Grass. The principal exports are Coal, Timber, Tobacco, and Stock. Principal industries, are Coal, Mining, Farming, Lumbering, and Stock raising, Markets. The tobacco goes to Richmond, Stock to Baltimore, Timber to New York and Cincinnati.

Relative to agriculture in Raleigh County, they noted:

The surface of Raleigh is hilly and mountainous, with a large proportion of plateau land, covered with undulating and rolling hills. The rivers cut deeply into the plane of the country, and the roughest land lies in the sides of the hills facing them. The soil is a loam, or sandy loam, 4 to 6 inches deep on the hills, and 6 to 10 inches, or more, on the levels. The hills and levels produce about alike. The crops are Corn, Wheat, Oats, Buckwheat, and Potatoes. Yields are Corn, 20 to 40 bushels; Oats, 20 to 25; Wheat, 10; Rye, 15 to 25; Potatoes, 100 to 150. Price of agricultural land, \$5 to \$15; of timber and coal lands, from \$1 to \$5. Timber is worth 50 cents to \$1 per tree, according to kind and location; at the mills, \$10 per 1,000. Principal industries, farming and stock raising. Principal exports, cattle. Market: Cattle go to Baltimore....

Summers County, according to Maury and Fontaine, had:

some high mountains and a large proportion of rolling, or gently undulating plateau land. The soil is sandy or loam, and clay loam, with calcareous matter in some parts. On the hills it is 3 to 6 inches deep; on the bottoms, 6 to 12. The crops are Corn, Wheat, Oats, Rye, Tobacco and Grass. Corn yields on the levels, 30 to 35 bushels; Wheat, 15 to 18; Rye, 15; Oats, 35. On the hills, Wheat and Rye, 10 bushels; Corn and Oats, 25; Tobacco, 600 pounds. Value of agricultural land, from \$10 to \$40 per acre: of

159. Lou Athey, "Social Change in Preindustrial Fayette County, West Virginia, 1860-1870," *Proceedings, New River Symposium*, 1992, pp. 71-81.

timber land, \$1 to \$5. Timber, stumpage, is worth 50 cents to \$1 per tree; at the mills, pine and poplar are worth \$15 per 1,000. Principal industries, farming, lumbering and stock raising. Principal exports: Stock, tobacco, and timber. Market for stock, Baltimore: for tobacco, etc., Richmond and Cincinnati; for timber, eastern cities....¹⁶⁰

Typical 19th Century Appalachian Mountain Farmstead and Traditional Mountain Culture at the Dawn of the Industrial Era in the New River Gorge Region. Very different from the fruit grower of the Shenandoah Valley, the cattleman of the South Branch Valley or the Greenbrier plateau, or the diversified farmer of West Virginia's river valleys was "the Mountaineer," who combined subsistence farming with timbering, hunting, and other forest-related occupations. The mountain homesteads, or family farms, established by these mountaineers in New River Gorge, as well as throughout much of West Virginia, were the backbone of the preindustrial 19th century Appalachian economy, and some of them would operate into the 20th century.

Each mountain homestead functioned as a nearly self-contained economic unit, depending upon the land and the energy of a single family to provide food, clothing, shelter, and the other necessities of life. Unlike agrarian sections of the Midwest and nonmountain South that had moved steadily toward dependence on a single cash crop, mountain family farms remained essentially diversified and independent, producing primarily for their own use. During the mid-to-late 19th century, Appalachia contained a greater concentration of noncommercial family farms than any other area of the nation.

The typical mountain farm in Appalachia, including most of those in New River Gorge, during the preindustrial period, consisted of a disparate mixture of bottomland and rugged mountainside. The average farm had about 25 percent of its land in cultivation, 20 percent in cleared pasture, and the remainder in woodland. Dotted by springs and frequently crossed by a creek, the highland farm was generally blessed with good water, a relatively mild climate, and a long growing season seldom threatened by early frost. Corn was the staple crop, occupying about 50 percent of the acreage under cultivation, but oats and wheat were also harvested, as well as hay, sorghum, rye, potatoes, buckwheat, and other crops. Most farms had a vegetable garden, beehive, and apple orchard, and often a variety of pear, plum, cherry, or other fruit trees. Wild blackberries and huckleberries were abundant, as were rabbits, squirrels, quail, and other wild game. By the late 19th century, large portions of the mountain hillsides had been cleared (usually by burning or girdling the trees) for raising cattle, sheep, mules, and fowl. The greatest proportion of the farm, including the "public land" that surrounded it, remained in woodland, however, and it was here that the family hogs grazed throughout much of the year.

The daily operation of the farm centered on the growing of all the vegetables and grain crops that the family used: corn, beans, and potatoes for the table, field corn for fattening the hogs, hay for feeding the livestock, and small grains, such as oats and wheat, for flour. Planting, cultivating, and harvesting were done by hand, since simple tools and traditional agricultural techniques proved most practical on the mountainous terrain.

160. Maury and Fontaine, *Resources of West Virginia*, pp. 373, 411, 414.

The kitchen garden was the mainstay of the food supply, and mountain gardens were generally quite large. Plowing was accomplished by use of a single-horse bull tongue or hillside turning plow, and early cultivation consisted of simply plowing between rows. The garden did not contain a wide variety of vegetables, but there was a large quantity of them, with corn being the most plentiful item.

Along with the garden crops, the self-sufficient mountain farm maintained a variety of livestock that provided food, clothing, and other household needs. Few farms were without several milk cows, a flock of hens, several mules or work oxen, and a drove of shoat pigs. Sheep raised on the rocky hillsides afforded wool for cloth, stockings, or floor carpets. Geese were kept both to control insects around the house and for their down, which was plucked annually and made into bed ticks and pillows. A pack of dogs was kept for hunting, protection, and regulation of rabbits, groundhogs, and other field pests.

The raising of livestock was the principal commercial enterprise in the mountains before industrialization, and it provided mountain farmers with the means of acquiring the few goods that could not be raised or produced on the farm. While cattle, sheep, and other livestock were grazed in large numbers, hogs were most important to the preindustrial mountain economy. Hogs were allowed to fatten on the mast in the forest until late fall, when they were brought in and fed on corn for several weeks to harden the flesh. Hogs were then slaughtered and placed in the smokehouse for the family's needs, and the rest were traded or sold to passing drovers.

In addition to raising hogs and other livestock, mountain farmers supplemented their incomes by occasionally cutting timber and gathering medicinal roots and herbs. Small-scale logging provided off-season work and an opportunity to trade at the mercantile centers. During the late summer, before the crops were harvested, families spent much of their "lay-by" time collecting ginseng, yellow-root, witch hazel, sassafras, galax, golden-seal, and bloodroot. Most local merchants accepted these plant products in exchange for store commodities.

Mountain residents seldom received cash for their surplus livestock, roots, and herbs, or other commercial products. Like other parts of rural America in the mid-to-late 19th century, the mountains were lacking in legal tender money, and barter virtually became the sole means of exchange. The center of this barter economy was the local merchant, who exchanged retail commodities for surplus agricultural products and extended credit. Other businesses, including the hundreds of neighborhood mills in the region, operated on a similar basis, providing services in exchange for part of the product itself. This form of commerce reinforced the autonomy of the local market system and provided mountain communities with considerable freedom from the fluctuations of the national cash economy.

The independence and self-sufficiency of the mountain homestead was evident not only in the economic system, but in the material culture and social life of the region as well. From the earliest settlement, mountain residents relied almost entirely upon abundant timber, stone, and other natural resources for the construction of cabins, houses, barns, sheds, tools, furniture, and farm implements, and upon the fellowship of neighbors and kin for most social activities. Everything about the mountain homestead, including what has come to be referred to as its vernacular architectural style, reflected a society that had adapted

to and harmonized with its surroundings by making effective use of local resources and by altering traditional cultural patterns to fit new physical conditions. Within this environment emerged a regional culture with strong attachments to the land and a profound sense of place. The land, the homestead, one's kin, and one's neighbors formed the matrix for the daily lives of most mountaineers and the context from which they would confront the social patterns of the new industrial age.¹⁶¹

The Trump-Lilly Farmstead, a historic property in New River Gorge National River, is representative of a late 19th-century Appalachian frontier mountain farmstead and as such, was listed in the National Register of Historic Places in 1990. Little altered since its development, the farmstead, consisting of ten structures that exhibit the characteristics of rural vernacular architecture, is an excellent example of subsistence-like, self-sufficient agriculture on the less than ideal acreage of an upland terrace in the New River Gorge region.¹⁶²

The Harry Hampton Ballard Farmstead, a 7.9-acre farm overlooking the New River in the Richmond District of Raleigh County, is a former farm in the national river dating from the late 19th century. The farmstead, which consists of a vernacular-style farmhouse and three outbuildings, retains its original farm structures in a highly unaltered state. A significant portion of its original field and pasture configuration is intact, and its rural ambience has been preserved. Although additional research and documentation is necessary before the Ballard Farmstead can be evaluated for its eligibility for listing in the National Register of Historic Places, the farm, like the Trump-Lilly Farmstead, could be one of the few remaining southern West Virginia farmsteads which have not been adapted to modern farming.

As might be expected, the cultural patterns associated with Appalachian mountain homestead life helped to produce a type, "the Mountaineer," which would become a distinctive lifestyle in American society for generations. Local color writers drew attention to the unique qualities of "the Mountaineer" as early as the 1870s in leading publications. Of his characteristics, a sympathetic contemporary wrote in 1870:

161. Eller, *Miners, Millhands, and Mountaineers*, pp. 16-23. For more data on the physical components of traditional mountain farmsteads in West Virginia see such articles as LeRoy G. Schultz, "The Barns of West Virginia," *Goldenseal*, IV (April-September, 1978), pp. 51-56; LeRoy G. Schultz, "Log Barns of West Virginia," *Goldenseal*, IX (Spring 1983), pp. 40-45; and LeRoy G. Schultz, "West Virginia Cribs and Granaries," *Goldenseal*, IX (Winter 1983), pp. 47-54. Contextual historical information for vernacular architecture may be found in: Carole Rifkind, *A Field Guide to American Architecture* (New York, New American Library Books, 1980); John J. - G. Blumenson, *Identifying American Architecture: A Pictorial Guide to Styles and Terms, 1600-1945* (Nashville, American Association for State and Local History, 1981); Virginia and Lee McAlester, *A Field Guide to American Houses* (New York, Alfred A. Knopf, 1991); Amos Rapaport, *House Form and Culture* (Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1969); Camille Wells, *Perspectives In Vernacular Architecture*, II (Columbia, University of Missouri Press, 1986); and Allen G. Noble, *Wood, Brick, and Stone: The North American Settlement Landscape* (Amherst, University of Massachusetts Press, 1984).

162. U.S. Department of the Interior, National Park Service, National Register of Historic Places — Registration Form, "Trump-Lilly Farmstead," prepared by Leigh McGowan, January 31, 1990; John Nicely, "The Trump-Lilly Farm," *Proceedings, New River Symposium*, 1993, pp. 140-50; and Institute for the History of Technology and Industrial Archaeology, West Virginia University, "The Trump-Lilly Farm: Historic Structures & Cultural Landscape Report," Technical Report No. 7. Draft, April 26, 1993.

The blending of races through several generations has resulted in a well defined Angle-Saxon type, slightly modified by that Celtic ease of manner peculiar to the dwellers of mild and fruitful climates. The genuine rural West Virginian is not much addicted to precipitous motion, rarely loses his temper or self-possession, and beyond the acquisition of necessaries of life, limited by almost Spartan frugality, is disposed to leave the improvement of things around him to time and chance. This unprogressive disposition is the more striking, as his native intellect and sagacity are extraordinary and susceptible of high development under proper direction or the stimulus of personal ambition. Perhaps nowhere on the continent are there such treasures of natural power buried under the rust of indolence and prejudice, and at the same time such a display of urbanity and hospitality prompted by native tact and geniality...Very unlike the proverbial Jonathan, the West Virginian seldom inquires into his neighbor's business with indelicate curiosity, and no matter how strong or antagonistic his convictions, never intrudes them upon strangers in aggressive or controversial discourse.¹⁶³

During the late 19th century various writers and local authors conveyed the impression to the American public that the Appalachian mountain region was a "strange land" inhabited by a "peculiar people." The fiercely-independent lifestyle of the mountaineers and their intimate symbiosis with the land on which they lived was admired, but their backwardness and socioeconomic degradation was censured. The phenomena of the Appalachian cultural experience would linger for generations in the American consciousness.¹⁶⁴

Impact of Industrialization on Settlement/Agriculture in the New River Gorge Region. Completion of the C & O Railroad through the New River Gorge in 1873 had a significant impact on the settlement and land use patterns in the region. The coming of the railroad opened the entire gorge to the coal and timber industries, and the captains of these industries wasted little time in beginning the exploitation of the area, leaving in their wake a considerably altered natural landscape and way of life.

The railroads, because of their inflexible grade requirements, were designed for and constructed in river and creek valleys to take advantage of natural drainage slopes and level bottomlands, while New River Gorge coal outcroppings were found along the valleys

163. J. H. Diss Debar, *West Virginia Hand-Book and Immigrants' Guide* (Parkersburg, West Virginia, Gibbens Bros., 1870), pp. 33-34.

164. Alan J. Hauser, "Changing Patterns in Agriculture and Their Impact On the People of Appalachia," *Proceedings, New River Symposium*, 1987, pp. 175-88, and Rice, *West Virginia: A History*, pp. 179-80. For more data on the historical development and cultural implications of the Appalachian experience and its impact on the American consciousness see: Henry D. Shapiro, *Appalachia On Our Mind: The Southern Mountains and Mountaineers In The American Consciousness: 1870-1920* (Chapel Hill, University of North Carolina Press, 1978); Rodger Cunningham, *Apples On The Flood: The Southern Mountain Experience* (Knoxville, University of Tennessee Press, 1987); David Whisnant, *All That Is Native & Fine: The Politics of Culture In An American Region* (Chapel Hill and London, University of North Carolina Press, 1983); and John C. Campbell, *The Southern Highlander and His Homeland* (New York, Russell Sage Foundation, 1921). Further information on the issues of vernacular architecture and cultural landscapes associated with the character of Appalachian cultural patterns in New River region may be found in Karen Hudson, "Architecture and Personal Expression in Southern West Virginia," *Folklife Center News*, XIV (Spring 1992), pp. 3-7, and Karen E. Hudson, *Final Report, New River Gorge Folklife Project Cultural Landscape Windshield Survey*, Submitted to American Folklife Center, Library of Congress, Washington, D.C., March 1992.

and hollows. Thus, the scene was set for the rapid preemption of narrow bottom lands, precious to the mountain farmers lucky enough to claim them, for new use as town and production plant sites, railroad rights-of-way, and railway yards and facilities. Mountain farmers, some of whom had tilled these lands for generations, were driven toward the ridges, thus exaggerating the pattern set by population pressures which had historically pushed them to increasingly marginal lands. The thousands of farmers who later returned to their ancestral valleys did so on the terms of the new industries, coming back as miners, loggers, and railroad workers rather than as farmers.

The railroads not only opened the gorge to industrial development, but they also provided a transportation system that enabled the shipment of large quantities of agricultural products from the Midwest to the hitherto isolated region. The farm products from the Midwest were larger in quantity, more extensive in variety, and cheaper in cost compared with the produce of the small-family farms in the gorge and surrounding region. The local farmers simply could not compete with the incoming agricultural produce.

In economic terms, the new industries had their most dramatic impact on land usage because mining, lumbering, and railroading outbid farming in the competition for acreage as land values soared. In Raleigh County, for instance, where mining took hold on a serious basis after construction of the C & O's Piney Creek extension in 1900, farm land prices tripled in ten years. Total farm acreage decreased by more than ten percent over the same period, while improved farm acreage — most likely the most level lands — dropped nearly 25 percent. The number of farms decreased from 1,745 to 1,598, while average farm size decreased slightly, from 90.9 to 87.1 acres. This, with the disproportionate drop in improved acreage, suggests that competition was not greatest for the land of marginal farms; in fact, the 147 farms disappearing between 1900 and 1910 averaged 132.8 acres — nearly half as big again as most. Thus, the Raleigh County farmer choosing to sell out at this time could go to the new industries with money in his pocket.

Farmers in the New River Gorge region offered no more effective resistance to the demands of the extractive industries than did Appalachians elsewhere. Land companies customarily bought up promising coal and timber properties well ahead of anticipated development, thus paying less than the potential value of the land warranted. The mountain farmers had little notion of the true value of the resources on their properties, and were happy for whatever price the sale might bring. The deal might seem a bargain where only mineral rights were taken, with the family left in apparently unhampered command of the surface. At any rate, the native population would have been powerless to resist the stronger forces of the national economy when they reached for the region's energy and natural resources.

For the most part, it cannot be assumed that any large part of the native population wished to impede industrialization. The mountain farmers appear to have willingly traded away their landed heritage, and it was this willingness which made them easy prey to land, mineral, and timber speculators. The rapaciousness of the sophisticated buyers lay not in purchasing what was readily for sale, but in taking advantage of the general ignorance of the sellers.¹⁶⁵

165. Sullivan, *Coal Men and Coal Towns*, pp. 54-57.

The industrialization of the New River Gorge region had its greatest effect on the transformation of the traditional way of mountain life. Not only did agriculture decline, but wild game was driven back into the hills, thus reducing subsistence hunting. Industrialization sparked an increase in education that shook and disintegrated traditional folkways and culture, caused members of the once tightly knit clans to scatter, and sharply divided family members as they found themselves on opposite sides of the industrial-capitalistic fence.

The character of the population changed dramatically with industrialization. Because the local mountain population was not numerous enough to support a work force, the captains of industry imported a labor force, a move that contributed to the end of traditional mountain culture. Blacks and European immigrants were recruited to provide labor to work the mines and harvest the trees, thus swamping the native mountain farmers in a population flood.¹⁶⁶

Settlement/Agriculture in the New River Gorge Region: 1870s-1940s. During the late 19th and early 20th centuries, as the New River Gorge region became heavily industrialized, agriculture declined in relative importance as a significant component of the economy. Despite its decline, however, agriculture continued to be a viable part of the region's socioeconomic base. According to a study compiled by Virgil A. Lewis in 1904, Fayette County, with a population of 19,512 in 1900, contained "much arable land" that was "well suited to certain kinds of agriculture." Lewis provided a statistical analysis of the county's diversified agricultural productivity:

By the census of 1900, there were in the county 1,128 farms; of this number, 4 had less than 3 acres; 49 had 3 and less than 10 acres; 58 had 10 and less than 20 acres; 215 had 20 and less than 50 acres; 377 had 50 and less than 100 acres; 280 had 100 and less than 175 acres; 85 had 175 and less than 260 acres; 49 had 260 and less than 500 acres; 6 had 500 and less than 1,000 acres; and 5 had 1,000 or more acres.

The lands produce the cereals and excellent grass for pasturage. In 1902 there were harvested 1,045 acres of wheat, which produced 10,237 bushels, valued at \$8,189.60; 1,917 acres of oats, which produced 29,070 bushels, valued at \$11,628.00; 3,487 acres of corn, which produced 74,041 bushels, valued at \$44,424.60; 180 acres of buckwheat, which produced 2,727 bushels, valued at \$1,363.55; 425 acres in Irish potatoes yielded 29,688 bushels, valued at \$14,844.00; of meadows, 3,788 acres produced 2,720 tons of hay, valued at \$37,200.00. Of sorghum cane, 90 acres produced 156 tons of forage and 5,028 gallons of syrup. The total value of all agricultural products for the year was \$117,694.70.

The fruit industry is in its infancy, but beginning to develop rapidly. In 1902, there were of apples 36,694 trees yielding 32,423 bushels, valued at \$19,453.80; of pears, 1,155 trees, yielding 515 bushels, valued at \$412.00; peaches, 3,938 trees yielded 1,191 bushels, valued at \$952.80; of cherries, 3,016 trees, producing 390 bushels, valued at \$780.00; of plums, 397 trees, producing 82 bushels, valued at \$166.00; of small fruit, 29 acres yielded a production valued at \$1,625.00. The total valuation of all fruits for the year was estimated at \$21,764.60.

166. Corbin, *Life, Work, and Rebellion in the Coal Fields*, pp. 6-8, and Williams, *West Virginia: A History*, pp. 102-15.

Wherever the lands are cleared the indigenous grasses afford excellent pasturage and the live stock interests are increasing. In the last mentioned year there were in the county 3,515 horses and mules, valued at \$40,600.00; 8,736 cattle, valued at \$174,720.00; 2,574 sheep, valued at \$5,148.00; 2,425 swine, valued at \$7,375.00. The total value of all live stock was \$334,095.00.

Of poultry, there were 25,360 chickens, 559 turkeys, 1,307 geese, and 463 ducks, the whole valued at \$8,194.00. The value of poultry raised the preceding year was \$14,293.00; and 132,960 dozens of eggs were produced. There were 1,871 swarms of bees, worth \$6,926.00, and producing 28,340 pounds of honey, and 560 pounds of wax. At the same time there were 3,166 milch cows on farms, and 763 dairy cows not on farms.¹⁶⁷

Agricultural statistics for Raleigh and Summers counties during the early 20th century may be found in a compendium of agricultural resources in West Virginia compiled by J. B. Garvin, Secretary of the West Virginia State Board of Agriculture, in 1907. According to this study, the 1906 agricultural production of Raleigh County, which had a population of 12,436 in 1900, was as follows:

Wheat 1,500 bushels, valued at \$1200.00. Oats 39,450 bushels, valued at \$11,835.00. Corn 191,321 bushels, valued at \$96,660.50. Buckwheat 8,763 bushels, valued at \$4,381.50. Potatoes 31,103 bushels, valued at \$15,551.00. Hay 4,437 tons, valued at \$44,370.00. Apples 1,000 bushels, valued at \$600.00. Pears 300 bushels, valued at \$180.00. Peaches 304 bushels, valued at \$243.20. Cherries 250 bushels, valued at \$750.00. Plums 50 bushels, valued at \$70.00. Horses 2,665, valued at \$159,900.00. Cattle 9,003, valued at \$270,090.00. Sheep 5,734, valued at \$17,202.00. Angora goats 8, valued at \$24.00. Swine 4,266, valued at \$12,798.00. Poultry 40,375, valued at \$12,112.50.

That same year the farm production of Summers County, which had an estimated population of some 17,000, was:

Wheat 62,136 bushels, valued at \$19,708.80. Oats 5,100 bushels, valued at \$1,530.00. Corn 28,860 bushels, valued at \$14,430.00. Buckwheat 4,480 bushels, valued at \$2,240.00. Potatoes 32,000 bushels, valued at \$16,000.00. Hay 2,125 tons, valued at \$21,250.00. Apples 30,400 bushels, valued at \$18,240.00. Pears 2,000 bushels, valued at \$1,200.00. Peaches 5,000 bushels, valued at \$4,000.00. Cherries 950 bushels, valued at \$2,850.00. Plums 750 bushels, valued at \$1,050.00. Horses 2,575 valued at \$154,500.00. Cattle 6,202 valued at \$186,060.00. Sheep 5,309 valued at \$15,927.00.¹⁶⁸

During World War I and the postwar years, agriculture continued to be an important, although secondary, component of the New River Gorge region's economy. Gradually, part-time farming with agricultural income supplemented by other employment became the norm as the self-sustaining family farm became a relic of the past. According to the West Virginia Geological Survey in 1916, Raleigh County had farm land "adapted to both tillage and grazing." Its principal farm products were corn, wheat, oats, hay, beef cattle,

167. Lewis, comp. *West Virginia: Its History, Natural Resources*, pp. 366-67.

168. Garvin, comp., *West Virginia: Agricultural Resources and Possibilities*, pp. 147-48, 151-52.

sheep, hogs, poultry, fruit, and vegetables. Considerable income was also derived from the digging and sale of medicinal roots found in forest lands.¹⁶⁹

The principal animal husbandry products of Fayette County in 1919, according to the West Virginia Geological Survey, were horses, mules, cattle, sheep, hogs, and dairy produce. The county's main agricultural crops were corn, oats, hay, potatoes, buckwheat, garden vegetables, apples, and peaches. The extensive coal mining operations in the region stimulated the growth of truck farming, particularly on the high plateaus of the southeast section of the county.¹⁷⁰

In 1926, the West Virginia Geological Survey stated that the principal agricultural crops of Summers County were corn, oats, wheat, buckwheat, hay, potatoes, apples, peaches, cherries, and grapes. The main animal products of the county were cattle, horses, sheep, poultry, hogs, mules, and bees.¹⁷¹

The importance of agriculture in the economic life of the New River Gorge region continued to decline during the 1930s and 1940s. By 1950 the population of the three counties in which New River Gorge National River is located had reached more than 115,000, much of the growth stimulated by coal production. Fayette County had 47,866 residents, while Raleigh had 55,472 and Summers had 11,704. While West Virginia was one of the least urbanized states in the East (31.9 percent urban), the New River region was even less urbanized (27.1 percent urban). Summers County was 30.1 percent urban, while Raleigh and Fayette were 22.9 and 11.7 percent, respectively. The large number of rural non-farm dwellers was explained by the numerous coal camps of less than 2,500 population and by the fact that many families chose to live in rural areas where the family's income was supplemented by garden production or by raising chickens or hogs. These part-time farms did not contribute a sufficient percentage of the family's income to be classified as farms by the Bureau of the Census.

By the early 1950s, the New River region had a few large and numerous farms that were changing from grain-vegetable-fruit production to animal products specialization. More than half of the region's farms contributed less than 50 percent to the farm family's income. Approximately 26.7 percent of the region was classified as farmland, ranging from Summers County which was 61.8 percent agricultural to Fayette County which had 16.8 percent of its land in farms. Most of the farms were small, averaging 99.5 acres in Summers County, 51.6 acres in Raleigh County, and 42.2 acres in Fayette County. Some 15 percent of the region's farms had tractors, but other large machinery, such as cultivators and harvesters, was almost nonexistent. The expense of such equipment, together with the small amount and rough topography of the land to be cultivated, dictated the use of work stock and hand tools. While most farms were owned by their operators, the value of the average farm, including land and buildings, was only \$6,215, a sum that symbolized the

169. Krebs and Teets, *West Virginia Geological Survey, Raleigh County and the Western Portions of Mercer and Summers Counties*, p. 3.

170. Hennen and Teets, *West Virginia Geological Survey, Fayette County*, 1919, p. 20.

171. Reger and Price, *West Virginia Geological Survey, Mercer, Monroe, and Summers Counties*, 1926, p. 51.

declining importance of agriculture in the New River region's economy at mid-century.¹⁷²

Despite the declining importance of agriculture in the New River region, small family farms continue to operate in Fayette, Raleigh, and Summers counties. Situated on plateaus, these surviving agricultural enterprises still produce marketable crops and livestock for use by New River region communities.

PROPERTY TYPES

Introduction

European-American settlement/agriculture had a significant impact on the natural and built environments of West Virginia and New River Gorge National River from the late 18th century to 1945. Although significant portions of early pioneer settlements and agricultural operations in the gorge were swept away with the coming of the coal, railroad, and lumber industries during the 1870s and 1880s, vestiges of 19th and early 20th-century self-sufficient, subsistence farms survive, particularly on the slopes and upland sections of the region.

Typology of Known and Expected Property Types

The typology of known and expected types for Euro-American settlement/agriculture includes:

1. Farmsteads
 - a. Farm houses
 - b. Domestic outbuildings (privies, outhouses, detached or outkitchens, wells, laundry sheds, icehouses, semi-subterranean storage cellars)
 - c. Agricultural production facilities (springhouses, barns, granaries, sheds, stables, smokehouses)
 - d. Specialized activity areas (yards, vegetable gardens, orchards, fields and pastures, woodlots, and trash dumps with associated fences or stone walls).

172. William Thomas Witzel, "The Resources and Industries of the New River Drainage Basin in West Virginia" (M.S. thesis, University of Tennessee, 1957), pp. 18-23, 27-34. Further data on agricultural production and trends in Fayette, Raleigh, and Summers counties during the 20th century may be found in: Monroe Washington, *Raleigh's Rich Resources* (Beckley, Beckley Newspapers Corporation, 1955), p. 25; Paul E. Lovingood, Jr., and Robert E. Reiman, *Emerging Patterns In the Southern Highlands: A Reference Atlas*, Produced by the Appalachian Consortium, Inc., in cooperation with Appalachian State University, University of South Carolina, and Tennessee Valley Authority, 1982, Vol. I, Introduction; U.S. Department of Commerce, Bureau of the Census, *United States Census of Agriculture: 1925, West Virginia Statistics by Counties* (Washington, Government Printing Office, 1928); West Virginia, Department of Agriculture, *West Virginia Agriculture* (Charleston, 1928); West Virginia University, Agricultural Experiment Station, College of Agriculture, Forestry, and Economics, *Agricultural Changes In West Virginia, 1940-1950-1959*, Current Report 38, May 1963; Bailey, "Some Change In West Virginia Farming Between 1929 and 1959;" and Mack H. Gillenwater, "A Geographical Analysis of the Demographic Changes in the New River Basin, 1900-1980," *Proceedings, New River Symposium*, 1983, pp. 203-17.

2. Agricultural Processing Facilities

- a. Gristmills
- b. Carding/woolen/fulling mills
- c. Tanneries
- d. Slaughterhouses
- e. Limekilns
- f. Distilleries

3. Transportation Facilities

- a. Farm roads
- b. Farm-related conveyances

Known and Expected Distribution of Property Types

Farmsteads. A farmstead consists of specialized structures, features, facilities, and activity areas which form a functionally interrelated (and largely self-sufficient) economic unit of domestic agricultural production at the level of the household. Physical remains associated with this property type include farm houses or dwellings for the farm family. Domestic outbuildings on the farmstead may include privies, outhouses, detached or outkitchens, wells, and laundry sheds. Agricultural production facilities on the farmstead may include springhouses, barns, granaries, sheds, stables, and smokehouses. Specialized activity areas on the farmstead may include yards, vegetable gardens, orchards, fields and pastures, woodlots, and trash dumps with associated fences or stone walls. Portions of the specialized activity areas may not always be contiguous to the parcel where the complex, including the farm house, domestic outbuildings, and agricultural production facilities, is located.

The majority of structures associated with a farmstead in the gorge area are vernacular-design log or wood-frame structures, while specialized structures, such as, springhouses, smokehouses, icehouses, semi-subterranean storage cellars, wells, and chimneys, are more typically constructed of stone or brick. Log and wood-frame structures are subject to more rapid deterioration than those of stone and brick.

Early farmsteads in the gorge tended to be located in the rich bottomlands along the New River and its tributaries where the soil was fertile and the farm lands were easily accessible to historic roads and river transportation. The coming of the C & O Railroad in 1873 opened the entire New River Gorge to the coal and lumber extractive industries. The railroads were generally designed for and built in river and creek valleys to take advantage of natural drainage slopes. New River coal outcroppings were also found primarily along the valleys and hollows as were lucrative and accessible timberlands. Thus, fertile valley and bottomland farm areas were preempted for use as coal, railroad, and lumber operations. The mountain farmers, some of whom had been on the land for generations, were driven toward the less fertile ridges and plateau areas of the gorge region. Thus, most extant remnants of Euro-American farmsteads are to be found on the ridges and plateau areas of the gorge in sections that were accessible to historic roads and removed from coal, lumber, and railroad operations.

Agricultural Processing Facilities. A series of industries involved in processing agricultural products are associated with this context. These individual industries comprise the agricultural processing industries property type. Included in this property type are such sub-types as gristmills, carding/woolen/fulling mills, tanneries, slaughterhouses, limekilns, and distilleries. Like farmsteads these industrial complexes were functionally related and largely self-contained economic units.

Early agricultural processing industries in the gorge and nearby areas varied considerably in terms of their size, technology, labor requirements, and distribution across the landscape. Most, however, were waterpowered, at least in the early 19th century, or used water as an element in their respective processes. Thus, most of the early examples of this property type would have been located along or near the New River and its tributary streams.

The coming of the railroad, coal, and lumber industries during the 1870s and subsequent years, however, drove the agricultural processing industries, along with the farmsteads, toward the ridges and plateau areas of the gorge region. Hence most extant remnants of Euro-American agricultural processing industries, as is the case with farmsteads, are likely to be found on the ridges and plateau areas of the gorge in sections that were accessible to historic roads and removed from coal, lumber, and railroad operations.

Transportation Facilities. Farmsteads and agricultural processing facilities required transportation for operation and marketing. Historic farm roads provided access to farmsteads and connected farmsteads to outlying fields and pastures. They also enabled farmers to transport their produce to nearby agricultural production facilities. While much of the early agricultural produce of the New River Gorge was consumed on the self-sufficient farmstead itself, some farmers began to market portions of their crops in local towns during the late 19th and early 20th centuries. Farm roads were necessary arteries for transportation of farm goods to local markets. As is the case with farmsteads and agricultural processing facilities property types, most extant farm roads are to be found on the ridges and plateau areas of the gorge in sections that were removed from coal, lumber, and railroad operations. While early farm-related conveyances generally consisted of horse or oxen-drawn wagons and/or rudimentary implements, farm-related motorized vehicles, such as tractors, were introduced in southern West Virginia by the 1920s.

Present Conditions of Property Types

Most early farmsteads, agricultural processing industries, and transportation facilities along the New River and its tributaries in the gorge region have disappeared or become historic archeological sites as a result of industrialization. While a few remnant examples of late 19th and early 20th century historic farmsteads are extant in the ridge and plateau areas of the gorge, visible traces of agricultural sites have become less well defined and most have become reclaimed at least in part by the forest and dense vegetation as agricultural activity has declined and farmsteads have been abandoned in recent decades. The Trump-Lilly Farmstead, for example, is a rare surviving site representative of a late 19th and early 20th century traditional self-sufficient/subsistence farm in New River Gorge National River. However, only about 10 percent of the farm is now cleared and the agricultural system one sees today is small by comparison to the agrarian activities that once were undertaken at the site.

The majority of historic structures associated with farmsteads are vernacular-design log or wood-frame structures. With the decline of agricultural activity they have received little or no maintenance, and thus have been subjected to rapid deterioration in the humid New River climate. Specialized farmstead structures, such as springhouses, smokehouses, and icehouses, are more typically constructed of stone or brick and thus more likely to survive. Abandoned farmsteads have been subjected to vandalism, salvage to area residents, and "pot-hunting" by artifact collectors. Structures on some surviving farmsteads have been modernized to accommodate housing needs by rural non-farm residents.

Because of the self-sufficient, subsistence nature of most agricultural activity in the gorge area, few, if any, agricultural processing facilities that can be identified are extant in New River Gorge National River. Some examples of such enterprises may survive, however, in nearby towns and service centers.

Historic farm road remnants are extant in some parts of the gorge, especially in the ridge and plateau areas away from industrial sites. The integrity of some road fragments, however, has been impacted by nearby coal, lumber, or railroad operations.

TABULAR SUMMARY OF MANAGEMENT INFORMATION

This tabular summary of management information includes key data for each historic property related to the Euro-American settlement/agriculture context in New River Gorge National River that has been surveyed by the cultural resources management staff of the former Mid-Atlantic Regional Office. During fiscal year 1992, a survey by MARO was conducted of structures acquired by the National Park Service from 1982 to 1992 to begin the draft List of Classified Structures for the national river. Information on each structure (including structural landscape features and ruins) was collected from land acquisition records, local histories, journals, newspapers, and oral interviews. Compilation of information for the draft LCS is an ongoing process. In November 1993, for example, the MARO-LCS team surveyed structures at the Harry Hampton Ballard Farmstead that had recently been purchased by the National Park Service.

Data for the structures listed in the tabular summary is from the draft LCS. This information will change as further studies and fieldwork are undertaken and Determinations of Eligibility and National Register of Historic Places nominations are completed. The names of the structures in the tabular summary were given at the time of the fieldwork and often represent the name of the most recent owner of the property rather than a historic name. Some of the structures' names will change as a result of the research for this historic context study as well as research that may be undertaken in the future.

Tabular Summary of Management Information

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
S-023	80359	Trump-Lilly Farmstead House	Hinton vicinity (NERI Tract 102-03)	Standing structure	1a	Listed (11-8-90)
S-023A	80363	Trump-Lilly Farmstead Yard Fence	Hinton vicinity (NERI Tract 102-03)	Unstabilized ruin	1d	Listed (11-8-90)
S-024	80360	Trump-Lilly Farmstead Granary	Hinton vicinity (NERI Tract 102-03)	Standing structure	1c	Listed (11-8-90)
S-025	80354	Trump-Lilly Farmstead Barn	Hinton vicinity (NERI Tract 102-03)	Standing structure	1c	Listed (11-8-90)
S-026	80361	Trump-Lilly Farmstead Stable	Hinton vicinity (NERI Tract 102-03)	Standing structure	1c	Listed (11-8-90)
S-027	80355	Trump-Lilly Farmstead Spring House	Hinton vicinity (NERI Tract 102-03)	Standing structure	1c	Listed (11-8-90)
S-028	80362	Trump-Lilly Farmstead Meat Shed	Hinton vicinity (NERI Tract 102-03)	Standing structure	1c	Listed (11-8-90)
S-029	None	Trump-Lilly Farmstead Wash House	Hinton vicinity (NERI Tract 102-03)	Standing structure	1b	Listed (11-8-90)
S-123B	80357	Trump-Lilly Farmstead Field Fences	Hinton vicinity (NERI Tract 102-03)	Standing structure	1d	Listed (11-8-90)
S-157	80948	Trump-Lilly Farmstead Outhouse	Hinton vicinity (NERI Tract 102-03)	Standing structure	1b	Listed (11-8-90)
S-156	80949	Trump-Lilly Farmstead Hay Barn	Hinton vicinity (NERI Tract 102-03)	Standing structure	1c	Listed (11-8-90)
S-158	81614	Trump - Lilly Farmstead Outlying Barn	Hinton Vicinity (NERI Tract 102-03)	Standing structure	1c	Listed (11-8-90)
None	None	River Road (portion of WV 26)	Hinton to Sandstone (east bank of New River)	Asphalted road in historic road alignment	3a	Not evaluated

CHAPTER SIX: RECREATION/STATE PARKS HISTORIC CONTEXT

NARRATIVE HISTORY

Summary

Geographic Boundaries: New River Gorge National River
Chronological Period: 1930s - 1940s

The historic context for recreation/state parks in New River Gorge National River focuses on the establishment of three state parks within the authorized boundaries of New River Gorge National River. At the time of its creation in 1978 the three state parks — Babcock, Grandview, and Sandstone Falls — formed the basis of established public recreation facilities and opportunities in the national river. During the 1930s two of the parks — Babcock and Grandview — were established as units of the embryonic West Virginia state park system and were developed using New Deal funding and Civilian Conservation Corps (CCC) workmen under the technical supervision of the National Park Service. The two parks, both of which contain extant examples of CCC rustic architecture, became popular and well-known areas in the state park system, and Grandview became one of the most heavily visited day-use parks in the state. Because it was established in the 1970s and developed as a riverfront day-use site with picnic facilities in the 1980s, Sandstone Falls State Park falls outside the significant chronological period for this historic context. Sandstone Falls and Grandview were acquired by the National Park Service in 1988 and 1990, respectively, and made a part of the national river. The twin concepts of recreational development and conservation of natural and scenic resources that provided the rationale for establishment of the state parks foreshadowed the underlying purposes for creating the national river as a unit of the National Park System.

While this study focuses on the three state parks within the boundaries of New River Gorge National River, four other units of the West Virginia state park system are adjacent to the national river's boundaries. These areas — Hawks Nest, Carnifex Ferry, Pipestem, and Bluestone — also offer insights into the development of recreational destinations in the New River region.

Introduction

This historic context for recreation/state parks in New River Gorge National River is based in part on a book authored in 1988 by Kermit McKeaver, chief of the Division of State Parks in West Virginia from 1948 to 1977. The book, entitled *Where People and Nature Meet: A History of the West Virginia State Parks*, provides a historical overview of both the state park system and its individual units and offers a synopsis of the principal themes and resources in the major parks in the state.

Historic Development of Recreation/State Parks in Its National Context

National Conservation Movement. Development of the recreational potential of West Virginia's vast array of natural resources and establishment of an extensive state park system during the 20th century has been influenced by the growing nationwide conservation and state parks movements. As the nation's natural resources were being ruthlessly exploited to meet the demands of an increasingly urbanized and industrialized society during the late 19th and early 20th centuries, the conservation movement took root to protect and develop the country's physical resources in a more orderly and rational manner. While the goal of the conservation movement was to protect the nation's remaining natural resources from exhaustion, it also encouraged the orderly use of those resources by an increasingly modern society that was seeking recreational opportunities in the nation's vanishing natural hinterlands.

The last decade of the 19th century and the first several decades of the 20th century were called the "conservation era," because the period was one of extraordinary concern for the fate of the nation's natural resources. During those decades the wise management of American resources was a major cause that captured considerable media and public attention. It drew support from organizations based on profession — associations of biologists, geographers, geologists, and other natural sciences. It also drew support from outdoor clubs, such as the Appalachian Mountain Club and the Sierra Club, and from scenic preservation organizations, garden clubs, and civic betterment associations. The conservation cause was also supported by those businesses which had economic stakes in provident natural resource management — some timber companies, railroads, and elements of the mineral extraction industry. This breadth of concern inspired and was reflected in the high level of political attention conservation received. Both major political parties formulated platform planks out of the conservation issue. Gifford Pinchot, one of conservation's most forceful partisans, became President Theodore Roosevelt's chief lieutenant and ultimately one of the most prominent men in Washington as Chief Forester of the U.S. Forest Service, an agency established in 1905 to provide for the wise use of the nation's forestlands.

As a movement and as a cause conservation had strong ties to the contemporary progressive movement. Progressivism was tied to the emergence of an industrial economy and a modern, middle class society in the decades following 1890. One of its principal goals was to make government responsive to the rapidly broadening and increasingly powerful middle class. Another of its central aims was to bring government in line with the latest rational scientific principles. Out of this concern for rationality came a demand for efficiency in government. The movement abhorred "politics" and "special interests," thus reflecting a homogeneous notion of the public good that made little allowance for class or region-based differences in needs.

Like progressivism, the conservation movement was directed toward accommodating the changes associated with the emergence of modern industrial society. The wider significance of the movement, according to some writers, stemmed from the role it played in transforming a decentralized, nontechnical, and loosely organized society into a highly organized and centrally directed society that could meet a complex world with efficiency and purpose.

The progressive conservation agenda for land resources, especially what remained of the public domain, reflected some of the movement's dominant themes. The conservation movement advocated continued public ownership of much of the public domain, since such a policy was bound up with the idea of the public good and the notion of efficiency. Public ownership would give scientists and resource management professionals the greatest latitude in working toward the public good by protecting the nation's natural resources from rapacious exploitation and promoting their rational use. Public land ownership thus fit into a homogeneous, universalist notion of the public good with all Americans, regardless of class or region, becoming the beneficiaries of its bounty.

Although the idea of perpetual public ownership of much of the public domain was not new, and isolated areas had been exempted from private claims beginning in the early 19th century, it was not until the era of progressive conservation that a policy of massive, systematic exemption gained broad popular support and made political headway. Before the progressive era closed after World War I, more than 150,000,000 acres of the public domain had been placed in national forests, parks, and monuments.

These withdrawals raised the question of what should be done with the millions of acres of land that the federal government was to manage. When this question arose, a split emerged in the conservation movement between those for whom ideas of the public good were based on a utilitarian, materialist humanism and those whose ideas were grounded more in a sense of aesthetics or a mystical reverence for nature.

The writings of Gifford Pinchot and John Muir represent the opposing poles of thought which the movement included. Conservation, as defined by Pinchot, stood for three central utilitarian principles which would guide the multiple resource use philosophy of the U.S. Forest Service. The principles were: 1) orderly development of natural resources and the fullest use of them by the present generation; 2) prevention of waste; and 3) development and preservation of resources "for the benefit of the many, and not merely for the profit of a few."

While Pinchot offered the material means of a satisfying modern life, Muir hoped to create through his preservation efforts the psychic and physical antidotes for what he saw as the dehumanizing aspects of modern industrial urban society. Untrammelled nature could restore what modern society deadened — the primitive, natural side of man. Muir desired a balance of the spiritual and the material, out of which would come total well-being. Preservation of the nation's great scenic areas from material exploitation would be an important means to this end. In keeping with progressivism's broad-based, democratic notions of public interest, it was important to ensure public access to these unspoiled places for recreation and spiritual renewal. These ideas would provide the intellectual framework for the establishment of the National Park Service in 1916.¹⁷³

State Parks Movement. During the 1920s, while the National Park Service was expanding in many directions, a state parks movement gathered momentum, resulting in establishment of numerous state park systems throughout the nation. Stephen T. Mather,

173. Ronald A. Foresta, *American's National Parks and Their Keepers* (Washington, Resources for the Future, Inc. 1984), pp. 9-18. Also see U.S. Department of the Interior, National Park Service, *The National Survey of Historic Sites and Buildings, Theme XIX, Conservation of Natural Resources*, 1963, pp. 1-176.

Director of the National Park Service, strongly and actively encouraged this movement, believing that the National Park System was a model that should be emulated by the states. Beyond his belief that the time had come when the states should begin to do on a political level what the nation was doing on the "heroic scale," Mather faced a disconcerting problem. The national park concept had caught the public imagination, and tourists had begun to visit these wilderness treasures in growing numbers, creating a profitable new industry — entertainment of the traveler — both inside and on the fringes of the parks. Pressures began to build to establish new national parks throughout the country as the states attempted to reap the benefits of the tourist industry. As a result, numerous proposals were submitted for new parks that did not compare with the nationally significant "crown jewels" of the National Park System such as Yosemite, Yellowstone, Mount Rainier, Glacier, Crater Lake, and Grand Canyon. Furthermore, many of the proposed parks did not measure up to the high standards developed by Mather and his associates for additions to the system.

As a consequence of this dilemma, Mather was determined to promote the growth and development of state park systems. Although some states had established parks as early as the 1880s, by 1921 six states had only one park and 29 had no state parks. Accordingly, Mather convened the first National Conference of State Parks, under the sponsorship of the National Park Service, in Des Moines, Iowa, in January 1921. Attended by some 200 conservationists, the meeting resulted in a movement toward the creation of systems of recreation areas within the states which would be comparable in purpose, choice, administration, and resultant benefits to what on the national scale was the purpose and achievement of the National Park System. The principal tenets of the newly-organized conference were:

To urge upon our governments, local, county, state, and national, the acquisition of additional land and water areas suitable for recreation, for the study of natural history and its scientific aspects, and the preservation of wildlife, as a form of the conservation of our natural resources; until there shall be public parks, forests and preserves within easy access of all the citizens of every state and territory of the United States; and also to encourage the interest of non-government agencies and individuals in acquiring, maintaining and dedicating for public uses similar areas; and in educating the citizens of the United States in the values and uses of recreational areas.¹⁷⁴

Under Mather the Park Service offered advice and guidance to the state park commissions and served as a national clearing house for information on state parks. This assumption of an active role in relation to state park systems had clear strategic advantages for the bureau. It created a new class of clients among state and local park officials who benefitted from Park Service aid and advice. It supported the bureau's claims to a leading role in federal recreation policy. More importantly, by encouraging state park systems the National Park Service might enable the states to accept as parks, many of the inferior sites which state congressional delegations were proposing as national parks. While these practical reasons were important to Mather, he was also very much imbued with the

174. Freeman Tilden, *The State Parks: Their Meaning in American Life* (New York, Alfred A. Knopf, 1962), pp. 3-5.

progressive vision, which for him included an ideal landscape incorporating a system of state parks to accommodate the increasingly motorized, affluent public.¹⁷⁵

Enactment by Congress in 1936 of the Park, Parkway, and Recreation Area Study Act, upon the recommendation of the Park Service, was a milestone in strengthening the relationship between the bureau and the states. The act clearly established the bureau as the preeminent federal recreation agency, and it singled out the bureau as the proper conduit of federal aid to lower levels of government for recreation projects. This legislation directed the NPS to make a comprehensive study of the park and recreation area programs of the United States to provide data that would be helpful in "developing a plan for coordinated and adequate public park, parkway, and recreation area facilities for the people of the United States." It also authorized the Park Service to furnish consultative and advisory assistance to the states and their political subdivisions.

During the late 1930s, the Park Service, under authority of this act, assisted 46 states and the territory of Hawaii in developing plans for statewide and territorialwide parks and recreation areas. Thirty-seven of these plans, some of which were preliminary in nature, were completed at the time work was suspended soon after American involvement in World War II. The 1941 report, *A Study of the Park Recreation Problems of the United States*, was based to a considerable extent on the findings of the state and territorial studies.¹⁷⁶

Work on the cooperative studies with the states was resumed in 1956 as an important element of the Park Service's Mission 66 Program. After the establishment of the Outdoor Recreation Resources Review Commission in 1958, the Service cooperated closely with the commission and made its planning data available to that group.

Following issuance in January 1962 of the commission's report, *Outdoor Recreation for America*, a Bureau of Outdoor Recreation was established in the Department of the Interior to implement one of the commission's major recommendations. A number of functions relating to cooperation with other federal, state, and local agencies, as authorized by the 1936 act, were transferred to the new bureau.¹⁷⁷

Civilian Conservation Corps (CCC). Little more than a decade after the meeting at Des Moines federal assistance was to give the development of state parks an impetus that neither Mather nor anyone else could have envisioned. The booming economy of the 1920s in the United States came to an abrupt end with the stock market crash in October 1929 and was succeeded by a tragic period known as the Great Depression. Although the economic downturn began in 1929, it was not until 1931-32 that its true depths and the need for major remedial action became apparent. At that point, coping with the Depression became a major demand, perhaps the major one, on elements of the federal bureaucracy. During the 1930s the Park Service found an important place in New Deal efforts to cope with the wounded economy and its social consequences.

175. Foresta, *America's National Parks and Their Keepers*, p. 39.

176. U.S. Department of the Interior, National Park Service, *A Study of the Park and Recreation Problems of the United States* (Washington, Government Printing Office, 1941).

177. Tilden, *State Parks*, pp. 13-14, and Foresta, *America's National Parks and Their Keepers*, pp. 45-46.

President Franklin D. Roosevelt's relationship to his Secretary of the Interior, Harold L. Ickes, was a close one, and Ickes convinced the president that unemployed labor could be put to good use in carrying out conservation and recreation projects for Interior's bureaus. Conservation and the provision of recreational opportunities were areas in which the federal government could spend extensive sums of money and employ much labor with relatively little controversy, since these programs were widely recognized as legitimate concerns of government. Moreover, it could be argued that the public provision of recreation facilities complemented, and in some cases stimulated, private business. Accordingly, the Park Service was assigned a large role in managing the Civilian Conservation Corps program and soon that role came to eclipse all other bureau responsibilities in terms of personnel and resources employed.

A bill, commonly called the Federal Unemployment Relief Act, was signed into law on March 31, 1933, the legislation providing for Emergency Conservation Work (ECW) as the Civilian Conservation Corps was officially called. The CCC was authorized to provide work for 250,000 jobless male citizens between the ages of 18 and 25 (on October 1, 1935, the age range would be expanded from 17 to 28) who had been unemployed for at least six months. CCC enrollees would be engaged in reforestation, road construction, soil erosion prevention and control, and park recreation and flood control projects. Work camps, consisting of approximately 200 men, were established for CCC enrollees, and the youth received \$30 per month, \$25 of which went to their dependents. Enrollees were provided with living quarters, food, clothing, medical care, and hospitalization. Initially, enlistment was for six months, but in September 1933 provision was made for reenlistment. Four federal departments cooperated in carrying out the CCC program. The Department of Labor recruited the enrollees, while the War Department administered and directed the work camps and camp activities, which included camp construction, transportation, and physical conditioning of the men. The Departments of Agriculture and of the Interior organized and supervised the work projects. As many as 500,000 men were in the program at one time, and by the end of 1941 some 2,000,000 men had been employed by the program.¹⁷⁸

At its peak, there were 2,635 CCC camps operating on projects in the United States, 561 of which were assigned to national, state, and local parks. As hundreds of millions of dollars in federal emergency funds from New Deal agencies were poured into conservation activities, the National Park Service had an organization suited in skill and experience, though not staffed for such an undertaking, to direct the efforts into channels that would secure lasting benefits. The enrollees worked on hundreds of national park development projects, including a large backlog of projects which had been planned but which had not been carried out for lack of money and manpower. By 1935 the bureau was operating 118 CCC camps in the National Park System. It was estimated by some that during its ten years of existence (1933-42) the CCC performed park conservation work that would have taken 50 years to accomplish under ordinary conditions.

178. U.S. Department of the Interior, National Park Service, *The Civilian Conservation Corps and the National Park Service, 1933-1942: An Administrative History*, by John C. Paige, 1985, pp. 1-37; Richard B. Morris, ed., *Encyclopedia of American History: Bicentennial Edition* (New York, Hagerstown, San Francisco, and London, Harper & Row, Publishers, 1976), pp. 404-05; and Yvonne Snyder Farley, "'A Good Part of Life,' Remembering the Civilian Conservation Corps," *Goldenseal*, VII (January - March 1981), pp. 42-49. More than 55,000 men from West Virginia served in CCC work camps throughout the United States.

While the Park Service utilized considerable sums of federal emergency funds in national park development projects, the greatest proportion of such funds expended through the bureau went to nonfederal park development — state, county, and metropolitan park systems. The availability of these funds enabled the Park Service to expand upon its policies of promoting nonfederal park systems, and at the same time state and local officials saw these funds as an opportunity to develop park systems to meet the increasing conservation and recreation needs of their citizens. During 1933-35, for instance, seven state park systems were established while nationwide a total of 350 new state parks were created. The Park Service drew up development plans for the new state parks and carried out many of the plans with the CCC labor at its disposal. Road and water supply systems, power lines, trails, dams, picnic, bathing, and camping facilities, and park administrative, maintenance, and housing structures were some of the projects completed by the CCC enrollees. Under the Emergency Relief Administration submarginal farming and grazing land was acquired by the federal government, and much of the land deemed of value for recreation was turned over to the Park Service. Some of this land was developed into parks with the idea of eventually turning them over to the states in which they were located and for whom they would serve as model state parks. These "recreation demonstration areas" were developed with CCC labor as well. In fact, the bureau's use of CCC labor in many of its projects was so lavish that at the program's peak in size in 1935, the Park Service was employing some 6,000 supervisors and 120,000 enrollees in connection with it.¹⁷⁹

Historic Development of Recreation/State Parks in Its State Context

Overview of Conservation and Recreation Development in West Virginia: 1890s-1920s.

The destructive tendencies of the coal, lumber, and other extractive industries during the late 19th and early 20th centuries left a legacy of depleted resources and scarred terrain in West Virginia, much as they did throughout the Appalachian region.¹⁸⁰ Choice stands of forest were ruthlessly cut, and the lack of precautions in the use of railroad locomotive and steam-propelled sawmills, together with the carelessness and ignorance of farmers and hunters, led to extensive forest fires, resulting in soil erosion, floods, and declining soil fertility. Rivers and streams were polluted, leading to a decline in the fish population, and game animals and birds were senselessly slaughtered. Thus, the results of industrialization were exploitation and ruination of West Virginia's natural resources, scenic qualities, and traditional landscapes.

While some limited efforts were undertaken during the last several decades of the 19th century to protect West Virginia's vanishing natural resources from the ravages of industrialization it was not until the early 1900s that conservation began to receive statewide attention. Under the impelling national leadership of President Theodore Roosevelt, the movement for conservation of West Virginia's natural resources, previously launched, could no longer be neglected. Its beginnings were closely related to a legislative act of 1897 authorizing a geological and economic survey. This work came under the direction of Dr. Israel C. White, a distinguished geologist of international reputation, who

179. Foresta, *America's National Parks and Their Keepers*, pp. 43-45, and Tilden, *State Parks*, pp. 14-16.

180. Eller, *Miners, Millhands, and Mountaineers*, pp. 110-12.

acted as state geologist without pay. The county surveys for the state geological and economic survey made under his direction were storehouses of information on West Virginia's natural resources. In conjunction with the Agricultural Experiment Station of West Virginia University, the state board of agriculture, and the farmers' granges, White was able to create interest in conservation in many ways. His most enduring legacy was the appointment in 1908 of a state conservation commission authorized to study and report upon West Virginia conservation problems and to cooperate with President Roosevelt's Conservation Conference that same year.¹⁸¹

The state conservation commission, under White's leadership, prepared a report in 1908 describing the destruction of West Virginia's natural resources and the need for conservation. In making a case for protection and preservation of the state's scenic and natural resources, the report stressed the economic benefits to be derived from utilization of such resources for recreation and tourism. The report noted in part:

West Virginia has not, up to the present time, done much with its scenery except to mar it, mutilate it, and burn it up. Except in the case of mineral springs, practically nothing has been done in this state to make scenery attractive or to bring it to the attention of the outside world. West Virginia may never rival Switzerland, but it can equal Maine. The summer climate is glorious among its high mountains and elevated valleys. A series of summer hotels from 3,000 to 4,000 feet above the sea might stretch across the state, following the Allegheny and parallel ranges of mountains.

Adequate highways connecting these resorts, and others for side trips to hunting and fishing grounds, with the surrounding forests cared for, and the innumerable mountain streams clear and clean would attract to West Virginia many thousand wealthy tourists who now hardly know the state by name and who never think of visiting it, except to rush across it on the limited express trains of trunk railroads.

A good many things must be done before West Virginia will take its due rank as a resort for tourists, health seekers, and sight seers. It must first protect its woods and make them attractive. It must clean its streams and stock them with fish, and make and enforce civilized laws for the protection of the fish. It must stop the senseless slaughter of birds and game. It must build roads that can be traveled with speed and safety by modern vehicles. In building these roads the value of scenery must be considered in regions where scenery is attractive.

The steps necessary to the carrying out of any one of these recommendations are many, expensive, and difficult. No one should suppose that it is possible to do such things by simply resolving that they ought to be done. The immediate duty is to make a beginning and to make it in the right way and in proper direction. Then build upon that beginning as it becomes possible to do so. Check forest fires first; lessen the pollution of streams; put all new roads on the best grades, and when old ones are changed, put them on proper grades also; make it so dangerous for fish dynamiters and game destroyers to ply their trade that they will migrate. Follow these beginnings with constructive work; stock streams anew

181. Ambler, *West Virginia: The Mountain State*, pp. 506-08.

with fish; the forests with game and birds; build roads as circumstances will allow; and take pains to let the outside world know that West Virginia is in the scenery and resort business.

If the time shall come when immense storage reservoirs occupy a number of the elevated valleys among the mountains of West Virginia they will constitute an important factor in the development of the state's scenic resources. They will add more than almost anything else can add to the enjoyment of persons who visit the mountains, as well as to the people who live there. To all intents and purposes they will be high mountain lakes, suited to sail, launch, and canoe. They will cover hundreds, and in some cases, perhaps thousands of acres, and abound in fish and fowl. The reservoirs are not yet built, of course. They may not be built for a long time; but it is reasonably safe to count on them as one of the most attractive features of our mountain scenery in years to come.¹⁸²

Despite the impetus of the growing conservation movement in the United States and the efforts of White and his colleagues on the state level, West Virginia conservationists made only halting progress in the effort to protect the state's natural resources from the excesses of industrialization until the mid-1920s. A state game warden system was initiated by the state legislature in 1897 to strengthen existing game and fish laws, but no appropriations were made to finance the office. The West Virginia Reform Law of 1909 directed the governor to appoint a Chief Forest, Game, and Fish Warden for a four-year term under the direction of the Forest, Game, and Fish Department. Public interest in conservation, however, lagged behind that in other states. Many of the county wardens appointed by the state warden were admittedly less than respectable, the need for forest protection was not appreciated, especially by hunters and fisherman, and the staff of the warden's office was inadequate for law enforcement and education of the public.

While West Virginia was grappling with its conservation issues two national forests comprising lands in the state were established and placed under U.S. Forest Service administration. Both national forests, the Shenandoah (renamed George Washington in 1932) and the Monongahela, were acquired under the Weeks Act of March 1, 1911, and established primarily for flood protection and regulated timber production. The Shenandoah was proclaimed on May 16, 1918, and the Monongahela on April 28, 1920.¹⁸³

With the objective of improving the effectiveness of the warden system, the West Virginia state legislature in 1921 vested administration of the forest, game, and fish laws in a three-member body designated the Game and Fish Commission. Appointed by the governor, this commission was authorized to appoint a chief game protector. Upon its formation the commission appointed as game protector A.B. Brooks, a pioneer in the state conservation movement, particularly with those phases of it that concerned forests and wildlife. With an annual income from hunting and fishing licenses of some \$81,000, which was

182. West Virginia Conservation Commission, *Report* (1908), quoted in Brooks, *West Virginia Geological Survey, Volume Five, Forestry and Wood Industries*, pp. 39-40.

183. Rice, *West Virginia: The State and Its People*, p. 473. By 1938 the Monongahela National Forest covered some 795,000 acres in Grant, Tucker, Pendleton, Pocahontas, Preston, and Randolph counties, and the George Washington comprised some 100,000 acres in Hardy, Hampshire, and Pendleton counties.

augmented from year to year by federal allotments under the Clarke-McNary Act of 1924, grants from private landowners, and by the active support of the West Virginia Wildlife League, the conservation movement began to make steady progress. Sixteen poorly equipped wooden fire lookout stations were converted into modern steel structures, and additional modern towers were constructed. The commission purchased the first state-owned game reserve at French Creek in Upshur County, and the first state-owned forest, Seneca, in Pocahontas County. The commission participated in the construction of experimental filtration plants, and it noted with protective approval the voluntary return of beavers to the Hampshire County area. It stocked a number of streams from the U.S. Hatchery at White Sulphur Springs.¹⁸⁴

Emergence of the West Virginia State Park System in the 1920s. Under Brooks' leadership and the influence of the growing state parks movement being promoted by the Park Service, the West Virginia state legislature established a study group known as the State Forest, Park and Conservation Commission in 1925. The commission was composed of the governor, commissioner of agriculture, chairman of the Game and Fish Commission, director of agriculture extension, and state geologist. This commission was directed to study and investigate the need and opportunity for forests, parks, and game preserves and to prepare a comprehensive report with recommendations to the 1927 session of the state legislature.

As a result of its studies, the commission made several recommendations that would play a significant role in the establishment of a state park system. The recommendations included: 1) lands having outstanding scenic and natural qualities should be acquired by the Game and Fish Commission and be administered as units of a state parks system; 2) the Game and Fish Commission should have authority to acquire and accept gifts of park lands; and 3) all state activities relating to game, fish, forestry, and parks should be placed under one organization that was to be called the Conservation Commission of West Virginia.

As directed the State Forest, Park, and Conservation Commission made specific recommendations relating to acquisition of lands for state parks. It urged that large areas having outstanding scenic and natural quality be secured before commercial exploitation made their purchase difficult. Among the areas recommended for acquisition in the 1927 report were: 1) Coopers Rocks, Monongalia County; 2) Cranberry Glades and surrounding mountains, Pocahontas County; 3) Hawks Nest area of New River Canyon, Fayette County; 4) an area near White Sulphur Springs in the vicinity of the intersection of the Midland and Seneca Trails; 5) Pinnacle Rock, Mercer County; and 6) Blennerhassett Island, Wood County. Seneca Rocks and Smoke Holes were also recommended for acquisition, but it was recognized that they were to be added to the Monongahela National Forest.

In addition, the commission recommended that several areas having historical or cultural significance be included in a state monument system. These included: 1) the Mound at Moundsville; 2) Tu-Endie-Wei Park at Point Pleasant; 3) Berkeley Springs, Rumsey Monument, and Cadell Rifle Rough in Preston County; and 4) the Morgan Monument at Bunker Hill. Acquisition of Ashby's Fort, Pricketts Fort, Philippi Battlefield, Drupe (Droop)

184. Ambler and Summers, *West Virginia: The Mountain State*, pp. 468-71.

Mountain Battlefield, and other historic spots to be selected by the state historical society was also recommended.¹⁸⁵

As a result of the study commission's recommendations the state legislature passed a law establishing a State Forest and Park Commission. This fledgling organization, which was administered by the Game and Fish Commission, marked the beginning of the state park system in West Virginia. The first acquisition of land by the new State Forest and Park Commission was Droop Mountain Battlefield, acquired by deed dated April 14, 1928. Despite this initial acquisition a fully operational state park system would not emerge in West Virginia until 1933 when a state park division was established under a newly created Conservation Commission.¹⁸⁶

Overview of Conservation and Recreation Development in West Virginia: 1920s-Present.

Before reviewing the historical development of the state park system, it is instructive to gain perspective on the evaluation of the conservation movement and recreational opportunities in West Virginia from the late 1920s onward. When the state was visited by the most destructive forest fires in 20 years during the spring of 1928, the state legislature responded in 1929 by abolishing the Game and Fish Commission and establishing the West Virginia Game, Fish, and Forestry Commission and assigning it executive powers and responsibilities. At the same time a comprehensive set of game, fish, and forestry laws was enacted, and the new commission was directed to appoint a chief forester with responsibilities for forest conservation and protection.

That same year the Great Depression settled on the country, and while it seriously impacted the economy of West Virginia it proved to be a blessing in disguise for the West Virginia conservation movement. As the Depression worsened, it became necessary to find employment for many persons and ways to stimulate the economy. With the coming of the New Deal under President Roosevelt in 1933 a variety of emergency funding programs were enacted to alleviate suffering and bring the nation out of economic collapse. Among the most helpful programs of the New Deal for conservation work in West Virginia was the CCC. Seizing upon this agency as an opportunity to make the state's mountains, streams, and forests inviting resorts, the legislature, in extra session in 1933, established the Conservation Commission of West Virginia to replace the earlier West Virginia Game, Fish and Forestry Commission. The new commission, which had divisions of game, fish, forestry, and state parks, was charged with conservation and development of lands for state parks as well as protection of forests, wildlife, fish, and scenic wonders. At the same time the conservation, fish, game, and forestry laws were revised, chiefly to permit cooperation with the federal government in the CCC program as well as other New Deal emergency funding agencies.

As originally constituted, the Conservation Commission consisted of five members. Its administrative staff comprised four persons: a director, an executive secretary, a director of fish propagation, and a chief game protector. The staff was soon enlarged by the addition of directors for law enforcement, parks, forestry, and education, the latter to concentrate on educational work among sportsmen and in the public schools. Its revenue

185. Kermit McKeever, *Where People and Nature Meet: A History of the West Virginia State Parks* (Charleston, West Virginia, Pictorial Histories Publishing Company, 1988), p. 8.

186. *Ibid.*, p. 8, and Ambler and Summers, *West Virginia: The Mountain State*, p. 471.

was derived from hunting and fishing licenses, federal aid, state appropriations, and an assessment of one cent per acre for fire protection on private forest land for fire protection. Ten percent of hunting and fishing license fees were set aside for purchase of lands for state parks, forests, and game and fish refuges.¹⁸⁷

From the outset the Conservation Commission of West Virginia was interested primarily in "renewable natural resources": forests, soil, water, and wildlife. Under the commission a notable beginning on behalf of forest conservation was initiated during the 1930s, emphasizing reforestation as well as forest fire prevention. By 1939 the state owned six forests which ranged in acreage from 5,400 for Greenbrier Forest in Greenbrier County to 12,973 for Coopers Rock Forest in Monongalia and Preston counties and operated a 22-acre forest tree nursery in Cabell County that had an annual propagating capacity of 5,000,000.

That same year the state operated 11 state-owned parks, totaling some 32,500 acres. The state parks ranged in size from 40 acres for Pinnacle Rocks in Mercer County, to 10,865 acres for Watoga Park in Pocahontas County.

In 1939, in addition to its forests and parks West Virginia owned eight tracts of land comprising some 15,600 acres that were used for game propagation. On these tracts wild game birds and animals were bred for distribution to state owned parks and forests. At the same time the state leased from private owners for ten-year periods some 64 tracts in 24 counties totaling 120,000 acres for game refuges. By the late 1930s the Conservation Commission was operating three fish hatcheries and one hatchery rearing station. Soil conservation was tied closely to soil rehabilitation and forest fire prevention, but it also received the attention of the state university agricultural extension service and other state agencies in conjunction with Soil Conservation Service programs under the Department of Agriculture.¹⁸⁸

During World War II, the Conservation Commission continued to administer state programs for the preservation and protection of West Virginia's natural resources and the development of state lands for park and recreation purposes. In 1943 the Conservation Commission's membership was increased to seven, one from each congressional district and one at large, but the membership was reduced in 1945 to six, one for each congressional district. By the mid-1940s the number of employees under the Conservation Commission had increased to more than 200, including professionals such as engineers, biologists, foresters, protectors, superintendents, managers, deputies, clerical workers, and maintenance personnel. Employees in the law enforcement and forestry divisions were placed under the state civil service system in 1945 and the remainder of the commission's workers in 1948.¹⁸⁹

187. Ambler and Summers, *West Virginia: The Mountain State*, pp. 471-72; Writers' Program, Work Projects Administration, *West Virginia: A Guide to the Mountain State*, pp. 25-26; and Ralph R. Widner, ed., *Forests and Forestry in the American States: A Reference Anthology Compiled by the National Association of State Foresters* (Washington, D.C., 1968), pp. 313-21.

188. Writers' Program, Work Projects Administration, *West Virginia: A Guide to the Mountain State*, pp. 26-29, and Ambler, *West Virginia: The Mountain State*, pp. 592-95.

189. Ambler and Summers, *West Virginia: The Mountain State*, p. 472.

Under the Conservation Commission natural resource preservation and protection programs were continued in West Virginia during the postwar period. The recreational potential of natural resources was more clearly recognized, and the development of recreational opportunities became a prime objective of the commission in its efforts to meet the increasing recreational needs of the population. By 1955 the state park system included 19 state parks with a total park acreage of nearly 40,388. The parks offered a variety of recreational opportunities, including hiking, fishing, boating, picnicking, playgrounds, golf, swimming, hunting, winter sports, camping, guest lodges, vacation cabins, and horseback riding. In 1954 there were ten state forests with a total acreage of 78,255, and an additional tract, Sleepy Creek, of some 20,000 acres in Morgan and Berkeley counties had been purchased for future development. The forests were maintained primarily for timber production, recreational use, hunting and fishing management, demonstration purposes, watershed protection, reforestation, and fire and pest control. The largest forests were equipped with vacation cabins, playgrounds, picnic areas, hiking trails, and swimming facilities. By 1954 the commission administered five fish hatcheries and administered a variety of programs to clean up stream pollution, propagate wildlife, and manage hunting and fishing activities.¹⁹⁰

Although conservation and recreation programs would be placed under various state agencies as a result of several governmental reorganizations after the 1950s, they would continue to be major elements of West Virginia's socioeconomic life down to the present. As its natural resources were preserved and protected and the recreational potential of its lands was developed, West Virginia increasingly became a noted recreation area in the eastern United States. A brochure prepared by the U.S. Department of the Interior in 1964 described this phenomena:

West Virginia is the recreation area many people in the eastern half of the United States are seeking. With a strong rural flavor, the State lies between the giant industrial areas to its east and west and presents a pleasant contrast to much of the Mississippi Valley.

Its mountains impart serenity and restfulness and its fish and game provide inviting opportunities for sportsmen...

While not as populous as some of its neighboring states, West Virginia has a great potential in recreational development because it is convenient to areas of high population density and because it offers a wide range of scenic and other outdoor attractions...¹⁹¹

By the late 1980s there was increasing recognition of the significant role that recreation and tourism played in the West Virginia economy as well as the lives of its citizens and the general American motoring public. The West Virginia State Comprehensive Outdoor Recreation Plan for 1988-92 noted:

Public and private providers of outdoor recreation administered over 1,590,216 acres of outdoor recreation land in West Virginia in 1987. This represents about

190. *Ibid.*, pp. 472-77.

191. U.S. Department of the Interior, Office of the Secretary, Division of Information, *Natural Resources of West Virginia: The Mountain State* (Washington, D.C., Government Printing Office, 1964), pp. 33, 35.

ten percent of the State's total land area and amounts to about .83 acres for each resident of the State.

The vast majority of the State's outdoor recreation land — 1,473,428 acres or 92.6 percent — is undeveloped (passive or conservation uses) while only 36,287 acres or 2.3 percent of the total is in developed lands (intensive use areas). Water-based recreation areas comprise 80,501 acres or about 5.1 percent of the total.

Federally administered lands comprise the great majority of outdoor recreation lands in the State — 1,161,642 acres or 73.0 percent of the total — due mainly to the presence of the National Forests. State administered lands comprise 407,247 acres or 25.6 percent of the total, and locally administered lands represent 21,327 acres or less than 1.3 percent of the total. One may conclude from these figures that West Virginia has a wealth of outdoor recreation opportunities not only for its citizens but for the numerous tourists and vacationers that visit the State each year...¹⁹²

Overview of Development of State Park System: 1933-Present. Although an embryonic state park system had been established under the Game and Fish Commission in 1927, an organized state park system did not begin in West Virginia until 1933. As a result of the worsening Depression, the CCC was established that year to relieve unemployment through conservation work programs. Using CCC personnel and funds from other New Deal public works programs, the NPS, which had been promoting state parks since the early 1920s, proposed to develop into state parks suitable areas to be procured by the individual states. West Virginia, as did many other states, rose to the challenge and established a state parks division in 1933 under its newly-established Conservation Commission.¹⁹³

The guidelines describing the purpose of state parks was written into the legislation establishing the Conservation Commission. The law stated that the purpose of the system:

shall be to promote conservation by preserving and protecting natural areas of unique or exceptional scenic, scientific, cultural, archeological or historic significance, and to provide outdoor recreational opportunities for the citizens of this state and its visitors...¹⁹⁴

In the beginning only one area suitable for development as a state park was owned by the Conservation Commission. Accordingly, Watoga State Forest in Pocahontas County was designated as a state park. In 1934 the state legislature, sensing the need for and value of state parks, appropriated \$70,000 for the purchase of additional lands for development of

192. Governor's Office of Community and Industrial Development, *West Virginia State Comprehensive Outdoor Recreation Plan, Calendar 1988 - 1992*, July 1988, pp. 1-2.

193. For more data on the impact of the CCC on the development of the West Virginia state park system see George Hersel, "Legacy of the CCC," *Wonderful West Virginia*, XLVII (October 1983), pp. 3-11; Jennings Randolph, "The Civilian Conservation Corps: American's Productive Investment," *Wonderful West Virginia*, XLVII (October 1983), pp. 12-13; and Ted Fearnow, "Civilian Conservation Corps — Impact on West Virginia's Outdoors," *Wonderful West Virginia*, XLI (October 1977), pp. 4-9.

194. Quoted in McKeever, *Where People and Nature Meet*, p. 5.

state parks. Using these funds some 17,085 acres were purchased for park lands. Watoga State Park was doubled in area, and lands for Lost River State Park in Hardy County, Cacapon State Park in Morgan County, and Babcock and Hawks Nest state parks in Fayette County were acquired.

CCC Camps were soon established in or near these park areas, and the work of planning, design, and development of the parks commenced under the direction of the National Park Service. The CCC camp designations and their dates of commencement were:

Watoga, SP-1, May 15, 1934
Lost River, SP-2, May 15, 1934
Babcock, SP-3, May 15, 1934
Cacapon, SP-4, October 4, 1934
Watoga, SP-5, June 18, 1935

The CCC camp established at Babcock also provided personnel for the development of Hawks Nest State Park. The camp, SP-5, was transferred from the Department of Agriculture to the Department of the Interior on August 15, 1934.

Development of these areas was guided by a "state park concept" formulated by the Conservation Commission. This concept would guide development of West Virginia state parks for the next half century. A state park, according to the commission, was a wooded area dedicated primarily to outdoor recreational use by the public and the preservation of aesthetic and sometimes historic values. Secondly, state parks were to be devoted to timber growth and game propagation. Thus, state parks were planned to preserve some of the state's outstanding scenic areas and protect them from exploitation and to preserve some lands typical of West Virginia in their natural condition. Prevention of timber and mineral exploitation of park lands would allow nature to restore them to their condition when the "white man" came, and prohibition of hunting would permit wildlife to be "harvested" only by camera and observation.

With the "state park concept" in mind, park development was directed toward the development of convenience and accessibility to selected portions of the parks, with attention to minimizing impacts on the natural environment. Where possible large areas were left untouched to ensure propagation of wildlife and protect natural conditions. Construction of family vacation cabins in natural settings was given high priority in the early years, and the popularity of the cabins soon evolved into the need for inns, lodges, restaurants, trading posts, and other visitor-related services.

By June 1935 some \$3,100,000 in federal funds from a variety of New Deal agencies had been expended in development of the aforementioned parks. The state parks division reported that no efforts were being spared "in the tedious planning of the work where artistic merit and soundness of construction" were concerned. Progress had thus been "less rapid than in the case of projects undertaken by other types of [CCC] camps." The division noted further that "high mineral values and speculative interests" had prevented the acquisition of suitable park lands near the state's population centers. However, good roads led to the parks being developed, and the division was certain that "West Virginians of this and future generations, together with many out-of-state visitors," would "enjoy

healthful out-of-door recreation in comfort, amid beautiful surroundings" and "appreciate both the conception and the construction of the system of State Parks."¹⁹⁵

As planning and development works continued in the aforementioned state parks, the state parks division undertook two additional projects during 1935-36 under the direction of the National Park Service. These included Oglebay Park, a metropolitan park in Wheeling, and Tomlinson Run in Hancock County, the latter acquired and developed in conjunction with the Work Projects Administration.

By June 30, 1936, more than \$4,000,000 in federal funds had been spent in developing West Virginia's state parks using CCC labor. During 1935-36 three additional CCC camps were established to conduct work in the state parks. These included:

Babcock, SP-6, July 10, 1935

Watoga, SP-7, August 13, 1935 (discontinued January 15, 1936)

Oglebay, SP-8, August 7, 1935

In its annual report for 1935-36 the state parks division observed that careful planning of the parks continued to slow construction and development. However, the day was "fast approaching when the broad blue mountain sweeps of this rugged state will have been made accessible and will have added immeasurably to the health and happiness of a people surrounded by natural beauty."¹⁹⁶

During 1936-37 cutbacks in CCC programs and funding resulted in reductions in force in some camps and abandonment of others. Thus, the schedule for development of the state parks was delayed, as less than \$250,000 in federal funds were spent on their completion during 1936-37. Camp SP-1 in Watoga was closed on March 5, 1937, and Camps SP-6 in Babcock and SP-8 in Oglebay were abandoned by July 8, 1937.¹⁹⁷

Although not fully developed, five major state parks (Babcock, Cacapon, Lost River, Watoga, and Hawks Nest) were opened for the summer season of 1937. The parks attracted some 150,000 visitors between June 1 and October 5, the highest visitation figures (approximately 77,000) being recorded at Hawks Nest. In its annual report for fiscal year 1937-38 the state parks division observed:

The 1937 season was moderately successful from the viewpoint of cabin rentals and operation. Public interest in the parks has grown steadily, requiring

195. *Biennial Report of Conservation Commission of West Virginia for the Biennium, July 1, 1933 to June 30, 1935*, pp. 85, 94-99, and McKeever, *Where People and Nature Meet*, pp. 8-9. Land acquisition for park purposes in the early and mid-1930s was relatively inexpensive and easy in comparison to later years. Nearly 30,000 acres, or about one-half of the present state park system, was acquired during this period. Virtually all lands were purchased for \$5 per acre or less, and upwards of 90 percent was in fee title. Surface mining of coal was not practical during the 1930s, enabling the state park system to acquire many acres of valuable coal reserves along with the surface land. Much of the acreage, however, had been heavily timbered and ravaged by fires. McKeever, *Where People and Nature Meet*, p. 9.

196. *Annual Report of the Conservation Commission of West Virginia For the Year July 1, 1935 to June 30, 1936*, pp. 59-60, 68-70.

197. *Annual Report of the Conservation Commission of West Virginia For the Year July 1, 1936 to June 30, 1937*, pp. 53, 55-58.

informational services which have been provided in part by publication of full-color folders and production of a full-color motion picture. Closer cooperation with other divisions of the Conservation Commission, and fuller use of its educational facilities, is expected to further fill this informational need.

The parks are primarily important at this time as operating units designed to afford outdoor recreation to as many people as possible. It may be said that the period of pure construction is past, although the Civilian Conservation Corps still is carrying out the project work program, constructing such additional facilities as public desire and park planning demonstrate are needed.

No new major construction was undertaken during the past year; CCC activity confining itself largely to completion of cabins, pools and roads already underway..

Park administration in general is designed to provide within each major park a full complement of facilities; with horseback riding, swimming, picnicking, bicycling, and fishing to be provided in each. A playground for children is on the agenda. Boating, of course, is possible only in those parks having a lake.

During 1937-38 land was purchased for Pinnacle Rock State Park in Mercer County, and the division accepted temporary administrative control of Holly River State Park in Webster County, an area acquired by the Resettlement Administration and developed by the Farm Security Administration of the Department of Agriculture.¹⁹⁸

During the summer vacation season of 1938 some 188,000 persons visited the seven state parks that were open to the public. Hawks Nest led in total visits with some 84,000, followed by Babcock with some 28,000, Cacapon with slightly over 11,000, and Watoga with more than 10,000. Holly River, Lost River, and Droop Mountain Battlefield had between 6,000 and 9,000 visitors. Automobile license plate checks indicated that visitors to the parks came from all 48 contiguous states, the leaders being Virginia, Ohio, Pennsylvania, Maryland, Illinois, Kentucky, and Michigan. In addition, visitors came from the District of Columbia, Hawaii, Cuba, the Panama Canal zone, and Ontario, Canada. In its annual report for 1938-39 the state parks division observed:

The 1938 season witnessed a 300 per cent increase in cabin rentals, bookings being 628 weeks compared to 216 in 1937. Wider use of day facilities and an increased number of visitors correlated the gain in cabin occupancy.

Much of the increase in public use can be attributed to greater equalization of attendance among the various areas. Intensive advertising and completion of popular facilities were largely responsible.

198. *Annual Report of the Conservation Commission of West Virginia For the Year July 1, 1937 to June 30, 1938*, pp. 54-58. Holly River would remain federal land operated as a state park until 1954 when it was transferred to the state by the authority of the Bankhead-Jones Act. McKeever, *Where People and Nature Meet*, p. 9.

Regarding new development and program innovations in the parks the division noted:

Public desire was the guide in development of additional facilities, with two major projects, namely, provision for swimming and for children's playgrounds, receiving first consideration. Preliminary study was made of a plan for organized programs of activity at each park to foster neighborliness and good fellowship and to make park visitations instructive and entertaining.¹⁹⁹

As a result of the expansion of the state park system, which received nearly 321,000 visitors in 1939, the Division of State Parks reviewed its organizational functions and administrative responsibilities during 1939-40. The division adopted a more formalized administrative structure under which it had five principal responsibilities:

1. Provide technical supervision for park construction by the Civilian Conservation Corps and by the Works Progress Administration.
2. Create plans and detailed drawings and purchase materials for such construction.
3. Operate and maintain the state park areas for public recreation purposes.
4. Develop plans for future design, maintenance, and operation of the parks and submit recommendations for extension of park facilities.
5. Manage all park areas as game refuges.

The restructured division was organized into three branches — administrative, central design office, and field personnel. The functions of the three branches included:

Administrative: General administration of the division's responsibilities is directed by the chief, Division of State Parks, whose duty it is to carry out the policies of the Conservation Commission, through immediate supervision of planning, development, administration, maintenance and public use of State Parks.

Central Design Office: This office designs all facilities and inspects construction progress. Plans as developed by this office are submitted for approval through the National Park Service, which provides funds for employment of part of the personnel of this office. Actual construction is carried out by the Civilian Conservation Corps.

In the Central Design Office, are employed a landscape architect, assistant engineer and two draftsmen.

Field Personnel: The field personnel handles the actual day-to-day operation and construction of the parks. Personnel in the employ of the National Park Service supervises the work of the CCC and carries on development projects. Personnel in the employ of the Commission is charged with custody of the property of the State, and responsibility for adherence by field forces to the development, maintenance and operative policies of the central office.

199. *Annual Report of the Conservation Commission of West Virginia For the Year July 1, 1938 to June 30, 1939*, pp. 59, 61-64. By June 30, 1939, more than \$5,700,000 in federal funds had been spent on work in the state parks using CCC labor.

At the time the division was reorganized the state park system had twelve units. These included:

1. Watoga State Park, 10,048 acres, Pocahontas County.
2. Lost River State Park, 3,841 acres, Hardy County.
3. Babcock State Park, 3,231 acres, Fayette County.
4. Cacapon State Park, 5,725 acres, Morgan County.
5. Holly River State Park, 7,320 acres, Webster County.
6. Tomlinson Run State Park, 1,229 acres, Hancock County.
7. Hawks Nest State Park, 48 acres, Fayette County.
8. Blackwater Falls State Park, 446 acres, Tucker County.
9. Pinnacle Rock State Park, 32 acres, Mercer County.
10. Droop Mountain Battlefield State Park, 265 acres, Pocahontas County.
11. Carnifex Ferry Battlefield State Park, 275 acres, Nicholas County.
12. Grandview State Park, 52 acres, Raleigh County.

The latter was acquired in 1939 for development as a day-use park by enrollees from a CCC camp, P-66, that was located on private land near Beckley. The work of this camp was supervised by the U.S. Forest Service in cooperation with the state forestry division.

During 1939-40 four CCC camps continued to be operated in the state parks under the guidance of the National Park Service. These included Camps SP-2, Lost River, SP-4, Cacapon, SP-5, Watoga, and SP-6, Babcock. In its 1939-40 annual report the state parks division praised the CCC and the Park Service for their contributions to the state park system.

It was grateful to the CCC for the part it has played in the development of West Virginia's system of state parks. Without the generous assistance of the man-power and funds of this agency, West Virginia could not have attempted such an ambitious program of recreational development as has been carried on. The state is likewise grateful to the National Park Service for its counsel and cooperation in planning and design.

The division also provided its vision for the future expansion of the state park system, primarily through the establishment of day-use recreational parks, such as Grandview, and preservation of historical areas and structures. Day-use parks would be considered, "dependent upon public need and demand as demonstrated through legislative appropriations." Because many historically significant areas had "passed out of existence through lack of public interest in the past," the division was interested in the developing field of historic preservation but "financial and technical means for the purpose" were necessary.²⁰⁰

More than 350,000 persons visited West Virginia's state parks during the 1940 season, while cabin weeks booked increased from 826 in 1939 to 874 in 1940. Two partly developed new parks, Tomlinson Run and Pinnacle Rock, were opened to the public upon completion of their picnic facilities. As a result of increasing use of the parks, the state

200. *Annual Report of the Conservation Commission of West Virginia For the Year July 1, 1939, to June 30, 1940*, pp. 43, 45, 47-48.

parks division cooperated with the State Road Commission and the Works Projects Administration to improve entrance roads to the parks as well as roads within the parks. To promote tourism the division produced and distributed lithograph maps of each park and prepared for distribution 30,000 folders describing the state parks and forests.²⁰¹

The 1941 vacation season, the last prior to official American involvement in World War II, witnessed an increase of some 40,000 visitors to the state parks. The state parks division, in cooperation with the State Road Commission, Health Department, and Department of Public Safety, made an initial survey of proposed roadside parks — a study that would eventually lead to establishment of such day-use facilities as that at the north approach to the present New River Gorge Bridge. A full-time naturalist and recreation leader were employed in Cacapon State Park to direct various forms of organized interpretive and recreation activities. The success of the experiment resulted in plans to employ a naturalist and a recreation leader in each of the major parks in 1942 — plans that would be postponed by American entry into World War II.²⁰²

The last four CCC camps in the West Virginia state parks were closed during 1941-1942. Prior to American involvement in World War II two CCC camps in Lost River and Cacapon state parks were closed on July 3 and November 13, 1941, respectively. After the Pearl Harbor attack on December 7, 1941, that triggered American entry into the war, CCC camps in Babcock and Watoga state parks were abandoned on January 15 and July 10, 1942, respectively. The state parks division observed in its annual report for 1941-42 that it was:

with much regret that we see these camps pass on for to them we are indebted, through the National Park Service, for the major portion of construction of our present park system. It is our earnest hope that after the war is won we will have the assistance of a similar Federal agency.²⁰³

During World War II gasoline and tire rationing reduced overall visitation to the West Virginia state parks, particularly from other states. The total annual visitation during the conflict averaged about 100,000. Some facilities in the parks were closed, while other services were reduced. Cabin rentals remained strong, however, reaching 1,176 weeks booked during 1944-45 — a total that represented about 20 percent of the request for the year. Shortages in labor and construction materials during the war resulted in reduced maintenance activities and a virtual lack of new construction.²⁰⁴

Although the CCC and New Deal programs were phased out with the coming of the war, the state park system would continue to expand during the 1940s. Notable was the purchase of land for Cathedral State Park in Preston County with its towering hemlocks,

201. *Annual Report of the Conservation Commission of West Virginia For the Year July 1, 1940, to June 30, 1941*, p. 45.

202. *Annual Report of Conservation Commission of West Virginia, July 1, 1941 to June 30, 1942*, pp. 45-46.

203. *Ibid.* Also see Civilian Conservation Corps, *Pictorial Review, Civilian Conservation Corps, Ohio-West Virginia District, Company 1522, SP-6, Clifftop, West Virginia* [1940], n.p.

204. *Annual Report of Conservation Commission of West Virginia, 1941 - 1942*, pp. 47-51; *Ibid.*, July 1, 1943 to June 30, 1944, pp. 53-59; and *Ibid.*, July 1, 1944 to June 30, 1945, pp. 64-70; and McKeever, *Where People and Nature Meet*, p. 9.

and Audra State Park, the gem on the Middle Fork of the Buckhannon River with its alum caves and rhododendron thickets. Tygart Lake, the first state park associated with a reservoir built by the Corps of Engineers, also entered the park system during the 1940s.²⁰⁵

Following the war the state parks division struggled to meet the rising demand for recreational opportunities by ever increasing numbers of park visitors and to make improvements to the parks that had deteriorated as a result of neglect during the war. However, the necessary repairs to the deteriorating facilities and expansion of accommodations to meet the growing leisure demands of the motoring public were hampered by inadequate budgets during the postwar years. In June 1947 the state parks division reviewed the existing list of improvements in the 14 state parks that covered approximately 35,000 acres. The improvements, most of which had been constructed during 1933-40 by CCC laborers, included:

Swimming Pools	4
Bath Houses	4
Barns (large)	4
Museums	2
Water Lines	17 miles
Electric Lines	19 miles
Trails	196 miles
Boundary Fences	152 miles
Custodian Houses	6
Administration Buildings and Inns	6
Storage Buildings (large)	8
Cabins	95
Sewage Fields	89 acres
Telephone Lines	77 miles
Roads	83 miles
Parking Areas (100 cars)	30
Dams (large)	3
Picnic Tables	498
Structures, other (picnic shelters, latrines, incinerators, fireplaces, etc.) ...	1,073 ²⁰⁶

Visitation to the state parks continued to increase during the postwar era, the number of visitors exceeding 1,000,000 for the first time during 1948-49.²⁰⁷ Thus, the demand for more parks, as well as the upgrading and expansion of facilities and visitor services in the existing parks, gathered momentum during the late 1940s. In June 1948, for instance, the state parks division reviewed the first ten years of state park system operation and noted its frustration in meeting the current recreational demands being placed on it:

205. McKeever, *Where People and Nature Meet*, p. 9.

206. *Conservation Commission of West Virginia, Annual Report, 1946-1947*, pp. 76-79. Black pipe water lines laid during the 1930s were giving trouble, and telephone and power line poles, made from chestnut, were ready to fall.

207. *Conservation Commission of West Virginia, Annual Report, 1948-1949*, pp. 74-75.

The West Virginia State Park system has completed its first ten years of full and complete operations. The progress and growth of the system in popularity is indeed amazing. In the fiscal year of 1937-1938 the system had ten State Parks. In 1947-1948 the system had fifteen State Parks. The total attendance in 1937-1938 fiscal year was 75,194 persons. The total attendance for the 1947-1948 fiscal year was 977,321 persons. In the 1937-1938 fiscal year there were 740 cabin occupants. In 1937-1938 fiscal year, there were 216 cabin weeks sold at two-week periods. In 1947-1948 fiscal year, 1,526 cabin weeks were sold. Collections for 216 weeks of cabin rentals, 1937-1938, totaled \$4,540.00. Collections for 1,526 weeks of cabin rentals, 1947-1948, amounted to \$44,737.72. Collections for other facilities, 1937-1938, were \$71.74. Collections for 1947-1948 fiscal year were \$61,694.72. In view of the tremendous increase in use, the appropriations remained the same. However, the increase in collections have enabled the system, as a whole, to increase maintenance work to a point where most buildings are in adequate repair, but at the present rate of financing this system, years will elapse before all parks will be in a presentable and respectable condition as to merit praise.

It is impossible, by the use of any yard stick, to calculate, in terms of money, the many enjoyable picnics and outings of the 977,321 park visitors. The increase in requests for vacation cabins has been larger this year than in history and only approximately 19.4% of the total cabin applications were filled on one-week periods. In the fiscal year of 1937-1938, 98% of the cabin applications were filled. It is not very encouraging for more people to make applications for cabins. The solution to this inadequate and unfinished state park system lies in the hands of your state elected officials, the Board of Public Works and the Legislature. Only by their approval can the system continue to keep abreast of the increased demands.²⁰⁸

In response to the demand for more state parks and increased park facilities, the West Virginia state legislature passed the Revenue Bond Act of 1953, granting authority to sell bonds as a means of financing improvements and additions to the park system. Thus, West Virginia became one of the first states to acquire land and develop state park facilities as the result of the sale of bonds.

The Revenue Bond Act, under which revenue bonds totaling \$4,400,00 were sold in 1954-55, enabled the state park system to expand both in a numbers of areas and visitor services rendered. The concept of park development changed dramatically as the first major lodges were built and construction of campgrounds became a major focus of park development. Lodges at Blackwater Falls, Cacapon, and several other parks, as well as a bathhouse at Tomlinson Run were constructed, and 89 vacation cabins were built at Watoga, Tygart Lake, Cacapon, Bluestone, Blackwater Falls, and Lost River. Other improvements, such as roads, bridges, and utilities, were constructed, and campgrounds, the first of which had been developed at Watoga in 1953, were expanded. With these new developments the state park system became an integral part of the growing travel

208. *Annual Report of the Conservation Commission of West Virginia, July 1, 1947 to June 30, 1948*, p. 76.

industry of the state with annual visitation exceeding 2,000,000 for the first time in 1962.²⁰⁹

The decade of the 1950s was a period of growth and change for the West Virginia state park system. Organized recreation programs were initiated in many of the parks, and a new state park naturalist program was commenced at Blackwater Falls in 1958, setting the stage for expansion of interpretive programs in many other parks during succeeding years. The "state park concept" that had been formulated during the 1930s was modified in the 1950s. Park development philosophy was no longer directed primarily toward preservation but rather toward recreational use and development of scenic natural resources that was compatible with resource protection.²¹⁰

With the growth of the state park system the need for comprehensive guidelines to administer the acquisition, maintenance, development, and use of the parks became evident. Accordingly, a ten-year master plan for the park system, covering the years 1958-68, was adopted. According to the master plan, the primary purposes of the system were conservation and recreation. The plan stated further:

State parks are relatively spacious areas of outstanding scenic or wilderness character. Oftentimes these areas contain historical, archeological, geological and scenic values of state-wide significance which are preserved for posterity as nearly as possible in their original or natural conditions. They provide opportunities for appropriate types of recreation where such will not injure, impair or destroy the features or values for which they were established. The first and greatest detriment to culture is the destruction of natural resources at the expediency of a dollar. Commercial exploitation of natural resources on state parks is expressly prohibited.²¹¹

By 1967 the West Virginia state park system consisted of 21 parks in operation and three new major facilities under construction. The parks comprised nearly 59,000 acres of land valued at \$11,000,000 with some \$17,000,000 in facilities and improvements. Facilities in the parks included 192 cabins, 8 lodges, 15 swimming pools or beaches, 5 museums, 2,200 picnic tables, 12 lakes, 147 miles of hiking and bridle trails, and some 100 miles of roadway. Park visitation for the year totaled nearly 3,000,000 and nearly 59,000 campers spent more than 84,000 nights in the campgrounds.²¹²

During the 1960s the state park system initiated a "State Parks for the 1970s" expansion program with funding from the Area Redevelopment Administration, a federal program sponsored by the U.S. Economic Development Administration. Three new parks were developed at Pipestem, Canaan Valley, and Twin Falls, and major additions and improvements were made at Hawks Nest and Cass Scenic Railroad. The new parks, which

209. *West Virginia Conservation, Annual Report, December 1962*, p. 40, and McKeever, *Where People and Nature Meet*, pp. 9-10.

210. *West Virginia Conservation, Annual Report, December 1962*, p. 42, and McKeever, *Where People and Nature Meet*, p. 10.

211. "West Virginia State Parks, 1958 Master Plan, Conservation Commission," quoted in McKeever, *Where People and Nature Meet*, pp. 175-82.

212. *Annual Report, Department of Natural Resources, State of West Virginia, 1966-1967*, pp. 18-19.

would not be completed until the 1970s, represented a further departure from earlier concepts of West Virginia outdoor recreation, featuring golf courses, archery ranges, aerial tramways, a ski complex, and lodges that included convention facilities.²¹³

By 1988 the West Virginia state park system consisted of 34 parks covering 75,015 acres. As a result of various reorganizations the system was administered by the Department of Commerce, Division of Parks and Recreation, which also managed the recreation areas of nine state forests and eight public hunting and fishing areas. State parks were divided into four categories: resort vacation parks (4); vacation parks (13); day-use/natural areas (9); and historical parks (8).²¹⁴

Historic Development of Recreation/State Parks in Its Local Context

State Park Units in New River Gorge National River. When New River Gorge National River was established in 1978, three units in the West Virginia state park system were located within the authorized boundaries of the new unit in the National Park System. The three state parks, Babcock, Grandview, and Sandstone Falls, formed the basis of established public recreation facilities and opportunities in the national river.²¹⁵

Babcock State Park — One of West Virginia's earliest state parks, Babcock is located in Fayette County, approximately three miles south of Route 60 on State Route 41 near Clifftop. With its western edge bordering the New River, and Glade and Manns creeks cutting through its interior, Babcock State Park offers excellent fishing, picnicking, camping, boating, and swimming to both day users and overnight guests. Originally consisting of nearly 3,232 acres, much of which had been ravaged by forest fires and timber operations, the park was enlarged by additional land acquisitions to 4,127 acres by the 1980s.²¹⁶ The bulk of the land that constitutes the present park area was property of the Babcock Coal and Coke Company deeded to the State of West Virginia by E.V. Babcock on October 11, 1934, for the sum of two dollars per acre. A parcel of some 100 acres where the old Coopers Grist Mill was located was acquired separately from a Lewisburg family for ten dollars per acre.

Two Civilian Conservation Corps camps, SP-3 and SP-6, were established on May 15, 1934, and July 10, 1935, respectively, to improve and develop Babcock under the guidance of the National Park Service. Camp SP-3, known as Camp Beaver, was located across State Route 11 from the present park campground, and Camp SP-6, known as Camp Lee, was located on the site of the present park campground. James H. Baldwin and M.J. McChesney were

213. *Annual Report, Department of Natural Resources, State of West Virginia, 1967-1968*, p. 49.

214. Governor's Office of Community and Industrial Development, *West Virginia State Comprehensive Outdoor Recreation Plan*, July 1988, pp. 1-6 and 1-7.

215. U.S. Department of the Interior, National Park Service, *General Management Plan, New River Gorge National River*, p. 82.

216. U.S. Department of the Interior, National Park Service, *Feasibility Study for Development of a New River Gorge National Parkway, Virginia and West Virginia*, October 1963, p. 5.

the first project superintendents of Camps SP-3 and SP-6, respectively.²¹⁷ By the end of June 1935 some \$600,000 in federal funds had been spent on development work in Babcock using CCC labor. In the biennial report that June the state parks division described the work that had been completed at Babcock as well as the projects that were to be undertaken:

Plans call for the clearing out of dead timber; the building of nine over-night cabins, five of the log cabin type being completed to date; an administration building near Cooper's Mill Falls, providing a Museum, Park Office, Caretaker's Quarters and Guest Rooms, a Grill Room and Kitchen, a Recreation Room, and Dressing Rooms for those interested in swimming. A dam nearby will form a swimming pool. A bridge just above the falls will enable one to cross Glade Creek to the horse trail, then on up to the Lookout House, or else to continue along the truck trail extension, and down to the cabins.

Another lookout house is to be erected; also a superintendent's dwelling, three lodges, four trailside and picnic shelters, a horse barn and fence enclosure.

A well and pump house with 4,000 gallon storage capacity, now forms the source of water supply for the cabins and administration building. Another well and pump house, and storage facilities for 3,000 gallons of water will be provided for the picnic area.

A ranger's house at the western end of the park will supervise wild life and provide fire protection.

Other projects completed are 280 rods of fences, 13 miles of telephone lines extending west from Camp to Sewell, then south to Thurmond; the grading of 3 1/2 miles of park roads, with macadamizing a current project, park furniture, including seats, tables, benches, signs and markers.

In the field of forest culture, 29,000 trees have been planted, and several acres of grass have been sown. A nursery and experimental plots are now being contemplated, as is also the reforestation of approximately 1,000 acres along the northern slopes of Manns and Glade Creeks.

Under the heading of forest protection may be listed the installation of seven miles of forest fire trails, and the detailing of groups to fight forest fires, the Spy Rock fire of 400 acres calling for strenuous work before being conquered.

Three cesspools are now being constructed, and an additional four will be necessary.

To conserve wild life, no hunting or fishing will be allowed in the park during this season, or until sanctioned by the Conservation Commission. Manns Creek

217. Milton Harr, *The C.C.C. Camps In West Virginia: A Record of the Civilian Conservation Corps in the Mountain State, 1933-1942*, N.P., 1992, pp. 31, 33. Also see "The Civilian Conservation Corps and Babcock State Park: Yvonne Snyder Farley Interviews Jennings Boley," *Goldenseal*, VII (January-March 1981), pp. 50-54.

has been stocked with 93,000 fish. This number will be increased from time to time.

The horse trail, extended 11 1/2 miles, will encircle the park. Two horse bridges will be provided.

The foot trails will be extended 4 1/2 miles, totaling 10 1/2 miles, and, with three foot bridges, will provide access to remote areas.

Five hundred cubic yards of stone will be quarried; 30,000 square yards of fine grading placed, and 30 acres of landscaping necessary to produce the desired result, a complete State Park.²¹⁸

Development of Babcock State Park continued during 1935-36. The state parks division reported in June 1936:

A broad plan of development has been carried forward during these past two years. Dead timber within the park had been cleaned out. Fifteen log cabins have been constructed or are under construction. An administration building near Cooper's Mill Falls, providing a museum, post office, caretaker's rooms for those interested in swimming, is under construction. A dam, nearby, along Glade Creek, is under construction and will form a splendid fresh water swimming pool. Above this dam, work had begun upon a bridge that will enable one to cross Glade Creek to the horse trail which leads to the mountain top, or else to continue along the truck trail extension and down to the cabin area. . . .

Ten and one-half miles of foot trails have been constructed, one along the plateau-like mountain top and another in the deep gorge through which flows Glade and Mann's Creeks. A horse trail, intended eventually to encircle the park, follows along the mountain ridge to Sewell, offering remarkable vistas of a country that is noted for its craggy sandstone cliffs and precipitous terrain. from the shaggy ledges above Sewell, there is a drop of 1,300 feet to New River, affording a most majestic and spectacular view of the New River gorge.²¹⁹

Thirteen vacation cabins, one picnic area, and foot and horse trails were ready for public use when Babcock State Park was opened on July 1, 1937. Construction of the administration building, swimming pool, and other recreational facilities in the park were delayed by CCC cutbacks in 1937, thus preventing the park from being fully operational

218. *Biennial Report of Conservation Commission of West Virginia, 1933-1935* pp. 91-99.

219. *Annual Report of the Conservation Commission of West Virginia, 1935-1936*, pp. 64-66, 68-70. The administration building and adjacent improvements, which constitute outstanding examples of CCC rustic stonework, feature native stone obtained from a quarry in the park. Harr, *CCC Camps In West Virginia*, p. 33.

during its first year of public use.²²⁰ Nevertheless, the park accommodated nearly 19,000 visitors during the 1937 summer vacation season.²²¹

During the 1938 vacation season Babcock had a total of more than 28,000 visitors, second in the state park system behind Hawks Nest. A total of 153 weeks was booked for cabins in the park. In June 1938 the state parks division observed:

Aside from the rugged beauty of Babcock, one of its prime attractions has been its Glade Creek swimming pool. This pool, particularly throughout the first operating month of the second season, had been very well attended. This second season has also marked the full use of the Administration Building. The superintendent's office, bath-house, check-room, overnight sleeping rooms, restaurant concession and recreation hall are all located here and operating. Picnicking at Babcock has proved popular.²²²

During 1939 visitation to Babcock remained approximately the same as the previous season. Little construction was undertaken in the park as most of the CCC workers in Camp SP-3 were shifted to projects in Hawks Nest State Park. An entrance or gateway was added, and a picnic area water system was placed under construction. Proposed projects for Babcock included development of a second cabin group on what was known as Sandy Crag Mountain and the expansion of dining and overnight accommodations at the administration building.²²³

During 1939-40 CCC workers completed a contact station, stone walls, grading, planting, and general landscaping at the entrance to Babcock State Park. A small group of six cabins was partially completed on Sandy Crag Mountain, along with an access road, water supply line, and sanitary facilities.²²⁴

Some 30,000 persons visited Babcock State Park during 1940. The cabin group on Sandy Crag Mountain was completed, and construction of a general play area, including tennis courts, and enlargement of the picnic area was initiated. While development of the park was continuing with CCC labor, the original sandstone surfacing of park roads was beginning to present maintenance problems.²²⁵

During 1941 visitation to Babcock increased to more than 42,000. Several more overnight cabins were completed in the Sandy Crag area; the playground area, including tennis courts and volleyball, croquet, badminton, and horseshoe facilities, was completed; and two new parking lots were constructed at the picnic area. The last CCC camp in the park,

220. *Annual Report of the Conservation Commission of West Virginia, 1936-1937*, pp. 53, 55-58. James H. Baldwin, who had been project superintendent of CCC Camp SP-3, became the first superintendent of Babcock State Park, serving in that capacity until January 1942.

221. *Annual Report of the Conservation Commission of West Virginia, 1937-1938*, p. 57.

222. *Ibid.*, p. 55, and *Annual Report of the Conservation Commission of West Virginia, 1938-1939*, p. 64. The swimming pool was a natural pool created by construction of a 150-foot long stone and concrete dam in front of the administration building.

223. *Annual Report of the Conservation Commission of West Virginia, 1938-1939*, pp. 59-60.

224. *Annual Report of the Conservation Commission of West Virginia, 1939-1940*, p. 46

225. *Annual Report of the Conservation Commission of West Virginia, 1940-1941*, p. 45.

SP-6, was closed January 15, 1942, thus bringing to an end the era of CCC development in the park.²²⁶

As a result of the wartime emergency, visitation to Babcock State Park declined to some 15,000 persons in 1942. The former site of CCC Camp SP-6 was used as a summer camp by the Boy Scouts.²²⁷

Because of shortages in labor, supplies, and construction materials and curtailment in funding, park operations were reduced and maintenance activities were limited at Babcock during and immediately after the war. For instance, the annual report of the state parks division for 1943-44 stated:

Reroofed barn, supply house and custodian dwelling. Constructed foot bridge across Glade Creek connecting cabins — 1 to 6 with area 7 to 13. Replaced and relocated water line from well to administration building. Principal activity was general maintenance and operations. A relocation and centralization of service units is planned, and necessary to simplify and reduce operational costs. All entrance and park signs repainted and some redesigned and relocated.²²⁸

Following the war an extensive coal strip mining operation near Babcock State Park had a severe impact on its resources. In June 1948 the state parks division reported on dire consequences of the strip mining operation to the park's resources and visitor services:

Babcock State Park, the first park in West Virginia dedicated to recreation, preservation and conservation of our natural resources and scenic beauty, is also the first park in West Virginia to feel the bite of a ruinous industry, strip mining. However, no strip mining is on State Park land. Glade and Manns Creeks, within and outside of Babcock State Park, have provided excellent trout fishing for many, many years in the past. These two beautiful mountain streams have been ruined completely as trout streams. They are muddy or milky all of the time, and silt has smothered and killed most all aquatic fish food. Muddy conditions, minus fish food, render the streams useless as fishing waters.

226. *Annual Report of the Conservation Commission of West Virginia, 1941-1942*, pp. 46-47. Far more data on CCC contributions to development of Babcock State Park, see Melody Bragg, "Civilian Conservation Corps Left Legacy of Beauty in State Parks," *The Fayette Tribune*, March 20, 1989, p. 12, File "H-14, Civilian Conservation Corps," historical files, NERI. Considerable information on the operation and accomplishments of the two CCC camps in Babcock State Park may be seen in two record groups at the National Archives and Records Administration in Washington, D.C. Pertinent files include Record Group 79, Records of the National Park Service, entry 41, Project Reports on CCC Projects In State and Local Parks, 1933-37, Box 142, File, S.P. 3, West Virginia-Clifftop, and Box 143, File, SP 6, West Virginia, Clifftop, W. Va., Babcock State Park; and Entry 65, Memoranda and Correspondence Concerning CCC Camps, 1935-42, Box 7, File, West Virginia; and Record Group 35, Records of the Civilian Conservation Corps, Entry 115, Division of Investigations, Camp Inspection Reports, 1933-1942, West Virginia, Box 234, File, West Virginia, SP-3, Clifftop, and Box 235, File, West Virginia, SP-6, Clifftop; and Entry 4, Monthly Progress Reports, 1933-1942, Box 20, Microfilm Rolls 134-40, and Box 21, Microfilm Rolls, 141-47.

227. *Annual Report of the Conservation Commission of West Virginia, 1942-1943*, pp. 48-49.

228. *Annual Report of the Conservation Commission of West Virginia, 1943-1944*, p. 55.

A rather large swimming pool constructed in Glade Creek many years ago has been rendered practically useless by the effect of strip mining above, or up the stream from this development. The entire development in the swimming pool area was built around and in conjunction with a swimming development. A vacation State Park without swimming is of no practical value. Most cabin guests, as well as other park patrons, build their stay around swimming activities. The Division of State Parks is in no condition financially to replace a ruined swimming development. Many cabin reservations at this park have been canceled and the income lost as a result of the effect of strip mining. The Conservation Commission, and particularly this Division, is helpless in this unfortunate situation...²²⁹

Conditions at Babcock apparently were corrected by the following year. Visitation to the park nearly reached its prewar levels in 1948-49 with a total of more than 36,000. Its vacation cabins were again in great demand as these structures were rented for a total of 357 weeks with 1,607 persons spending 11,249 nights. The three-room inn at the park provided accommodation for 503 guest nights. A food handling concession at the park was leased by the state to a private company to meet the growing demand for food services.²³⁰

During the 1950s Babcock State Park developed a reputation as one of West Virginia's most noted scenic recreational areas. One writer, for instance, observed in June 1959:

To my mind, Glade Creek is the Hallmark of Babcock State Park. Without it, all else would become of secondary significance. Because Glade is there, however, all of the wondrous attributes of park recreation are brought strongly into focus.

As one leaves U.S. Route 60 at its junction with Route 41, turning south some four miles before entering the park area, he cannot vision the wilderness area that lies ahead. For that is what Babcock is — a wilderness area with all the modern conveniences set out in a rustic manner...

When one sets out for Babcock State Park, he really ought to plan to spend several days. One cannot see it all on any short visit. The area is a geologist's dream; an architect's every wish for extreme beauty; and a naturalist's bonanza. But most of all, Babcock and Glade Creek appeal to every man, woman and child who go there, for it is a mixture of all that Mother Nature can pour into one area of its size.²³¹

By 1961 annual visitation to Babcock State Park had increased to nearly 50,000. That year the State Temporary Economic Program was initiated to help the unemployed. Under the program the facilities and buildings, many of which had received only general

229. *Annual Report of the Conservation Commission of West Virginia, 1947-1948*, p. 77.

230. *Annual Report of the Conservation Commission of West Virginia, 1948-1949*, pp. 74-76.

231. Robert R. Bowers, "Glade Creek...Hallmark of Babcock," *West Virginia Conservation*, XXIII (June 1959), pp. 9-11.

maintenance during the 1940s and 1950s, were renovated and upgraded. All of the vacation cabins were rehabilitated, a new 40-site tent and trailer campground was constructed, and a new water system was developed. The main roads and some of the trails in the park were paved, and a former six-mile railroad grade down Manns Creek Canyon was developed into a fisherman's access road and scenic drive. A naturalist program was commenced during the summer months to provide interpretation as part of the improved visitor services in the park.²³²

Visitation to Babcock continued to increase during the early 1960s, reaching nearly 63,000 by 1965. That year park expansion and improvements were implemented using funds from the Area Redevelopment Administration, a program of the U.S. Economic Development Administration. A 410-acre tract on the south side of the park was purchased from the Beury estate. A dam and 18-acre lake were constructed, and in collaboration with a training school for heavy equipment operations a mile of new stone-based road was built to provide access to the lake.²³³

Improvements to park facilities at Babcock continued during 1966-68. The new lake was stocked with bass and bluegill and opened for fishing; boat docks, a boathouse, and launching facilities were constructed of native cut stone; and many of the park's cabins were renovated. The access road to the lake was expanded to a 2 1/4-mile paved roadway to serve the boat docks as well as the planned pool, bathhouse, and picnic area near the lake.²³⁴

In 1969 construction was commenced on new water and sewer systems in the park and parking for the new picnic area was completed. In 1970 a new swimming pool was built near the lake, and later stables were opened under lease to a private concessionaire to operate a horseback riding enterprise.

In 1976 the water-powered Glade Creek Grist Mill was reconstructed and put into operation near the site of Coopers Mill which had served the area around the turn of the 20th century. The reconstructed mill, one of the most photographed spots in the state park system, consisted of materials from two mills in Pocahontas and Pendleton counties that were dismantled and taken to Babcock. The mill is operated during the summer season, offering tours, cornmeal, buckwheat flour, and whole wheat flour to the public.

Babcock State Park has continued to be one of the principal and most beautiful units in the West Virginia State park system and one of the popular recreational areas in Fayette County. By the mid-1980s its annual visitation was more than 250,000.²³⁵

232. *Annual Report of the Conservation Commission of West Virginia, December 1961*, pp. 40-43, and McKeever, *Where People and Nature Meet*, p. 25.

233. *West Virginia, Department of Natural Resources, Annual Report, Fiscal Year, July 1, 1964 - June 30, 1965*, pp. 54, 59.

234. *State of West Virginia, Department of Natural Resources, Annual Report, 1966-1967*, p. 20, and *Ibid.*, 1967-1968, p. 52. Also see Frank Hill, "Tourists Haunt Ghost Town, Bandits Cave," *West Virginia Conservation*, January 1967, pp. 16-21.

235. McKeever, *Where People and Nature Meet*, p. 25, and Fayette County Chamber of Commerce, *History of Fayette County, West Virginia, 1993* (Marcelline, Missouri, Heritage Publishing House, 1993), p. 140.

Grandview State Park — Grandview, an 892-acre state park that was acquired by the National Park Service and made part of New River Gorge National River in 1990, provides a spectacular seven-mile panorama of the rugged gorge and historic Stretchers Neck Tunnel on the C & O Railroad mainline from its 2,500-foot elevation. The former state park is located in Raleigh County, some five miles north of Interstate Highway 64 via State Route 9.

Once the site of a bustling village known as "Grandview," the area of the future Grandview State Park became the location of extensive coal mining and timbering operations during the late 19th and early 20th centuries. By the early 1930s, however, the Grandview site had gained a reputation as one of the scenic wonders of West Virginia. One writer observed in August 1930:

This promontory would no doubt be one of the most visited natural wonders if it were on a paved highway or otherwise easy of access. It can be reached now by scenery enthusiasts, however, over a fairly well-graded dirt road that is very good during the summer and fall. This turns off from United States Route 21 at Daniels, a village about six miles south of Beckley. The distance from the paved highway to the lofty ledge is thirteen miles, and no lover of mountain scenery, if passing through this section, will ever regret taking this side trip.²³⁶

In 1939 state park planners, recognizing the potential of the area then known as "Grandview Rock," took steps to purchase it for use as a state park. On October 20, 1939, some 52 acres in the vicinity of the present amphitheater were purchased from the Admiralty Coal Corporation for the sum of \$1,500. Some 825 acres of land known as Turkey Spur were purchased from the Loup Creek Corporation for nearly \$29,000 on April 30, 1949. Additional acreage was acquired in 1974, bringing the park's total acreage to 892.65 acres.²³⁷

After the initial acquisition of 52 acres in 1939, Grandview State Park was developed as a day-use area by CCC enrollees from Camp Raleigh. This camp, designated P-66, was located on private land near the future site of Shady Springs High School. Housing CCC Company 3531 the camp was operated under the guidance of the U.S. Forest Service in cooperation with the state forestry division. The camp was established on September 19, 1935, and prior to its activities at Grandview its personnel had been engaged principally in forest fire protection.²³⁸

Development of Grandview State Park continued during 1940-41, the work consisting of a parking area, approach road, shelter, picnic facilities, and water and sanitary systems.²³⁹

236. Charles Carpenter, "The New River Canyon," *West Virginia Review*, VII (August 1930), pp. 352-53, 371.

237. "State Park System is Approaching 30th Anniversary," *Post-Herald and Register (Beckley)*, April 2, 1967, "File H-14, Babcock State Park," historical files, NERI, and McKeever, *Where People and Nature Meet*, p. 97.

238. Harr, C.C.C. *Camps in West Virginia*, pp. 15, 23, and *Annual Report of the Conservation Commission of West Virginia, 1939-1940*, p. 45.

239. *Annual Report of the Conservation Commission of West Virginia, 1940-1941*, p. 48. The National Park Service, Denver Service, Technical Information Center has a set of drawings (dated March 1940) that relate to the development work at Grandview.

Although not completed Grandview was opened to the public in 1941, and some 5,500 persons visited the new park that year. Thomas S. Haney, the first caretaker of the park, would serve in that capacity and as superintendent until 1958. By the time that CCC Camp P-66 closed in late 1941 various day-use facilities were completed, including an overlook (now known as the Main Overlook), roads, parking areas, a picnic shelter (now known as Shelter No. 1), sanitary and water facilities, fireplaces, chestnut picnic tables and benches along the canyon rim, several trails, and a children's playground. Rustic stonework walls, curbing stairs, and walkways (e.g., the walkway to the Main Overlook) were constructed using rock from Prince Ridge in Grandview. Considerable landscaping and planting, especially of rhododendron, was also accomplished.²⁴⁰

Visitation to Grandview declined during World War II and the years immediately thereafter, and management of the park facilities was limited to general maintenance. During the late 1940s visitation to the park increased, reaching more than 38,000 in 1949-50.²⁴¹ Various improvements were made to the park facilities during 1953-54, including construction of several trails through the rock formations near the Main Overlook and a flagstone walk from the parking lot to the overlook, pavement of three parking lots and all principal park roads, and planting of 500 evergreen trees.²⁴² The park facilities were further improved during 1954-55 with an expanded trail system that included underground passages. An area was cleared for a large sheltered barbecue pit and grill, some 500 Norway Spruce were planted, and 200 feet of guard rail were constructed.²⁴³

During the 1950s the philosophy concerning state parks in West Virginia shifted from an emphasis on natural resource preservation to recreational use and development. In 1960 a large, modern 1,376-seat structure, known as Cliffside Amphitheater, was designed by Henry T. Elden and constructed at Grandview by the Vipperman Construction Company. Former CCC enrollees from Camp Raleigh returned to help with the construction of the amphitheater. The first production to be presented in the new facility was the historical drama "Honey in the Rock," depicting "the birth of West Virginia." The drama, which would run through 1969, was performed by the Historical Drama Association of Beckley and attracted some 43,574 people during showings between June 27 and Labor Day.²⁴⁴

The new recreational-use philosophy, combined with state emergency unemployment relief programs, prompted construction not only of the amphitheater but also a number of

240. *Annual Report of the Conservation Commission of West Virginia, 1941-1942*, pp. 47-48. Scattered materials relating to CCC Camp P-66 may be found in Washington, D.C., National Archives and Records Administration, Record Group 35, Entry 115, Division of Investigations, Camp Inspection Reports, 1933-1942, West Virginia, Box 234, File, West Virginia, P-66, Paynesville; and Record Group 95, Records of the U.S. Forest Service, Entry 144, Records Relating to Civilian Conservation Corps Work, 1933-1942, General Correspondence, 1933-1942, Boxes 168, 185m, 203-04, 206-07. Documents relating to all West Virginia CCC camps in Record Group 95, Entry 145, Camp Records, 1933-1942, were destroyed some years ago.

241. *Annual Report of the Conservation Commission of West Virginia, 1949-1950*, p. 31.

242. *West Virginia Conservation, Annual Report, 1953-1954*, p. 35.

243. *West Virginia Conservation, Annual Report, 1954-1955*, p. 36.

244. *West Virginia Conservation, Annual Report, December 1961*, p. 43; "Honey in the Rock," *West Virginia Conservation*, August 1961, pp. 5-7; and McKeever, *Where People and Nature Meet*, pp. 97-98. The amphitheater, which included a gift shop and refreshment stand, was also the setting for other plays and musicals.

other visitor use and park operations facilities in 1960-61. Construction included a rangers' office and Restrooms Nos. 1 and 2. The state widened and improved the entrance road to Grandview and constructed additional parking facilities, a wood-frame garage, dressing rooms at the amphitheater, a superintendent's house, a water tank, a water filtration plant, and a 36,000-gallon pond that would serve as the park's main water supply until the 1970s.

By 1964-65 annual visitation to Grandview had reached nearly 200,000 making it the sixth most heavily visited state park in West Virginia. Grandview, long recognized as having some of the finest rhododendron in the state, attracted increasing numbers of motorists each spring. Some 18,000 visitors, for instance, visited the park one weekend during the height of the May bloom in 1965. By the mid 1960s the park had also become a favorite setting for family reunions and company, church, and organization picnics.²⁴⁵

That year the state received a grant of \$211,000 from the Area Redevelopment Administration, a program of the Economic Development Administration, to undertake improvements in Grandview. The new development projects included:

1. Paving parking areas at the amphitheater
2. Construction of the Turkey Spur road and the Turkey Spur parking area
3. Construction of access road and parking area at Picnic Area No. 2
4. Installation of lighting for the parking areas at the amphitheater
5. Expansion of Picnic Shelters Nos. 2 and 4
6. Installation of picnic tables, 10 stone hearthswith grills, and 20 benches in the picnic areas
7. construction of Comfort Station No. 3 and playground comfort station
8. Installation of sewage system and water lines
9. Installation of a new sign system
10. Construction of safety fencing at all overlooks
11. Installation of stone and wood benches at the North Overlook
12. Installation of flagstone paving at the Main Overlook
13. Installation of two electric lights in the tunnels
14. Development of trails, steps and walkways
15. Landscaping of park grounds
16. Installation of a canopy over the amphitheater
17. Low-lying wetlands in the area of the playground osouth of the main visitor parking area were filled, graded, and equipped with 3 shuffleboard courts, 2 croquet courts, 4 horseshoe courts, 1 softball field, 2 volleyball courts, and 1 basketball court
18. Installation of fence and sign on top of Turkey Spur Rock
19. Planting of Norway spruce along Turkey Spur road

By 1965 Grandview State Park featured three major picnic areas equipped with shelters, grills, drinking fountains, and 99 picnic tables.²⁴⁶

245. Land and Community Associates, *Cultural Landscape Report, Grandview, New River Gorge National River, West Virginia*, June 1994, p. 2-7.

246. *West Virginia Department of Natural Resources, Annual Report, 1964-1965*, pp. 58-59; Frank Hill, "Big, Wild Country," *West Virginia Conservaton*, September 1965, pp. 8-15; and Land and Community Associates, *Cultural Landscape Report, Grandview*, p. 2-7-8.

Between 1960 and 1970 visitation to Grandview State Park more than tripled, reaching 296,610 visitors in the latter year. From 1961 to 1969 more than 300,000 persons attended "Honey in the Rock" productions. Beginning in 1970 another historical drama "Hatfields and McCoys," based on the most famous family feud in Appalachia during the late 19th century, premiered in the amphitheater, attracting nearly 68,000 theatergoers from all 50 states and 14 foreign countries during its first year of production. This drama ranked fourth in attendance at all outdoor theaters in the United States. Thereafter, both dramas continued to be given at the amphitheater between June and Labor Day, thus providing the state park nationwide attention.²⁴⁷

By the mid-1980s Grandview was attracting nearly 500,000 visitors annually. Ranked as one of West Virginia's finest day-use parks, it was also known for its cultural productions performed by Theatre West Virginia which had an average annual attendance of between 20,000 and 30,000. Areas of the park were designated for hunting. Although roads to Turkey Spur and other picnic areas were closed in winter because of ice or snow, the Main Overlook remained open year-round.²⁴⁸

Other New River Gorge State Recreation Facilities — While efforts were underway that would result in establishment of New River Gorge National River in 1978, the State of West Virginia planned to acquire 5,200 acres of land and develop two new state parks at the Route 19 highway crossing of the New River and at scenic Sandstone Falls. Ultimately, Canyon Rim was developed as a minimal orientation and day-use facility at the north approach to the New River Gorge bridge (opened in October 1977) under the administration of the State Department of Highways. By the early 1980s Sandstone Falls State Park had been developed as a riverfront day-use site with picnic facilities. Later in the decade it was acquired by the National Park Service to be administered as part of New River Gorge National River.²⁴⁹

Recreational Activities in New River Gorge National River. New River Gorge National River was established as a unit of the National Park System on November 10, 1978. The 62,000-acre scenic river corridor of the New River from Hinton to Fayetteville was designated a national river by Title XI of Public Law 95-625. The establishing legislation stated that the purposes of the national river, which had been foreshadowed by those of the state parks in the gorge, were to conserve and interpret "outstanding natural, scenic, and historic values and objects in and around the New River Gorge" and preserve "as a free-flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations." As the Park Service assumed

247. State of West Virginia, Department of Natural Resources, "Grandview State Park," and "Grandview - 1970," File "H-14, Grandview State Park," historical files, NERI, and Rice, *West Virginia: the State and Its People*, p. 324.

248. McKeever, *Where People and Nature Meet*, p. 98, and U.S. Department of the Interior, National Park Service, *Development Concept Plan/Environmental Assessment, Interpretive Prospectus, Grandview, New River Gorge National River, West Virginia* (Draft), January 1993, pp. 6-17.

249. U.S. Department of the Interior, Bureau of Outdoor Recreation, *New River Gorge Study*, 1975, p. 16; U.S. Department of the Interior, Bureau of Outdoor Recreation, *Final Environmental Statement, FES 76-42, Proposed New River Gorge National Wild and Scenic River in West Virginia*, 1976, p. 55; and U.S. Department of the Interior, National Park Service, *General Management Plan, New River Gorge National River*, p. 82.

administration of the national river, one of the management goals of the bureau became the development of a system of land- and water-based recreation opportunities that allowed visitors to experience the park's resources to the extent that natural, cultural, and scenic values were not impaired. Among the recreational opportunities that the Park Service sought to accommodate in the national river, subject to appropriate regulations to ensure resource protection, were nature study, scenic driving, scenic viewing, historic site visitation, river rafting and floating, fishing, hiking, rock climbing, hunting, off-road vehicle use, camping, and bicycling.²⁵⁰

Some of the recreational opportunities that the National Park Service determined to accommodate in the national river, such as hunting and fishing, were traditional activities that had been pursued by residents of the area for generations. Other recreational opportunities, such as river rafting and floating, were commercialized ventures that had become increasingly popular with the public during the decade prior to the national river's establishment. Many of the recreational pursuits in the national river were evidence that the area provided a wide spectrum of activities to meet the ever-increasing recreational demands of the American public.

Development of Hunting and Fishing Recreational Activities — The early settlers in the New River Gorge region hunted and fished to provide meat for their diets and furs for clothes and trade. In their *History of Fayette County*, Peters and Carden observed that hunting and fishing were significant components of early pioneer life and part of the training for boys growing up in the frontier conditions of the New River Gorge region. They observed:

The pioneer boy, when not needed on the farm, was usually apt to be found fishing for trout in the cool streams, or roaming the woods in search of game, which was abundant in early times — bears, and elk; wild cats, foxes, panthers, and wolves; otters, muskrats, and beavers; even wild turkeys and, in the "little winter" as the late fall was called, wild geese and ducks were abundant. Was it not indeed a hunter's paradise? The pioneer soon learned that considerable money could be earned as a hunter, sometimes more than could be earned as a farmer or a blacksmith, because there was constant demand for skins in the frontier market places which carried on trade with towns on the coast. The buying and selling of fur was so lucrative a business that many engaged in it.²⁵¹

In "the early years," Peters and Carden noted that the "New river abounded in all kinds of fish found in mountain streams, and even today [1920s] black bass and both kinds of catfish, blue and mud-cats, are caught in great numbers." They commented further on the evolution of fishing from a necessary component of pioneer life to a business activity and ultimately to a recreational diversion by the second decade of the 20th century:

250. U.S. Department of the Interior, National Park Service, *General Management Plan, New River Gorge National River*, pp. 79-83; *Ibid, Management and Development Guidelines for New River Gorge National River, West Virginia, November 1988*, n.p.; *Ibid, Management and Development Guidelines, New River Gorge National River, West Virginia, Reference Material*, December 1988, p. 5; and *Ibid, Interpretation Program Plan, New River Gorge National River, West Virginia*, May 1989, pp. 10-11.

251. Peters and Carden, *History of Fayette County*, pp. 108-09.

...The early settlers depended, to a very great extent, on the fish they caught from the river and mountain streams, for their change of diet. As the country became more and more populated, many men devoted a great part of their time to fishing for the market. Among those who became noted, if not famous, was one "Dick" Peters, who lived for the whole of his long and adventurous life on the hill above Sewell, overlooking New river and Manns creek....He sold fish to the railroad camps, when the Chesapeake and Ohio was being built, and later to the men who worked on the ovens and in the mines at Sewell and surrounding coal works. He knew where the good fishing grounds were and had trot lines set at each during the fishing season....it is well known that he caught and sold many tons of fish from New river and Manns creek, the latter of which, than as now was full of mountain trout. In recent years the government has been stocking this creek with rainbow trout, and many fishing clubs make yearly pilgrimages to its picturesque shores and spend their vacations close to the heart of nature, and catch great numbers of these fine fish.²⁵²

Not only did the New River Gorge region provide excellent fishing opportunities, but, according to Peters and Carden, its "hills" were also "filled with game" during the early years of settlement. Deer, bear, and smaller animals, such as foxes, raccoons, opossums, squirrels, and game birds, "afforded the pioneers a variety of the best that nature has to offer." There were also fur bearing animals, such as mink, otter, musk rat, and skunk, from "which many of the clothes of the people were made." With the coming of the coal and railroad industries, the game "was driven back from the river into the virgin forest where for many more years their natural habitat was undisturbed by the presence of man." With the cutting of timber and the increase of population in the area, however, game was becoming more scarce in the immediate area of the gorge during the first two decades of the 20th century, thus causing hunters, who were increasingly engaging in this activity for recreational purposes, to traverse further afield to find their quarry.²⁵³

Although much of the game had been forced out of the immediate confines of the gorge by the coal, railroad, and lumber industry operations, one area in the gorge, according to Peters and Carden, remained a sport hunting paradise in the 1920s. The authors noted that the "valley of Manns creek which empties into New river at Sewell, is now and has been ever since it was first explored, a great roosting place for wild turkey." Many "fine specimens have been taken here and on account of the roughness of the country, which makes it difficult to hunt them, this will be a turkey stand for many years."²⁵⁴

The growing popularity of hunting and fishing, as well as the negative impacts of industrialization and increasing population pressure, however, was having serious effects on the wildlife and fishery resources of the New River Gorge region as well as the entire state of West Virginia during the early 20th century. A. B. Brooks, a noted forestry expert, observed in 1910:

The large number of hunter's licenses issued from the County Clerks' offices and the numerous fishing and hunting permits granted by owners of forest land in West

252. *Ibid*, pp. 616-17.

253. *Ibid*, pp. 617-18.

254. *Ibid*, p. 618.

Virginia during the past two seasons, are evidences that the people of West Virginia are lovers of these sports. It is a lamentable fact, however, that the game has been so greatly reduced by careless and unlawful hunting and by forest fires, and that the fish have been killed by the pollution and drying up of streams to such an extent that these innocent sports have lost much of their former attraction.²⁵⁵

During the years following World War I various properties in the New River gorge region were developed and used by non-New River residents as single family seasonal hunting and fishing camps. Typically, these properties featured small vernacular-style bungalows, cabins, sheds, and river shelters designed to house families while they engaged in recreational hunting and fishing pursuits.²⁵⁶

Development of Whitewater Recreational Activity — Although commercial whitewater rafting in the New River Gorge region did not begin until 1968, residents of the area have enjoyed this recreational pursuit since the early 20th century. Nell Gwinn Wriston, who grew up at Round Bottom during the 1910s and 1920s, reminisced in 1984 that young people in the area spent Sunday afternoons during her adolescent years riding the New River rapids in 22-24-foot-long "skiffs." She observed:

....that was our Sunday afternoon dating — get out and ride the rapids in the boats. That was about all there was to do. We'd row so far into the eddy water and cut out into the white water. You'd get quite a ride.²⁵⁷

Commercial whitewater rafting began in the New River Gorge when Wildwater Expeditions Unlimited, Inc., commenced operations at Thurmond in 1968. As a result of televised news and sports coverage, television specials, and motion pictures, river running became an increasingly popular sport in the gorge as well as throughout the United States during the 1960s and 1970s. Four whitewater rafting companies began operation in the gorge region during the mid-1970s. By 1982 river running had become a booming business in the New River Gorge region; 22 of the 48 outfitters' licenses in the State of West Virginia were held by outfitters serving the New River. It was estimated that approximately 55,000 commercial boaters used the most popular whitewater section of the river between Thurmond and Hinton. According to many outfitters, government officials, and visitors, float traffic on the river was rapidly reaching its limits.²⁵⁸

The attractions and potential for expansion of whitewater operations in the New River Gorge region were described by K. Christopher Dragan of Wildwater Expeditions Unlimited in 1982. Observing that the professionalism of some New River outfitters had developed "to the point where it is being recognized as a standard by other commercial companies throughout the country," Dragan described the outstanding whitewater features of New River Gorge:

255. Brooks, *West Virginia Geological Survey, Volume Five, Forestry and Wood Industries*, p. 38.

256. "Proposed removal of residential structures, New River Gorge National River along Meadow Creek, West Virginia," n.d. [ca. September 1990], Files, State Historic Preservation Office, West Virginia Division of Culture and History, Charleston, West Virginia.

257. "A Daughter Remembers," From an interview by William E. Cox, *Goldenseal*, X (Spring 1984), p. 20.

258. Marjorie Corbett, "Protecting the New River Gorge," *National Parks*, LVI (March-April 1982), pp. 10-11.

The 30 mile stretch of New River from Prince to Fayette Station has the ideal situation of the first 15 miles being for the novice with easy access at Thurmond. The Prince to Thurmond run had original ratings of Class 2 to 4 [novice to advanced]; but, with today's advances in equipment, skills and knowledgeability of river runnings, the classifications are of 1 and 2 [beginner and novice] and extending to Class 3's [intermediate] at the high water levels. The section of New River from Thurmond to Fayette Station had original ratings of Class 3 through 5 [intermediate through expert] and still today these ratings are maintained by the majority of knowledgeable paddlers.

The Thurmond to Fayette Station run commonly referred to as the Lower Section has seen the greatest development. It offers an ideal one day raft trip within a day's driving time for a large portion of the Eastern United States. The first part of the trip contains a few Class 1 [beginner] rapids and long flat-water pools giving the river runner a chance to warm up for a second half of the trip that contains some of the best rapids found runnable year-round in the Eastern United States.

Dragan concluded that the New River "has the potential of being one of the finest recreational waterways in the country." With "the upper portions having easier access and smaller rapids, they are ideal for the fisherman and the novice boater." The section from Thurmond to Fayette Station with its "spectacular scenery and magnificent rapids" could "be the river in the Eastern United States for the whitewater recreationist to depend on" in the future.²⁵⁹

Recreational Opportunities in New River Gorge National River — The two-fold purpose for the establishment of New River Gorge National River was to conserve and interpret outstanding natural, scenic, and historic values, sites, and objects in and around New River Gorge and provide for resource-based recreation that did not impair resource values. Thus, one of the management goals of the National Park Service for its administration of the national river became the development of a system of land- and water-based recreation opportunities that allowed visitors to experience the park's resources to the extent that natural, cultural, and scenic values were not impaired.²⁶⁰

The *General Management Plan, New River Gorge National River*, approved on November 1, 1982, stated that people visited the national river to enjoy its "scenery, water, forests, history, geology, and wildlife in a variety of ways." Some pursued a single experience, such as a whitewater rafting trip, "while others participated" in a variety of activities such as fishing, hiking, camping, and sightseeing.

259. K. Christopher Dragan, "Whitewater Use of the New River, *New River Symposium, Proceedings*, 1982, pp. 20-22. For more data on whitewater use in New River Gorge, see Verne Huser, *River Running* (Chicago, Henry Regnery Company, 1975), pp. 19, 206, 216-17; Michael Jenkinson, *Wild Water West Virginia: A Peddler's Guide to the White Water Rivers of the Mountain State* (Hillsborough, North Carolina, Menasha Ridge Press, 1975), pp. 129-42; Ron Rathnow, *New River Gorge* (Birmingham, Alabama, Menasha Ridge Press, 1987); and Shirley Claymore Scott, "Thurmond to Fayette Station: A New River Guide for Boaters and Hikers," *New River Symposium, Proceedings*, 1985, pp. 65-73.

260. U.S. Department of the Interior, National Park Service, *Management and Development Guidelines, Reference Material*, pp. 3, 5.

According to the *General Management Plan*, visitation to New River Gorge had three principal components. These included visitation to the existing state parks within the national river boundary (Babcock and Grandview); river-based recreation comprised of boating, fishing, and swimming; and land-based recreation including sightseeing, picnicking, camping, hiking, and hunting.

During the early 1980s most commercial boating occurred on the whitewater run between Thurmond and Fayette Station. The second most popular section for commercial boating was between Prince and Thurmond, a stretch of river that provided a good introduction for novice rafters on the first leg of a two-day trip. The estimated annual number of commercial boaters was 55,000. Of the 7,000 private boaters, most traveled between Prince and Thurmond or Hinton and Meadow Creek, which were accessible and fairly easy to navigate.

Swimming, other than from watercraft, occurred at Fayette Station, McCreery Beach, and Sandstone Falls. It was estimated that 8,500 persons engaged in this activity in the national river during the previous year.

Most fishing occurred between Hinton and Meadow Creek, with the stretch between Prince and Thurmond second in popularity due to its fairly easy automobile access. An estimated annual total of 29,500 persons fished in the national river. The least used section of the river was between Meadow Creek and Prince, where fishing and canoeing dominated.

Land-based recreation in the national river included sightseeing, camping, picnicking, hiking, and hunting. With easy highway access from the heavily traveled U.S. 19, sightseeing at Canyon Rim amounted to an estimated 250,000 visits annually. Estimated annual visitation statistics for other land-based recreation in the national river included 10,000 campers, 4,000 picnickers, 1,500 hikers, and 500 hunters.²⁶¹

In 1989 the National Park Service prepared the *Resource Inventory and Analysis*, a document that presented a more comprehensive overview of recreational opportunities in the national river. According to this study, river-oriented recreation was "the largest arena of visitor use recreation currently available" in the New River Gorge region. Recreationists participated in water-based activities ranging from bank fishing to canoeing to running the whitewater rapids in a raft. Various sections of the river were preferred for different sports, with fishing and canoeing conditions more favorable from near Bluestone Dam to Sandstone Falls in the south end of the park and whitewater rafting more attractive from Thurmond downriver toward the north end of the park. In between there was a diverse mix of uses depending on river accessibility and gradient. The flatter areas of water attracted canoeists, john-boaters (small fishing boats), and fishermen, while the steeper, more turbulent rapids areas attracted rafters and kayakers.

The boating visitors were catered to by commercial outfitters — 23 rafting companies licensed by the state and several canoeing outfitters. The number of visitors involved in river recreation varied from year to year, as well as seasonally, depending on such factors

261. U.S. Department of the Interior, National Park Service, *General Management Plan, New River Gorge National River*, pp. 18, 79-83.

as the level of river flow. Visitor use statistics revealed that the numbers of commercial and private boaters in the national river during 1987 were 72,089 and 10,533, respectively.

Camping along the river was an increasingly popular activity. Fish camps, set up temporarily for overnight bank fishing, were primitive establishments used for short periods of time. Another form of primitive camping was practiced by the commercial rafting companies for overnight raft trips down the river. These usually occurred at specific or designated locations; no facilities were available, but the distances traveled were established and allowed for appropriate time designations for departures and arrivals. Guided fishing trips also used locations along the river for the overnight camping.

Sandstone Falls, the only National Park Service-designated camping area, had a two-week limit per stay. Camping and cabins were available at Babcock State Park, and camping was also available south of the national river at Bluestone Lake.

Rock climbing was a relatively new and rapidly growing recreational pursuit at New River Gorge. The gorge-top cliffs along the north end of the national river offered a challenging variety of climbing terrain and were becoming widely known as "the four-mile wall." Relatively easy access from roads along the east side between Canyon Rim and the Beauty Mountain area and the lengthy stretch of available terrain contributed to the increasing popularity of this activity.

Scenic drives in the New River Gorge area offered a different and increasingly popular perspective of the river. A loop drive around the national river offered a wide variety of scenery and terrain along with several overlooks into the gorge at the north end and roads paralleling the river at the south end. The bumpy but usually passable McKendree Road added a scenic stretch along the east gorge wall between Thurmond and Prince. Since the recent opening of I-64 across the gorge and Glade Creek, areas of the national river that had been relatively inaccessible were now highly visible to large numbers of passing motorists. With the eventual development of the New River Parkway (I-64-Hinton) to access the national river from the interstate, increasing numbers of visitors would be able to drive easily through areas of the gorge that could only be reached previously by hiking or boating.

Nature hiking and bird-watching were popular pursuits in the New River Gorge. Two trails were officially opened during the 1988 season — the Wolf Creek Trail to Kaymoor and Minden Trail along an abandoned railroad spur across the river from Thurmond. Nearly 18,000 persons used these trails during their first season in use. Numerous other trails laced the gorge, but these were informal traces used traditionally to reach long-time favorite fishing, camping, or hunting spots. A lengthy trail down the course of Glade Creek led to the river and connected to other informal trails along the river from below Grandview. These existing informal trails, in combination with developed trails, were linked by a trail plan proposed to traverse the length of the gorge.

A limited amount of horseback riding also existed around the north end of the national river. A rental stable offered trail rides in conjunction with raft trips, and there were designated horse trails in Babcock State Park.

Besides the attraction of its scenic nature trail, the entire Glade Creek area provided a wide variety of opportunities for land-based recreation. The Glade Creek drainage encompassed some of the least disturbed natural scenery within the national river. Since most of the Glade Creek area was beyond the sights and sounds and other indications of modern civilization, the area offered park visitors opportunities for solitude that were unavailable elsewhere in the national river.

Hunting of certain species of wildlife, the most prominent in the national river being turkey, white-tailed deer, and waterfowl, was a permitted recreational activity in the national river subject to state regulations. Trapping, by National Park Service legislation, was not allowed within the boundaries of the national river. Offroad vehicle use was permitted and becoming quite popular, taking advantage of some of the abandoned railroad grades and logging roads that crisscross much of the area.²⁶²

PROPERTY TYPES

Introduction

Development of recreational facilities and units in the state park system have had a significant impact on the natural and built environments of West Virginia, including the southern part of the state in which New River Gorge National River is located. Although informal recreational activities, such as fishing and hunting, have long been conducted in the area, construction of formalized recreational facilities within the authorized boundaries of the present-day national river did not occur until the 1930s and early 1940s when Babcock and Grandview state parks were established as units of the embryonic West Virginia state park system and developed using New Deal emergency funding and Civilian Conservation Corps enrollees for construction. When the national river was established in 1978, these two state parks, along with Sandstone Falls State Park which had been established during the 1970s, contained all of the formalized public recreation facilities within its authorized boundaries.

Expansion of recreational opportunities, particularly whitewater rafting and kayaking, in the New River Gorge region has drawn ever-increasing numbers of visitors to the area in recent decades — an occurrence that has left a significant impact on the natural environment. However, the material legacy of organized public recreation facilities within the authorized boundaries of the present-day national river during the period of significance were confined to two areas — Babcock and Grandview state parks. Although Babcock State Park lies within the authorized boundaries of New River Gorge National River, it continues to be administered as a unit of the West Virginia state park system.

Typology of Known and Expected Property Types

The typology of known and expected types for the recreation/state parks context includes:

262. U.S. Department of the Interior, National Park Service, *Resource Inventory and Analysis, New River Gorge National River, West Virginia*, July 1989, pp. 21-23.

1. Primary Outdoor Recreational Activity Facilities
 - a. Bathhouses, boathouses
 - b. Pavilions (outdoor picnic and function shelters)
 - c. Overlooks, lookouts
 - d. Comfort stations
 - e. Group social/educational meeting structures
 - f. Amphitheaters
 - g. Specialized activity areas, e.g., children's playground/play equipment areas, picnic areas, tennis courts, badminton courts, horseshoe pits, shuffleboard courts
2. Secondary Recreational Support Facilities
 - a. Park administrative/management-related structures, e.g., staff offices, personnel residences, visitor centers and contact facilities
 - b. Park maintenance structures, e.g., offices, shops, garages, warehouses
 - c. Concessions operations structures, e.g., restaurants, snack shops, gift and souvenir shops
3. Overnight Visitor Accommodations
 - a. Cabins
 - b. Lodges
4. Private Retreat Development
 - a. Company retreats
 - b. Church camps
 - c. Special youth camps
5. Engineering Structures and Landscape Features
 - a. Infrastructure buildings
 - b. Dams, functional and decorative
 - c. Bridges
 - d. Stone retaining walls, culverts, drainage ditches, curbs, spring basins, walkways, hearth, steps, water fountains, and trails
 - e. Directional signs or markers, benches
 - f. Man-made lakes, streams, waterfalls, and pools
 - g. Fencing
 - h. Machinery
6. Transportation Facilities
 - a. Roads and roadway structures/features — bridges, culverts, drains, turnouts
 - b. Vehicle facilities — parking lots

Known and Expected Distribution of Property Types

Primary Outdoor Recreational Activity Facilities. The primary outdoor recreational activity facilities property type includes bathhouses, boathouses, pavilions (outdoor picnic and function shelters), overlooks, comfort stations, group social/educational meeting structures (sometimes known as unithouses), amphitheaters, and specialized activity areas, such as children's playground and picnic areas, tennis, badminton, and shuffleboard

courts, and horseshoe pits. Structures of this property type that were built by the CCC are representative examples of the rustic or "park" style of architecture that reached its zenith during the late 1920s and 1930s as a result of the influence, in part, of National Park Service landscape architects.

Structures associated with this property type were designed in the rustic architectural style to make them harmonize with their natural surroundings. The construction technique emphasized use of native materials and hand craftsmanship and was primarily wood frame, load-bearing stone masonry, or wood frame faced with stone having little applied decorative ornament. The elevations tended to be irregular and asymmetrical in overall composition and fenestration and were typically dominated by overhanging eaves that were punctuated with either exposed sawn rafters or rough-hewn log rafters. The walls of the structures were generally wood weatherboard or random fieldstone masonry.

Secondary Recreational Support Structures. The secondary recreational support structures property type includes park administrative/management related buildings (e.g., staff offices, personnel residences, visitor centers, and visitor contact stations), park maintenance structures (e.g., offices, shops, garages, and warehouses), and concessions operations structures (e.g., restaurants, snack shops, gift and souvenir shops) for visitor services. These structures were designed and constructed by the CCC as integral parts of the park for which they were the management and maintenance control centers and focal points for visitor services.

Structures of this property type that were built by CCC were designed, for the most part, in the rustic or "park" style of architecture, similar to that for the primary outdoor recreational activity facilities.

Overnight Visitor Accommodations. Included in this property type are cabins and lodges designed for the purpose of providing overnight accommodations for park visitors. Cabins tend to be single-story, have hipped or gable roofs, and exhibit rough-sawn weatherboard exterior compositions. Because Grandview State Park was designed as a day-use area it has no overnight accommodations. Structures of this property type that were built by the CCC were designed in the aforementioned rustic architectural style.

Private Retreat Development. Private retreat development reflected a trend toward recreational sites for organized groups such as church camps, special youth camps, and company retreats. There are numerous examples of this property type in West Virginia, many of which remain extant in the New River region.

In 1994 the park acquired Camp Brookside, a company retreat developed by Union Carbide for its employees. This site may be eligible for listing in the National Register of Historic Places using cultural landscape guidelines.

Engineering Structures and Landscape Features. Engineering structures and landscape features were designed to conserve and protect/preserve park resources and manage recreational activities by controlling human usage, halting erosion, reclaiming land, and creating new bodies of water. Structures of this property type include uninclosed, functional infrastructure designs, although such enclosed structures as stone pumphouses and water treatment buildings and concrete water storage tanks were constructed by the

CCC. More typical, however, are such structures as stone and/or concrete dams, stone and wood bridges and stone retaining walls, culverts, drainage ditches, curbs, spring basins, steps, walkways, water fountains, and trails. Also included in this property type are directional signs or markers, wooden benches, and man-made lakes, streams, waterfalls, and pools.

Some of the more functional and less visible structures in this property type were constructed with poured concrete. However, most examples of this property type were visible and as such were designed in the rustic or "park" architectural style shared by most of the standing structures designed by the CCC. The construction technique was either reinforced poured concrete, stone masonry, or a combination of both. The overall designs within this property type varied widely, dependent as they were on the specific function of the structure in question.

Transportation Facilities. This property type includes roads and related roadway structures/features, such as bridges, culverts, drains, and turnouts, and vehicle facilities, such as parking lots. The transportation facilities were designed to provide vehicular access to park attractions, prominent visitor destination points, and specialized activity areas. During construction of roads and related vehicle facilities the CCC emphasized design considerations to lessen their impact on the landscape and make them compatible with their natural surroundings.

Present Conditions of Property Types

Virtually all CCC structures in these various property types at Grandview and Babcock State Park tend to be either still in use and serving the purposes for which they were constructed or "mothballed" and reasonably well-maintained. Thus, most structures are in good condition. Babcock has the largest and most representative group of structures associated with the rustic architectural style in the New River Gorge region. It should be noted that many structures, facilities, and landscape features built at Grandview and Babcock during the post-CCC era have been constructed in a manner that reflects the rustic architectural style, thus making it difficult in some cases to differentiate between CCC and non-CCC construction.

TABULAR SUMMARY OF MANAGEMENT INFORMATION

This tabular summary of management information includes key data for each historic property related to the recreation/state parks context in New River Gorge National River that was surveyed by Land and Community Associates of Charlottesville, Virginia, as part of its study entitled *Cultural Landscape Report, Grandview, New River Gorge National River, West Virginia* in June 1994. These structures will be surveyed by the Chesapeake/Allegheny System Support Office LCS team and entered into the national river's draft LCS.

Data for the structures listed in the tabular summary is from the *Cultural Landscape Report*. This information will change as further studies and fieldwork are undertaken and Determinations of Eligibility and National Register of Historic Places nominations are completed.

Tabular Summary of Management Information

PARK STRUCTURE #	LCS ID #	PROPERTY NAME	LOCATION	PROPERTY CATEGORY	PROP. TYPE	NATIONAL REGISTER STATUS (DATE)
None	None	Main Park Road to Overlook Parking Area & Picnic Area No. 1	Grandview	Paved road	5a	Not evaluated
None	None	Picnic Area No. 1 Parking Area	Grandview	Paved parking area	5b	Not evaluated
None	None	Main Overlook Parking Area	Grandview	Paved parking area	5b	Not evaluated
None	None	Historic Main Trail	Grandview	Trail	4d	Not evaluated
None	None	Historic Base Cliff Trail	Grandview	Trail	4d	Not evaluated
None	None	Tunnel Trail	Grandview	Trail	4d	Not evaluated
None	None	Main Park Road from Picnic Area No. 1 to Picnic Areas Nos. 2, 3	Grandview	Paved road	5a	
None	None	Picnic Area No. 1	Grandview	Picnic area	1g	Not evaluated
None	None	Stone Pylons with Suspended Wooden Entry Signs	Grandview	Standing structure	4e	Not evaluated
None	None	Stone Hearths with Grills	Grandview	Standing structure	4d	Not evaluated
None	None	Wooden Benches with Stone Bases	Grandview	Standing structure	4e	Not evaluated
None	None	Stone-Paved Paths Including Steps	Grandview	Stone-paved paths and steps	4d	Note evaluated
None	None	Vehicular Circulation Features (Culverts, Curbing, Retaining Walls)	Grandview	Standing structures	5a	Not evaluated
None	None	Stone Drinking Fountains	Grandview	Standing structures	4d	Not evaluated
None	None	Hand Pump	Grandview	Standing structure	4h	Not evaluated
None	None	Wooden Safety Fences	Grandview	Standing structure	4g	Not evaluated

CHAPTER SEVEN: SPECIFIC EVALUATION CRITERIA — REGISTRATION REQUIREMENTS

This study has developed five historic contexts that incorporate most of the historic properties in New River Gorge National River. The five contexts include: (1) coal industry, (2) railroad industry, (3) lumber industry, (4) Euro-American settlement/agriculture, and (5) recreation/state parks. This chapter will delineate an evaluation process in which the criteria for identifying the significance and integrity of the historic properties are developed for use in preparation of Determinations of Eligibility and National Register of Historic Places nominations.

EVALUATION PROCESS

In order to qualify for listing in the National Register of Historic Places, a historic property must be associated with at least one historic context, subject to the following conditions:

- A. Under the coal industry historic context, a historic property must have been used by the coal industry or by another industry for the mining, production, or transportation of coal. Historic properties may also qualify for listing if they: (1) were used by the coal industry to provide housing and social services for miners, (2) were associated with coal operators, miners, and significant events or personalities in the mine wars and union movement of the 1900-30 period, (3) represent the negative impact of mining, or (4) were government facilities devoted primarily to serving the needs of miners.
- B. Under the railroad industry historic context, a historic property must have been used by the railroad industry or by another industry for the construction, operation, and maintenance of railways. Historic properties may also qualify for listing if they were: (1) located in and/or were associated with railroad service towns/centers, (2) structures associated with railroad operators, managers, or workers in incorporated towns, or (3) government facilities devoted to serving the needs of railroad workers.
- C. Under the lumber industry historic context, a historic property must have been used by the lumber industry or by another industry for the cutting of timber or production and transportation of lumber products. Historic properties may also qualify for listing if they were: (1) used by the lumber industry to provide housing and social services for loggers and lumber management officials, or (2) buildings in incorporated towns associated with the lumber industry or a closely allied industry.
- D. Under the Euro-American settlement/agriculture historic context, a historic property must have been used by Euro-American settlers for the production, processing, or transportation of agricultural products.
- E. Under the recreation/state parks historic context, a historic property must: (1) have been constructed in a West Virginia state park unit by the

Civilian Conservation Corps, (2) reflect characteristics associated with rustic or "park" architecture, and (3) have been used by the West Virginia state park system for management, operation, development, design, or recreational use of the park.

To qualify for listing, a property must be a representative example of one of the subtypes identified in the sections describing the property types for each historic context. A historic property must also have integrity. The evaluation of integrity is generally a subjective judgment, but it must be grounded in an understanding of property's physical features and how they relate to its significance.

Within the concept of integrity, the National Register criteria recognize seven aspects or qualities that, in various combinations, define integrity. These qualities include location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity, a property will always possess several, and usually most, of the qualities. The retention of specific aspects of integrity is paramount for a property to convey its significance.

While a property must be a representative example of one of the identified subtypes and it must have integrity to qualify for listing, these criteria are subject to the following qualifications:

1. The major block of its composition must be intact.
2. Its construction and historic function must be documented with site-specific historic source materials.
3. It must be a recognizable component of a site associated with its historic context.
4. It must retain the essential physical features that enable it to convey its historic identity.

All properties change over time. It is not necessary for a property to retain all its historic physical features or characteristics. However, the property must retain the essential physical features that enable it to convey its historic identity. The essential physical features are those features that define both why a property is significant and when it was significant. They are the features without which a property can no longer be identified as, for instance, a late 19th-century coke oven, an early 20th-century railroad passenger and freight depot, or a turn-of-the-century farmstead. As an example a farmstead may be overgrown and visible traces of its turn-of-the-century agricultural system may have become less well defined, but most of its original farm buildings should be extant in a highly unaltered state, a significant portion of its original field and pasture configuration and fences should be intact, and its rural ambience should be impacted by few, if any, modern visual or technological intrusions, thus permitting it to depict a once prevalent agrarian way of life that has all but vanished.

If the historic exterior building material of a property is covered by nonhistoric material (such as modern siding), the property can still be eligible if the significant form, features,

and detailing are not obscured. If a property's exterior is covered by a nonhistoric false front or curtain wall, the property will not qualify under Criteria A, B, or C because it does not retain the visual quality necessary to convey historic or architectural significance. Such a property also cannot be considered a contributing element in a historic district because it does not add to the district's sense of time and place. If the false front, curtain wall, or nonhistoric siding is removed and the original building materials are intact, the property's integrity can be re-evaluated.

Ruins may be eligible for listing if they retain the essential physical features that define why they are significant and when they were significant. If such features cannot be identified, the ruin should be considered to have lost its integrity.

Historic properties that have achieved significance within the past fifty years may be eligible for listing if they are associated with events or persons or exhibit architectural styles that have "exceptional importance." The phrase "exceptional importance" may be applied to the extraordinary importance of an event or to an entire category of resources so fragile that survivors of any age are unusual.

Historic properties may have local, state, or national significance. Properties having local significance must be related to a historic context in the New River Gorge area and must be a representative example of a defined property type in the gorge. Properties having state significance must be illustrative of the historic context in West Virginia and must be one of the best of similarly associated properties in the state to represent the historic context theme. Properties having national significance must reflect an important aspect of the historic context theme in the nation as a whole and must be one of the best of similarly associated properties in the United States.

COAL INDUSTRY

Historic properties associated with the coal industry are eligible for listing under Criterion A in five principal areas of significance if they are associated with events that have made an important contribution to the broad patterns of American history. In the area of engineering, they must demonstrate the practical application of scientific principles to the design, construction, and operation of facilities, equipment, and machinery related to the development of coal mining operations and technology and ancillary processes. In the area of industry, they must be representative examples of technology and processes for management of materials, labor, and equipment to produce coal and its by-products. In the area of social history, they must be representative of the socioeconomic patterns associated with coal mining and the life-ways of its social groups. In the area of transportation, they must be representative examples of the process and technology of conveying raw materials relating to coal production. In the area of ethnic heritage, they must be associated with the history of persons (black and European) having a common ethnic or racial identity.

Historic properties associated with the coal industry are eligible for listing under Criterion B in four principal areas if they are associated with the lives of persons significant in American history. In the areas of architecture, engineering, industry, and transportation, they must be associated with the productive life of a person important to the coal

industry, or the property must be illustrative of the contributions for which the individual is known.

Historic properties associated with the coal industry are eligible for listing under Criterion C in two principal areas if they embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, or represent a significant and distinguishable entity whose components may lack individual distinction. In the area of architecture, they must demonstrate the practical art of designing and constructing buildings and structures associated with coal mining and persons associated with the coal industry. In the area of engineering, they must illustrate the practical application of scientific principles to the design, construction, and operation of buildings and structures to produce and transport coal and its by-products.

RAILROAD INDUSTRY

Historic properties associated with the railroad industry are eligible for listing under Criterion A in five principal areas of significance if they are associated with events that have made an important contribution to the broad patterns of American history. In the area of commerce, they must be representative examples of the business of trading goods, services, and commodities. In the area of engineering, they must demonstrate the practical application of scientific principles to the design, construction, and development of facilities, equipment, and structures related to railway operations. In the area of industry, they must be representative examples of technology and processes for management of materials, labor, and equipment to construct, operate, and maintain railroads. In the area of social history, they must be representative of the socioeconomic patterns associated with railroad operations and lifeways of the social groups associated with the industry. In the area of transportation, they must be representative examples of the process and technology of conveying passengers and materials. In the area of ethnic heritage, they must be associated with the history of persons (black and European) having a common ethnic or racial identity.

Historic properties associated with the railroad industry are eligible for listing under Criterion B in five principal areas if they are associated with the lives of persons significant in American history. In the areas of architecture, commerce, engineering, industry, and transportation, they must be associated with the productive life of a person important to the railroad industry, or the property must be illustrative of the contributions for which the individual is known.

Historic properties associated with the railroad industry are eligible for listing under Criterion C in two principal areas if they embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, or represent a significant and distinguishable entity whose components may lack individual distinction. In the area of architecture, they must demonstrate the practical art of designing and constructing buildings and structures associated with the railroad industry. In the area of engineering, they must illustrate the practical application of scientific principles to the design, construction, and development of equipment, machinery, and structures related to railroad operations.

LUMBER INDUSTRY

Historic properties associated with the lumber industry are eligible for listing under Criterion A in five principal areas of significance if they are associated with events that have made an important contribution to the broad patterns of American history. In the area of engineering, they must demonstrate the practical application of scientific principles to the design, construction, and operation of facilities, equipment, and machinery related to the cutting of timber and development of sawmill operations and technology and ancillary processes for the production of lumber products. In the area of industry, they must be representative examples of technology and processes for management of materials, labor, and equipment to produce lumber and its by-products. In the area of social history, they must be representative of the socioeconomic patterns associated with timber-cutting and lumber production and lifeways of its social groups. In the area of transportation, they must be representative examples of the process and technology of conveying raw materials relating to lumber production. In the area of ethnic heritage, they must be associated with the history of persons (black and European) having a common ethnic or racial identity.

Historic properties associated with the lumber industry are eligible for listing under Criterion B in four principal areas if they are associated with the lives of persons significant in American history. In the areas of architecture, engineering, industry, and transportation, they must be associated with the productive life of a person important to the lumber industry, or the property must be illustrative of the contributions for which the individual is known.

Historic properties associated with the lumber industry are eligible for listing under Criterion C in two principal areas if they embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, or represent a significant and distinguishable entity whose components may lack individual distinction. In the area of architecture, they must demonstrate the practical art of designing and constructing buildings and structures associated with timber-cutting and lumber production and persons associated with the lumber industry. In the area of engineering, they must illustrate the practical application of scientific principles to the design, construction, and operation of buildings and structures to produce and transport lumber and its by-products.

EURO-AMERICAN SETTLEMENT/AGRICULTURE

Historic properties associated with Euro-American settlement/agriculture are eligible for listing under Criterion A in five principal areas of significance if they are associated with events that have made an important contribution to the broad patterns of American history. In the area of agriculture, they must be associated with the process and technology of cultivating soil, producing crops, or raising livestock and plants. In the area of ethnic heritage (subcategory — European), they must relate to the history of persons having common ethnic origins or racial identities. In the area of exploration/settlement, they must be associated with the establishment and early development of new settlements or communities. In the area of social history, they must relate to the history of American

agrarian society and the lifeways of its social groups. In the area of transportation, they must be associated with the process and technology of conveying agricultural products.

Historic properties associated with Euro-American settlement/agriculture are eligible for listing under Criterion B in four principal areas of significance if they are associated with the lives of persons significant in American history. In the areas of agriculture, ethnic heritage (subcategory — European), exploration/settlement, and social history, they must be associated with the productive life of a person important to Euro-American settlement/agriculture, or the property must be illustrative of the contributions for which the individual is known.

Historic properties associated with Euro-American settlement/agriculture are eligible for listing under Criterion C in two principal areas if they embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, or represent a significant and distinguishable entity whose components may lack individual distinction. In the area of architecture, they must demonstrate the practical art of designing and constructing buildings and structures associated with Euro-American settlement/agriculture and persons associated with agrarian activities. In the area of engineering, they must illustrate the practical application of scientific principles to the design, construction, and operation of buildings and structures to produce and process agricultural products.

RECREATION/STATE PARKS

Historic properties associated with the recreation/state parks historic context are eligible for listing under Criterion A in eight principal areas of significance if they are associated with events that have made an important contribution to the broad patterns of American history. In the area of architecture, they must demonstrate the practical art of designing and constructing buildings and structures to serve human recreational needs. In the area of conservation, they must be associated with the preservation, maintenance, and management of natural or man-made resources in state parks. In the area of engineering, they must demonstrate the practical application of scientific principles to design, construct, and operate equipment, machinery, and structures to serve human recreational needs. In the area of entertainment/recreation, they must be associated with the development and practice of leisure activities for refreshment, diversion, amusement, or sport in state parks. In the area of landscape architecture, they must demonstrate the practical art of designing or arranging the land in state parks for human use and enjoyment. In the area of politics/government, they must be associated with the enactment and administration of laws by which the United States or West Virginia is governed or to activities related to political process. In the area of social history, they must be associated with the history of efforts to promote the welfare of society. In the area of transportation, they must relate to the process and technology of conveying passengers or materials in state parks.

Historic properties associated with the recreation/state parks historic context are eligible for listing under Criterion B in four principal areas if they are associated with the lives of persons significant in American history. In the areas of architecture, conservation, entertainment/recreation, and landscape architecture, they must be associated with the

productive life of a person important to recreation/state parks, or the property must be illustrative of the contributions for which the individual is known.

Historic properties associated with recreation/state parks are eligible for listing under Criterion C in three principal areas of significance if they embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, or represent a significant and distinguishable entity whose components may lack individual distinction. In the area of architecture, they must demonstrate the practical art of designing and constructing buildings and structures in the rustic architectural style to serve human recreation needs. In the area of engineering, they must demonstrate the practical application of scientific principles to design, construct, and operate equipment, machinery, and structures to serve human recreational needs. In the area of landscape architecture, they must be associated with the practical art of designing or arranging state park lands for human recreational use and enjoyment.

CRITERION D

Historic properties associated with each of the five historic contexts are eligible for listing under Criterion D if they are likely to yield important information about a common set of research questions important to the theme of the context or reveal significant historical artifacts useful for study collections and as indices for historic research. The properties must retain original materials, setting, and configuration to be eligible under Criterion D.

SUMMATION

Beyond the level of defining property types and establishing criteria to determine significance and integrity of historic properties within each of the historic contexts, the position of a property within local and regional socioeconomic networks should be considered in evaluating its significance. The coal, railroad, and lumber industries in New River Gorge, for instance, interconnected in many ways. The coming of the C & O Railroad to the gorge opened its pristine beauty, mineral wealth, and vast timber resources to broad human access, development, and exploitation. Many of the initial logging operations were geared toward the needs of the coal industry, and the railroad became a major consumer of coal to power its steam locomotives as it transported ever-increasing quantities of coal and lumber products to markets in major cities on the eastern seaboard. Some mining facilities produced coal for transportation and sale to coking operations that used wood, in part, to ignite their ovens, the resulting coke being transported to eastern markets by railroads. Farmers in the gorge frequently became coal miners or railroad workers as their financial needs required. Timbering of agricultural lands sometimes replaced or enhanced agricultural activities. Thus, a number of historic properties in the national river are associated with more than one historic context, enhancing their significance in terms of eligibility for listing in the National Register.

CHAPTER EIGHT: RESEARCH NEEDS AND QUESTIONS

COAL INDUSTRY

As part of a coal mining heritage study in southern West Virginia, the West Virginia State Historic Preservation Office is conducting a phased reconnaissance study focusing on coal mining-related historic resources in an eleven-county area. The first phase of the inventory, conducted in part through a cooperative agreement with the National Park Service's former Mid-Atlantic Regional Office, included the core coal mining region of Boone, Logan, McDowell, Mingo, and Wyoming counties. The report was entitled *Coal Heritage Survey, Southern West Virginia Reconnaissance Study of Sites Related to the History of Coal Mining, Phase I, Final Report, Boone, Mingo, Wyoming, McDowell, and Logan Counties*, by Cindy Dobson, Stacy Stone, and Kim Valente, November 8, 1991. The fieldwork was followed by historic research to document specific resources. In addition to individual resources, the survey team considered whole landscapes — the overall relationship of land, structures, and objects — to identify, for example, mining operations and settlement patterns.

The second phase of the reconnaissance, which has not been undertaken, is of utmost importance to the New River Gorge region since it would focus on coal mining-related historic resources in six counties — Fayette, Raleigh, Mercer, Summers, Wayne, and Cabell. This study is necessary to provide a more comprehensive understanding of specific coal mining-related sites in the gorge and their relationship to the broader context of coal industry development in the New River field, the State of West Virginia, and the nation as a whole.

While no intact mining facility or company town is located in the New River Gorge area, the extant remnants at Kay Moor constitute a sizable proportion of the principal elements of a major coal mining operation. Other sites in the area contain scattered extant fragments of mining facilities and/or company towns. It is important to place these fragments in the context of the total mining facility or company town in which it was located. This is necessary in order to compare these facilities/company towns to the Kay Moor site as well as to mining plants and company towns found in historical literature and in other regions.

Once a company town fragment has been placed within the historic context of which it is a part, it will become possible to learn more about it as well as add to the increase of knowledge about company towns in the nation. In a 1990 study entitled "Eastern Kentucky Coal Company Towns, a Research Plan," L. Martin Para of the Kentucky Heritage Council suggested questions that need to be addressed about any site of a former company town. Among the questions that are pertinent to the New River Gorge region are the following:

1. Does the town have a clear form such as a linear, cruciform, or other identified form?
2. What is the spatial relationship of houses to one another? Can evidence of racial, occupational, ethnic, or other types of segregation be found?

3. What is the relationship of the houses to the mining plant?
4. What is the relationship of the dwellings to non-dwellings, such as company stores, offices, community buildings, and recreation areas?
5. How does the existing configuration of buildings reflect the period in which the town was created?
6. Can the ratio between high and low status dwellings be established? How do such ratios differ between towns? If there are fewer class distinctions among workers' housing in smaller company towns, can they be viewed as more egalitarian? Can categories of town types be established according to these housing ratios?
7. What potential for industrial archeology exists at the site?
8. What factor — location or builder — better explains variation in house architecture throughout the region?

A priority for future research should be the ethnic composition of the coal mining population in the New River Gorge area. Additional information on the daily lives of the "average person" in the coal towns would help to provide a more comprehensive picture of the human element in the gorge as it was impacted by industrialization.

RAILROAD INDUSTRY

There is an abundance of archival material relating to the C & O Railroad operations in New River Gorge at the Chesapeake and Ohio Historical Society in Clifton Forge, Virginia. The society has a building and two railroad boxcars full of C & O Railroad uncataloged archival materials. Much of the collection, however, is currently unavailable for research because the society is a volunteer organization operating on a small budget.

Access to the railroad records at the CSX Hinton division office should be investigated because they contain personnel files, drawings, maps, and other archival materials relating to C & O operations in the New River Gorge region. The historical society has made arrangements for the ultimate disposition of the records at Hinton to be archived at Clifton Forge.

Numerous oral interviews with former railroaders and Thurmond townspeople have been conducted, but few focus on such topics as railway operations at Quinnimont or on the railroad and the technology which made Thurmond a stopping point. In an effort to better understand the history of steam and the operation of the railroad in Thurmond, more interviews that address these topics should be undertaken.

LUMBER INDUSTRY

While coal company towns in southern West Virginia have been the subject of considerable historical research and analysis, logging camps and lumber towns have received less attention. Research is needed concerning the construction, development, and operation of logging camps and their relationship to lumber towns in southern West Virginia and the New River Gorge region. In his *Tumult on the Mountain*, Roy B. Clarkson, an authority on the history of the West Virginia lumber industry, describes a typical logging camp and the lifestyle of loggers. Research is needed to determine if this description accurately reflects logging operations in the New River Gorge region or whether there were unique regional distinctives associated with lumbering in the gorge. Further research is needed concerning the interrelationship of the lumber industry with coal mining and railroading in the gorge as well as the similarities and differences between coal towns and lumber towns in the area.

EURO-AMERICAN SETTLEMENT/AGRICULTURE

The period from the 1870s to the 1920s witnessed the transition of the New River Gorge region from an economy based on agriculture to one based on the coal, timber, and railroad industries. A considerable body of documentary material is available on this theme which should be used for an expanded study on early settlement and agriculture. Further research is needed to gain a clearer understanding of the interrelationship of the growth of industry and the decline of agriculture. Research is also needed to determine whether agrarian activities in all sections of the gorge were equally impacted by the development of industry or whether there were differences among various parts of the region.

The context for settlement, migration, and agriculture in New River Gorge National River between the mid-19th and mid-20th centuries may be found in research under disciplines, such as archeology and ethnography, and various regional studies that combine traditional life and economic surveys. There is a wealth of information to place the New River region in the context of Southern Appalachia. However, topics such as settlement patterns, vernacular farm architectural styles, agricultural practices, and domestic folkways of agrarian society in the gorge prior to the 1870s, as well as during the transition years between the 1870s and 1920s, merit further study and analysis.

The Trump-Lilly Farmstead in New River Gorge National River represents a rare surviving example of a late 19th century traditional self-sufficient/subsistence farm of the Mid-Appalachian region. Potential controversy exists concerning the appropriate categorization of this site as representative of subsistence, self-sufficient, or commercial agriculture. Further investigation of the socio-economic trends in the region during the late 19th century, as well as comparative analysis with neighboring areas more commonly associated with agriculture, may aid in determining the correct interpretation of this site.

The Harry Hampton Ballard Farmstead, a 7.9-acre farm overlooking the New River in the Richmond District of Raleigh County, is a former farm in the national river dating from the late 19th century. The farmstead retains its original farm structures in a highly unaltered state, and a significant portion of its original field and pasture configuration is

intact. Additional research and documentation is necessary before the Ballard Farmstead can be evaluated for its eligibility for listing in the National Register of Historic Places. The farm, like the Trump-Lilly Farmstead, could be one of the few remaining southern West Virginia farmsteads that have not been adapted to modern farming.

RECREATION/STATE PARKS

Civilian Conservation Corps Camps SP-3 (Camp Beaver) and SP-6 (Camp Lee) were located in Babcock State Park and carried out considerable development projects in that park as well as nearby Hawks Nest State Park. Technical supervision of these two CCC camps was given to the National Park Service in cooperation with the West Virginia Conservation Commission, Division of State Parks. Some materials relative to the activities of the two camps may be found in Record Group 35, Records of the Civilian Conservation Corps, and Record Group 79, Records of the National Park Service, at the National Archives in Washington, D.C. However, further research is needed concerning the composition, contributions, and activities of these two camps. CCC Camp P-66 (Camp Raleigh) was located on private land at Shady Springs in Raleigh County and carried out a series of development projects in Grandview State Park. Technical supervision of this camp was provided by the U.S. Forest Service in cooperation with the Division of Forestry of the West Virginia Conservation Commission. Materials relating to its activities may be found in Record Group 35 and Record Group 95, Records of the U.S. Forest Service, at the National Archives. Some years ago, however, numerous CCC camp records in Record Group 95 were destroyed, among them those for Camp P-66. More information is needed concerning the activities and contributions of this camp.

Several topics relating to the recreation/state parks context merit further research in documentary/archival materials. These include the establishment, development, and operation of the West Virginia state park system and the historical development of Grandview and Babcock state parks.

The influence of National Park Service design on West Virginia state park development of the same period should be examined. The significance of all post-World War II resources at Grandview and other West Virginia state parks should be reevaluated as they approach an age of fifty years. At the present time, it appears that they should be evaluated in the context of pre-World War II designs implemented in the post-World War II era for their possible relationship to Mission 66 work completed in national parks during the same period.

EPILOGUE

This study has developed five historic contexts that cover most of the historic properties in New River Gorge National River. The five contexts include: (1) coal industry; (2) railroad industry; (3) lumber industry; (4) Euro-American settlement/agriculture; and (5) recreation/state parks. Each of the historic contexts includes delineation of an evaluation process whereby the criteria for identifying the significance and integrity of historic properties are developed for use in preparation of Determination of Eligibility and National Register of Historic Places nominations.

Beyond the level of defining property types and establishing criteria to determine significance and integrity of historic properties within each of the historic contexts, the position of a property within local and regional socio-economic networks should be considered in evaluating its significance. The coal, railroad, and lumber industries in New River Gorge, for instance, were interconnected in many ways. The coming of the C & O Railroad to the New River Gorge opened its pristine beauty, mineral wealth, and vast timber resources to broad human access, development, and exploitation. Many of the initial logging operations were geared toward the needs of the coal industry, and the railroad became a major consumer of coal to power its steam locomotives as it transported ever-increasing quantities of coal and lumber products to markets in major cities on the eastern seaboard. Some mining facilities produced coal for transportation and sale to coking operations that used wood, in part, to ignite their ovens, the resulting coke being transported to eastern markets by railroads. Thus, a number of historic properties in the national river are associated with more than one historic context, thus enhancing their significance in terms of eligibility for listing in the National Register.

ANNOTATED BIBLIOGRAPHY

LIST OF REPOSITORIES CONSULTED OR WHERE RESEARCH WAS CONDUCTED

- Beckley, West Virginia. Raleigh County Library.
- Bluefield, West Virginia. Eastern Regional Coal Archives.
- Boulder, Colorado. University of Colorado, Norlin Library.
- Charleston, West Virginia. Paul D. Marshall and Associates, Inc.
- Charleston, West Virginia. State of West Virginia, Commerce, Labor, and Environmental Resources Department.
Tourism and Parks Division.
Parks and Recreation.
- Charleston, West Virginia. State of West Virginia, Education and the Arts Department.
Culture and History Division.
State Archives and History Library.
State Historic Preservation Office.
Library Commission.
State Reference Library.
- Charlottesville, Virginia. Land and Community Associates.
- Clifton Forge, Virginia. Chesapeake and Ohio Historical Society.
- Fayetteville, West Virginia. Fayette County Library.
- Glen Jean, West Virginia. New River Gorge National River.
Historical files.
Library.
Map Files.
Photograph Files.
- Hinton, West Virginia. Summers County Library.
- Lakewood, Colorado. National Park Service, Denver Service Center.
Library.
Eastern Team Files.
Technical Information Center.
- Morgantown, West Virginia. West Virginia University.
Colson Hall, West Virginia Collection.
Institute for the History of Technology and Industrial Archaeology.
Wise Library.
- Philadelphia, Pennsylvania. National Park Service. (Former) Mid-Atlantic Regional Office.
Cultural Resources Management.
- Suitland, Maryland. National Archives and Records Administration. Washington National Records Center.
- Washington, D.C.
Department of the Interior, Natural Resources Library.
Library of Congress.
National Archives and Records Administration.

COAL INDUSTRY

Collections

Glen Jean, West Virginia. New River Gorge National River. Historical Files.

Morgantown, West Virginia. West Virginia University, Colson Hall. West Virginia Collection.

The West Virginia Collection, perhaps the most comprehensive collection of primary and secondary materials relating to West Virginia history, contains numerous entries on coal mining in the state, as well as the New River coal field. The historical files at New River Gorge contain copies of a variety of newspaper and periodical articles and other works relating to coal towns, mining sites, and coal-related issues in the gorge.

Books

Ambler, Charles, and Summers, Festus P. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1958.

Athey, Lou. *Kaymoor: A New River Community*. N.P., Eastern National Parks and Monuments Association, 1986.

Bragg, Melody. *Window to the Past*. Glen Jean, West Virginia, Gem Publications, 1990.

Comstock, Jim. ed. *The West Virginia Heritage Encyclopedia, Shirley Donnelly Sampler, Volume Sixteen, Supplemental Series*. Richwood, West Virginia, Jim Comstock, 1974.

Conley, Phil. *History of the West Virginia Coal Industry*. Charleston, West Virginia, Education Foundation, Inc., 1960.

Corbin, David Alan. *Life, Work, and Rebellion in the Coal Fields: The Southern West Virginia Miners, 1880-1922*. Urbana, Chicago, and London, University of Illinois Press, 1981.

Craigo, Robert. ed. *The New River Company: "Seventy Years of West Virginia Coal History."* [Mt. Hope, West Virginia, New River Company, 1976.]

Dictionary of American History. Rev. ed. New York, Charles Scribner's Sons, 1976.

Dix, Keith. *Work Relations in the Coal Industry: The Hand-Loading Era, 1880-1930*. Morgantown, Institute for Labor Studies, West Virginia University, 1977.

Eller, Ronald D. *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*. Knoxville, University of Tennessee Press, 1982.

Fayette Journal, Special Edition, Historical, Industrial, November 2, 1911.

Goodrich, Carter. *The Miner's Freedom*. New York, Arno Press, 1977.

- Hunt, Edward Eyre, Tryon, F.G., and Willits, Joseph H. *What the Coal Commission Found*. Baltimore, Williams and Wilkins Company, 1925.
- Lane, Ron, and Schnepf, Ted. *Sewall: A New River Community*. N.P., Eastern National Parks and Monuments Association, 1985.
- Miller, Donald L., and Sharpless, Richard E. *The Kingdom of Coal: Work, Enterprise, and Ethnic Communities in the Mine Fields*. Philadelphia, University of Pennsylvania Press, 1985.
- Nuttall, John. *Trees Above With Coal Below*. San Diego, Neyenesch Printers, 1961.
- Peters, J.T., and Carden, H.B. *History of Fayette County, West Virginia*. Charleston, West Virginia, Jarrett Printing Company, 1926.
- Robinson, Neil. *The Kanawha and New River Coal Fields of West Virginia, U.S.A.* Charleston, West Virginia, 1904.
- Smith, Charles. *Fire Creek: A New River Coal Mining Community, 1877 to 1976*. Glen Jean, West Virginia, Gem Publications, 1991.
- Sullivan, Charles Kenneth. *Coal Men and Coal Towns: Development of the Smokeless Coalfields of Southern West Virginia, 1873-1923*. New York and London, Garland Publishing, Inc., 1989.
- _____. *Thurmond: A New River Community*. Glen Jean, Eastern National Parks and Monuments Association, 1989.
- Tams, W.P., Jr. *The Smokeless Coal Fields of West Virginia: A Brief History*. Morgantown, West Virginia, West Virginia University Library, 1963.
- Turner, William H., and Cabbell, Edward J. eds. *Blacks in Appalachia*. Lexington, University Press of Kentucky, 1985.
- Williams, John Alexander. *West Virginia: A History*. New York, London, and Nashville, W.W. Norton and Company and American Association for State and Local History, 1976.
- _____. *West Virginia and the Captains of Industry*. Morgantown, West Virginia University Library, 1976.

The works by Dix, Eller, Goodrich, Hunt, Tryon, and Willits, Miller and Sharpless, and Turner and Cabbell were helpful in providing a historical overview of the coal industry and its place in the economic development of the United States. The books by Conley, Tams, and Williams were useful in understanding the historical development of the coal industry in West Virginia, while the works by Sullivan and Corbin provided regional perspectives on the coal industry in southern West Virginia. Books providing useful data on coal mining in the New River coal field and New River Gorge included those by

Athey, Bragg, Craigo, the *Fayette Journal*, Lane and Schnepf, Nuttall, Peters and Carden, and Robinson.

Periodicals

Athey, Louis L., with assistance of Geoffry B. Skaggs. "A Kind of Pittsburgh': Beehive Coke Making in the New River Gorge." *Proceedings, New River Symposium*, 1982, pp. 161-67.

Bragg, Melody E. "Glen Jean: Echo of an Empire." *Goldenseal*, XIV (Winter 1988), pp. 9-16.

Cox, William E. "McKendree No. 2: The Story of West Virginia's Miners Hospitals." *Goldenseal*, VII (Fall 1981), pp. 36-40.

Eller, Ronald D. "The Coal Barons of the Appalachian South, 1880-1930." *Appalachian Journal*, IV (Spring-Summer 1977), pp. 195-207.

Hamill, R.H. "Design of Buildings in Mining Towns." *Coal Age*, XI (June 16, 1917), pp. 1045-48.

Hammond, M.B. "The Coal Commission Reports and the Coal Situation." *The Quarterly Journal of Economics*, XXXVIII (August 1924), pp. 550-66.

Hill, R.T. "Line Villages in Southern West Virginia: Examples in the New River Gorge." *Proceedings, New River Symposium*, 1985, pp. 121-29.

Huebner, A.F. "Houses for Mine Villages." *Coal Age*, XII (October 27, 1917), pp. 717-20.

Lane, Ron, and Schnepf, Ted. "The Saga of Sewall: Case Study of A Ghost Town in the New River Gorge." *Proceedings, New River Symposium*, 1983, pp. 89-106.

McLean, Lois C. "Labor History in the New River Coalfield." *Proceedings, New River Symposium*, 1982, pp. 176-84.

"Mabel Gwinn, New River Nurse: Interview by Paul J. Nyden." *Goldenseal*, VII (Fall 1981), pp. 30-35.

Meissner, C.R., Jr., Englund, K.J., and Mory, P.C. "Coal Resources of the New River Gorge, West Virginia." *Proceedings, New River Symposium*, 1982, pp. 146-55.

Munn, Robert F. "The Development of Model Towns in the Bituminous Coal Fields." *West Virginia History*, XL (1978-79), pp. 242-53.

Shuff, Murray. "Life on the New River . . . Fifty Years Ago." *Proceedings, New River Symposium*, 1984, pp. 15-32.

Simmons, Charles W., Rankin, John R., and Carter, U.G. "Negro Coal Miners in West Virginia." *Midwest Journal*, VI (Spring 1954), pp. 60-69.

The works by Eller, Hammond, and Simmons, Rankin, and Carter were useful in understanding the historical development of the coal industry in West Virginia and the South, while those by Hill, Hamill, Huebner, and Munn provided data on coal towns and their architecture. The works by Athey, Bragg, Cox, Lane and Schnepf, McLean, Meissner, and Shuff provided site-specific information on coal towns and mining operations in New River Gorge.

Technical Studies

American Institute of Mining and Metallurgical Engineers. *The Low-Volatile Coal Field of Southern West Virginia*, by Howard N. Eavenson. New York, 1931.

Hennen, Ray V., and Teets, D.D., Jr. *West Virginia Geological Survey, Fayette County*. Wheeling, West Virginia, Wheeling News Litho. Co., 1919.

Historic American Engineering Record. *Kay Moor Coal Mine-1900, Fayetteville Vicinity, West Virginia*, HAER No. WV-38. 1986.

_____. *Nuttallburg Mine Complex, 1873*. HAER No. WV-51, by Lee R. Maddex. Draft, 1992.

Institute for History of Technology and Industrial Archaeology, West Virginia University. "Historical Context for the Coal Heritage Survey," by Michael E. Workman, *et al.* Draft, June 19, 1991.

Keystone Consolidated Publishing Co. *The Coal Catalog Combined With Coal Field Directory for the Year 1920*. Pittsburgh, 1920.

Krebs, Charles E., and Teets, D.D., Jr. *West Virginia Geological Survey, Raleigh County and the Western Portions of Mercer and Summers Counties*. Wheeling, West Virginia, Wheeling News Litho. Co., 1916.

Paul D. Marshall and Associates, Inc. *A Cultural Research Project: The New River Gorge National River, West Virginia*. 3 vols. Charleston, West Virginia, 1981.

U.S. Department of the Interior. Bureau of Mines. *Coal Reserve Study, New River Gorge, West Virginia*, by Peter C. Mory, Alice V. Brocoum, and Armond H. Beers, 1977.

_____. _____. *Houses for Mining Towns, Bulletin 87*, by Joseph H. White. Washington, Government Printing Office, 1914.

_____. National Park Service. *Historic Resource Study, Kay Moor, New River Gorge National River, West Virginia*, by Sharon A. Brown. July 1990.

_____. _____. *Historic Structure Report, Bank of Glen Jean, New River Gorge National River, West Virginia*, by Norma Camarena and Sharon A. Brown. October 1990.

_____. _____. Mid-Atlantic Regional Office. *Coal Fields, Communities and Change, Status of Planning: Study of Coal Mining Heritage and Related Resources in Southern West Virginia*. 1991.

_____. _____. National Register of Historic Places Inventory — Nomination Form, "Bank of Glen Jean," prepared by James C. Blankenship III and Michael J. Pauley. December 15, 1982.

_____. _____. National Register of Historic Places Inventory — Nomination Form, "Prince Brothers General Store," prepared by William E. Cox and Rodney S. Collins. January 29, 1986.

_____. _____. National Register of Historic Places — Registration Form, "Kay Moor; Kay Moor No. 1 Coal Mine," prepared by Sharon A. Brown. November 8, 1990.

West Virginia Geological and Economic Survey. *Coal and Mining in West Virginia, Coal-Geology Bulletin No. 2*, by James A. Barlow. Morgantown, West Virginia, February 1974.

West Virginia State Historic Preservation Office. *Coal Heritage Survey, Southern West Virginia Reconnaissance Study of Sites Related to the History of Coal Mining, Phase I, Final Report, Boone, Mingo, Wyoming, McDowell, and Logan Counties*, by Cindy Dobson, Stacy Stone, and Kim Valente. November 8, 1991.

_____. *Coal Industry and Labor, History (Coal) Context (Draft)*, by Michael J. Pauley. January 6, 1989.

The principal studies used in preparation of the coal industry context were those by the Institute for History of Technology and Industrial Archaeology, Paul D. Marshall and Associates, and the West Virginia State Historic Preservation Office.

Theses and Dissertations

Anson, Charles Phillips. "A History of the Labor Movement in West Virginia." Unpublished Ph.D. dissertation, University of North Carolina, 1940.

Gillenwater, Mack Henry. "Cultural and Historical Geography of Mining Settlements in the Pocahontas Coal Field of Southern West Virginia, 1880-1930." Unpublished Ph.D. dissertation, University of Tennessee, 1972.

Merrill, William McKinley. "Economics of the Southern Smokeless Coals." Unpublished Ph.D. dissertation, University of Illinois, 1950.

Posey, Thomas Edward. "The Labor Movement in West Virginia, 1900-1948." Unpublished Ph.D. dissertation, University of Wisconsin, 1948.

Simon, Richard Mark. "The Development of Underdevelopment: The Coal Industry and its Effect on the West Virginia Economy, 1880-1930." Unpublished Ph.D. dissertation, University of Pittsburgh, 1978.

Thomas, Jerry Bruce. "Coal Country: The Rise of the Southern Smokeless Coal Industry and its Effect on Area Development, 1872-1910." Unpublished Ph.D. dissertation, University of North Carolina, 1971.

The works by Merrill, Simon, and Thomas were useful in understanding the historical development of the coal industry and its economic impact on southern West Virginia, while that by Gillenwater provided invaluable insights into the demographic characteristics of southern West Virginia coal towns. The works by Anson and Posey provide useful data on the history of the labor movement in West Virginia.

Congressional Documents

U.S. Congress. Senate. Committee on Immigration. *Reports of the Immigration Commission, Immigrants in Industries, Part 1: Bituminous Coal Mining*. 61st Cong., 2d Sess., S. Doc. 633, 1911.

_____. _____ . Committee on Mines and Mining. *Report of the United States Coal Commission*. 68th Cong., 2d Sess., S. Doc. 195, Part 1, 1925.

_____. _____ . *Report of the United States Coal Commission*. 68th Cong., 2d Sess., S. Doc. 195, Part 3, 1925.

These documents provided some insights into the condition of the coal mining industry during the first two decades of the 20th century and its economic impact on various areas of the United States including southern West Virginia.

RAILROAD INDUSTRY

Collections

Glen Jean, West Virginia. New River Gorge National River. Historical Files.

Morgantown, West Virginia. West Virginia University, Colson Hall. West Virginia Collection.

The West Virginia Collection, perhaps the most comprehensive collection of primary and secondary materials relating to West Virginia history, contains numerous entries on railroad operation in the state, as well as the New River George region. The historical files at New River Gorge contain copies of a variety of newspapers and periodical articles and other works relating to railroading, railway towns and sites, and railroad-related issues in the gorge.

Interviews

Interview of Rev. Steward H. Frazier by Paul J. Nyden, November 12, 1980. New River Gorge National River Oral History, Vols. 20-22, Tape 22, pp. 23-24

This interview provides historical data relating to railroading in New River Gorge with particular attention

to Thurmond and Southside Junction.

Books

Ambler, Charles H. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1940.

Bragg, Melody. *Window to the Past*. Glen Jean, West Virginia, Gem Publications, 1990.

Dictionary of American History. Rev. ed. New York, Charles Scribner's Sons, 1976.

Dixon, Thomas W., Jr. *Chesapeake & Ohio Standard Structures*. Clifton Forge, Virginia, The Chesapeake & Ohio Historical Society, Inc., 1991.

_____. *Chesapeake & Ohio : Superpower to Diesels*. Newton, New Jersey, Cartens Publications, Inc., 1984.

Dorin, Patrick C. *The Chesapeake and Ohio Railway: George Washington's Railroad*. Seattle, Superior Publishing Company, 1981.

Fayette Journal, Special Edition, Historical, Industrial, November 2, 1911.

Gallagher, P. E. *Map and Directory of the New River Coal Field, Fayette and Raleigh Counties, West Virginia*. Norfolk, Virginia, Tidewater Publishing Company, 1906.

Huddleston, Eugene L. *Riding that New River Train: The Story of the Chesapeake & Ohio Railway through the New River Gorge of West Virginia*. Alderson, West Virginia, The Chesapeake & Ohio Historical Society, Inc., 1989.

Lambie, Joseph T. *From Mine to Market: The History of Coal Transportation on the Norfolk and Western Railway*. New York, New York University Press, 1954.

Lane, Ron, and Schnepf, Ted. *Sewell: A New River Community*. N. P., Eastern National Parks and Monuments Association, 1985.

Nelson, James Poyntz. *The Chesapeake and Ohio Railway*. Richmond, Virginia, Lewis Printing Co., Inc., 1927.

Peters, J. T., and Carden, H. B. *History of Fayette County, West Virginia*. Charleston, West Virginia, Jarrett Printing Company, 1926.

Rice, Otis K. *West Virginia: A History*. Lexington, University Press of Kentucky, 1985.

_____. *West Virginia: The State and Its People*. Parsons, West Virginia, McClain Printing Company, 1972.

Robinson, Neil. *The Kanawha and New River Coal Fields of West Virginia*, U. S. A. Charleston, West Virginia, 1904.

Sullivan, Charles Kenneth. *Coal Men and Coal Towns: Development of the Smokeless Coalfields of Southern West Virginia, 1873-1923*. New York and London, Garland Publishing, Inc., 1989.

Tams, W. P., Jr. *The Smokeless Coal Fields of West Virginia: A Brief History*. Morgantown, West Virginia, West Virginia University Library, 1963.

Turner, Charles W. *Chessie's Road*. Richmond, Virginia, Garrett & Massie, Inc., 1956.

_____. *Chessie's Road*. 2nd ed. with additions by Thomas W. Dixon, Jr., and Eugene L. Huddleston. Alderson, West Virginia, The Chesapeake & Ohio Historical Society, Inc., 1986.

The works by Dixon, Huddleston, Nelson, Dorin, and Turner were useful in gaining an understanding of the historical development and operation of the C & O Railroad in its national, state, and local contexts. Sections in the books by Ambler and Rice provide a historical framework for the growth and development of the railroad industry in West Virginia, while those by Bragg, Peters and Carden, Sullivan, and Tams contain insights relative to the construction and operation of railways in southern West Virginia and the New River Gorge Region. The volume by Lambie provides a thorough history of the Norfolk and Western Railroad as well as an analytic overview of the relationship between the railroad and coal industries. The book by Huddleston contains valuable information on the construction and operation of the Chesapeake and Ohio through the New River Gorge region.

Periodicals

Bias, Charles. "Building the Chesapeake and Ohio Railroad through the New River Region." *Proceedings, New River Symposium*, 1982.

_____. "The Completion of the Chesapeake and Ohio Railroad to the Ohio River, 1869-1873." *West Virginia History*, XL (Summer 1979), pp. 393-403.

Brown, Leona G. "Quinnimont: Going Back to a New River Town." *Goldenseal*, XVI (Fall 1990), pp. 23-29.

Earnest, Dale S. "Thurmond, WV - My Boyhood Home Town." *Proceedings, New River Symposium*, 1986, pp. 77-85.

Henderson, Catherine L. "Thurmond." *Wonderful West Virginia*, LII (December 1988), pp. 26-31.

Marshall, Paul D. "Hinton Historical District." *Proceedings, New River Symposium*, 1984, pp. 85-90.

Richmond, Larry S. "Thurmond Revisited." *Wonderful West Virginia*, LIV (June 1990), pp. 20-23.

Simmons, Charles W., Rankin, John R. and Carter, U. G. "Negro Coal Miners In West Virginia." *Midwest Journal*, VI (Spring 1954), pp. 60-69.

"What Makes C & O Grow?" *Tracks*, XLI (April 1956), p. 6.

Witschey, Walter Robert Thurmond. "Smokin' Guns and Smokeless Coal, Thurmond, West Virginia, New River Boom Town." *Proceedings, New River Symposium*, 1983, pp. 9-13.

The articles by Bias provide useful data concerning construction of the Chesapeake and Ohio Railroad, while those by Brown, Earnest, Henderson, Marshall, Richmond, and Witschey discussed the impact of the C & O on various communities in the New River Gorge region.

Technical Studies

Hennen, Ray V., and Teets, D. D., Jr. *West Virginia Geological Survey, Fayette County*. Wheeling, West Virginia, Wheeling News Litho. Co., 1919.

Historic American Engineering Record. *Chesapeake and Ohio Railroad: Thurmond Yards*, HAER No. WV-42, by Billy Joe Peyton. 1988.

Institute for the History of Technology and Industrial Archaeology, West Virginia University. *New River Gorge National River, Thurmond Passenger Depot and Offices, Historic Structure Report*, by Billy Joe Peyton, et al. August 1991.

Paul D. Marshall & Associates, Inc. *A Cultural Research Project: The New River Gorge National River, West Virginia*. 3 vols. Charleston, West Virginia, 1981.

_____. *Hinton Historic & Architectural Survey*. Charleston, West Virginia, September 30, 1983.

Reger, David B., and Price, Paul H. *West Virginia Geological Survey: Mercer, Monroe, and Summers Counties*. Wheeling, West Virginia, Wheeling News Litho. Co., 1926.

U.S. Department of the Interior. National Park Service. *Development Concept Plan / Interpretive Prospectus, Thurmond, New River Gorge National River, West Virginia*. September 1992.

_____. _____. *Historic Structure Report, Thurmond Commercial Buildings, New River Gorge National River, West Virginia*, by Sally Small, Louis Torres, and Larry Reynolds, August 1992.

_____. _____. National Register of Historic Places Inventory — Nomination Form, "Hinton Historic District," prepared by Paul D. Marshall. September 30, 1983.

_____. National Register of Historic Places — Nomination Form, "Prince Brothers General Store," prepared by William E. Cox and Rodney S. Collins. January 29, 1986.

_____. National Register of Historic Places — Nomination Form, "Thurmond Historic District," prepared by R. Eugene Harper. September 15, 1983.

The studies by the Historic American Engineering Record, Institute for the History of Technology and Industrial Archaeology, and Paul D. Marshall & Associates provide a historical overview of the railroad industry and its impact on the New River Gorge region. The National Register nomination forms provide site specific data on the railroad towns of Thurmond and Hinton.

Dissertations

Thomas, Jerry Bruce. "Coal Country: The Rise of the Southern Smokeless Coal Industry and its Effect on Area Development, 1872- 1910." Unpublished Ph.D. dissertation, University of North Carolina, 1971.

This work provides useful historical perspective on the development of railroads in southern West Virginia and their relationship to the coal industry.

LUMBER INDUSTRY

Collections

Glen Jean, West Virginia. New River Gorge National River. Historical files.

The historical files at New River Gorge contain copies of a variety of newspaper and periodical articles and

other works relating to timber cutting, lumber camps and towns, and lumber-related issues in the gorge.

Books

Ambler, Charles H. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1940.

_____, and Summers, Festus P. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1958.

Braun, E. Lucy. *Deciduous Forests of Eastern North America*. Philadelphia, Toronto, The Blakiston Company, 1950.

Clarkson, Roy B. *Tumult in the Mountains: Lumbering in West Virginia, 1770-1920*. Parsons, West Virginia, McClain Printing Company, 1964.

Cox, William E. *Life on the New River: A Pictorial History of the New River Gorge*. N. P., Eastern National Parks and Monuments Association, 1984.

Defebaugh, James Elliott. *History of the Lumber Industry of America*. 2 vols. Chicago, The American Lumberman, 1906.

Dictionary of American History. Rev. ed. New York, Charles Scribner's Sons, 1976.

Eller, Ronald D. *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*. Knoxville, University of Tennessee Press, 1982.

Encyclopedia of American Forest and Conservation History. 2 vols. New York and London, Macmillan Publishing Company and Collier Macmillan Publishers, 1983.

Fayette Journal, Special Edition, Historical, Industrial, November 2, 1911.

Garvin, J. B. comp. *West Virginia Agricultural Resources and Possibilities*. Charleston, West Virginia, The Tribune Printing Co., 1907.

Huddleston, Eugene L. *Riding That New River Train: The Story of the Chesapeake & Ohio Railway Through the New River Gorge of West Virginia*. Alderson, West Virginia, The Chesapeake & Ohio Historical Society, Inc., 1989.

Lane, Ron, and Schnepf, Ted. *Sewall: A New River Community*. N. P., Eastern National Parks and Monuments Association, 1985.

Lewis, Virgil A. comp. *West Virginia: Its History, Natural Resources, Industrial Enterprises and Institutions*. Charleston, West Virginia Commission of the Louisiana Purchase Exposition, 1904.

Maury, M. F., and Fontaine, William M. *Resources of West Virginia*. Wheeling, West Virginia, The Register Company, Printers, 1876.

Miller, James H. *History of Summers County: From the Earliest Settlement to the Present Time*. Parsons, West Virginia, McClain Printing Company, 1908.

Peters, J. T., and Carden, H.B. *History of Fayette County, West Virginia*. Charleston, West Virginia, Jarrett Printing Company, 1926.

Rice, Otis K. *West Virginia: A History*. Lexington, University Press of Kentucky, 1985.

_____. *West Virginia: The State and Its People*. Parsons, West Virginia, McClain Printing Company, 1972.

The most definitive work on the West Virginia lumber industry is that by Clarkson, a recognized authority in his field. Other works that provided useful data concerning the growth and development of the West Virginia lumber industry were those by Ambler, Ambler and Summers, Eller, Garvin, Lewis, Maury and Fontaine, and Rice. Books that offered

helpful documentary information on lumbering operations in the gorge and adjacent area include those by Cox, Lane, Miller, and Peters and Carden.

Periodicals

Long, Roy, and Huddleston, Eugene L. "New River Crossings at Glade, West Virginia." *Chesapeake and Ohio Historical Magazine*, XXIV (May 1992), pp. 3-11.

This article offered useful insights concerning lumber operations at Glade in New River Gorge.

Technical Studies

Brooks, A. B. *West Virginia Geological Survey: Volume Five, Forestry and Wood Industries*. Morgantown, West Virginia, Acme Publishing Company, 1910.

Paul D. Marshall & Associates, Inc. *A Cultural Research Project: The New River Gorge National River, West Virginia*. 3 vols. Charleston, West Virginia, 1981.

U.S. Department of the Interior. National Park Service. *Development Concept Plan/Environmental Assessment/Interpretive Prospectus, Grandview, New River Gorge National River, West Virginia*. (Draft), January 1993.

West Virginia University. Agricultural Experiment Station, College of Agriculture, Forestry, and Home Economics. *Primary Wood Industries of West Virginia*, Bulletin 461, by W. H. Reid, W. W. Christensen, A. W. Goodspeed, and N. D. Jackson. June 1961.

The study by Brooks, written during the heyday of the West Virginia lumber industry, provides considerable information on the status of the West Virginia lumber industry during the late 19th and early 20th centuries. The study by Marshall & Associates was most helpful in understanding the growth and development of the lumber industry in the gorge.

Dissertations

Anson, Charles Phillips. "A History of the Labor Movement in West Virginia." Unpublished Ph.D. dissertation, University of North Carolina, 1940.

This dissertation provided useful data on the development of the West Virginia lumber industry.

EURO-AMERICAN SETTLEMENT/AGRICULTURE HISTORIC CONTEXT

Collections

Glen Jean, West Virginia. New River Gorge National River. Historical Files.

Morgantown, West Virginia. West Virginia University, Colson Hall. West Virginia Collection.

The West Virginia Collection, perhaps the most comprehensive collection of primary and secondary materials relating to West Virginia history, contains numerous entries on Euro-American settlement and agriculture in the state as well as the New River Gorge region.

Books

Ambler, Charles H. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1940.

_____, and Summers, Festus P. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1958.

Blumenson, John J.-G. *Identifying American Architecture: A Pictorial Guide to Styles and Terms, 1600-1945*. Nashville, American Association for State and Local History, 1981.

Campbell, John C. *The Southern Highlander and His Homeland*. New York, Russell Sage Foundation, 1921.

Cavalier, John. *Panorama of Fayette County*. Parsons, West Virginia, McClain Printing Company, 1985.

Corbin, David Alan. *Life, Work, and Rebellion in the Coal Fields: The Southern West Virginia Miners, 1880-1922*. Urbana, Chicago, and London, University of Illinois Press, 1981.

Cunningham, Rodger. *Apples on the Flood: The Southern Mountain Experience*. Knoxville, University of Tennessee Press, 1987.

Debar, J. H. Diss. *West Virginia Hand-Book and Immigrants Guide*. Parkersburg, West Virginia, Gibbens Bros., 1870.

Dictionary of American History. Rev. ed. New York, Charles Scribner's Sons, 1976.

Donnelly, C. Shirley. *Historical Notes on Fayette County, West Virginia*. [Fayetteville, privately printed, 1958].

Eller, Ronald D. *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*. Knoxville, University of Tennessee Press, 1982.

Garvin, J. B. comp. *West Virginia Agricultural Resources and Possibilities*. Charleston, West Virginia, The Tribune Printing Co., 1907.

- Hedrick, Charles B. *Memoirs of Raleigh County*. Beckley, West Virginia, Wood Printing Company, 1932.
- Holliday, Robert Kelvin. *A Portrait of Fayette County*. Oak Hill, West Virginia, The Fayette Tribune, Inc., 1960.
- Johnson, Patricia Givens. *The New River Early Settlement*. Pulaski, Virginia, Edmonds Printing, Inc., 1983.
- Johnston, David E. *A History of Middle New River Settlements and Contiguous Territory*. Radford, Virginia, Commonwealth Press, Inc., 1906.
- Lewis, Virgil A. comp. *West Virginia: Its History, Natural Resources, Industrial Enterprises and Institutions*. Charleston, West Virginia Commission of the Louisiana Purchase Exposition, 1904.
- Lively, Lester. *History of Summers County*. N.P., [1963].
- Lovingood, Paul E., Jr., and Reiman, Robert E. *Emerging Patterns In the Southern Highlands: A Reference Atlas*. Produced by the Appalachian Consortium, Inc., in cooperation with Appalachian State University, University of South Carolina, and Tennessee Valley Authority, 1982. Vol. I.
- McAlester, Virginia and Lee. *A Field Guide to American Houses*. New York, Alfred A. Knopf, 1991.
- Maurry, M. F., and Fontaine, William M. *Resources of West Virginia*. Wheeling, West Virginia, The Register Company, Printers, 1876.
- Miller, James H. *History of Summers County: From the Earliest Settlement to the Present Time*. Parsons, West Virginia, McClain Printing Company, 1908.
- Noble, Allen G. *Wood, Brick, and Stone: The North American Settlement Landscape*. Amherst, University of Massachusetts Press, 1984.
- North, E. Lee. *The 55 West Virginias: A Guide to the State's Counties*. Morgantown, West Virginia, West Virginia University Press, 1985.
- Peters, J. T., and Carden, H. B. *History of Fayette County, West Virginia*. Charleston, West Virginia, Jarrett Printing Company, 1926.
- Rapaport, Amos. *House Farm and Culture*. Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1969.
- Rice, Otis K. *The Allegheny Frontier: West Virginia Beginnings, 1730-1830*. Lexington, University Press of Kentucky, 1970.
- _____. *West Virginia: A History*. Lexington, University Press of Kentucky, 1985.

- _____. *West Virginia: The State and Its People*. Parsons, West Virginia, McClain Printing Company, 1979.
- Rifkind, Carole. *A Field Guide to American Architecture*. New York, New American Library Books, 1980.
- Roller, David C., and Twyman, Robert W. eds. *The Encyclopedia of Southern History*. Baton Rouge and London, Louisiana State University Press, 1979.
- Shapiro, Henry D. *Appalachia on Our Mind: The Southern Mountains and Mountaineers in the American Consciousness: 1870-1920*. Chapel Hill, University of North Carolina Press, 1978.
- Sullivan, Charles Kenneth. *Coal Men and Coal Towns: Development of the Smokeless Coalfields of Southern West Virginia, 1873-1923*. New York and London, Garland Publishing, Inc., 1989.
- Summit County Historical Society. *The History of Summers County, West Virginia, 1984*. Salem, West Virginia, Don Mills Inc., 1984.
- Thurmond, Walter R., "The Town of Thurmond," in Walter Robert Thurmond Witschey, *The Thurmonds of Virginia*. Richmond, Gatewood Company, 1978.
- Washington, Monroe. *Raleigh's Rich Resources*. Beckley, Beckley Newspapers Corporation, 1955.
- Wells, Camille. *Perspectives In Vernacular Architecture*. Vol. II. Columbia, University of Missouri Press, 1986.
- Whisnant, David. *All That Is Native & Fine: The Politics of Culture in an American Region*. Chapel Hill and London, University of North Carolina Press, 1983.
- Williams, John Alexander. *West Virginia: A History*. New York, London, and Nashville, W. W. Norton & Company and American Association for State and Local History, 1976.
- Writers' Program, Work Projects Administration. comp. *West Virginia: A Guide to the Mountain State*. New York, Oxford University Press, 1941.

The books by Ambler, Ambler and Summers, Debar, Garvin, Lewis, Maury and Fontaine, Rice, Williams, and the Writers' Program, Work Projects Administration provide useful information on the growth and development of Euro-American settlement/agriculture in West Virginia. Those by Eller, Corbin, Lovingood and Reiman, and Sullivan offer valuable data on settlement and agricultural practices and patterns in southern West Virginia and the Appalachian region. The most important works that have useful information for this context in the New River Gorge region are those by Donnelly, Johnson, Johnston, Miller, and Peters and Carden. The books by Cunningham, Campbell, Shapiro, and Whisnant provide helpful contextual data on Appalachian cultural experiences and the "mountaineer" stereotype in the American consciousness. Books that include valuable data on farm-related vernacular architecture, such as that found in southern West Virginia, include those by Blumenson, McAlester, Noble, Rapaport, Rifkind, and Wells.

Periodicals

"A Daughter Remembers, From an Interview by William E. Cox." *Goldenseal*, X (Spring 1984), pp. 17-21.

Athey, Lou. "Social Change in Preindustrial Fayette County, West Virginia, 1860-1870." *Proceedings, New River Symposium*, 1992, pp. 71-81.

Brown, Leona G. "Round Bottom: Home of the New River Gwinns." *Goldenseal*, X (Spring 1984), pp. 16-17.

Donnelly, Shirley. "Early Settlers and Settlements in Fayette County." *West Virginia History*, X (January 1949), pp. 125-35.

Gillenwater, Mack H. "A Geographical Analysis of the Demographic Changes in the New River Basin, 1900- 1980." *Proceedings, New River Symposium*, 1983, pp. 203-17.

Hauser, Alan J. "Changing Patterns in Agriculture and Their Impact On the People of Appalachia." *Proceedings, New River Symposium*, 1987, pp. 175-88.

Hill, R. T. "Line Villages in Southern West Virginia: Examples in the New River Gorge." *Proceedings, New River Symposium*, 1985, pp. 121-29.

Hudson, Karen. "Architecture and Personal Expression in Southern West Virginia." *Folklike Center News*, XIV (Spring 1992), pp. 3-7.

McLean, Louis C. "Irish Mountain: The Story of a West Virginia Immigrant Community." *Goldenseal*, XVII (Spring 1991), pp. 47-56.

Nicely, John, "The Trump-Lilly Farm." *Proceedings, New River Symposium*, 1993, pp. 140-50.

Schultz, LeRoy G. "Log Barns of West Virginia." *Goldenseal*. IX (Spring 1983) pp. 4-45.

_____. "The Barns of West Virginia." *Goldenseal*, IV (April-September, 1978), pp. 51-56.

_____. "West Virginia Cribs and Granaries." *Goldenseal*, IX (Winter 1983), pp. 47-54.

Solecki, R. S. "An Archaeological Survey of Two River Basins in West Virginia." *West Virginia History*, X (1948), pp. 338-44.

The most useful articles for understanding settlement patterns and agricultural practices in the New River Gorge area are those by Athey, Brown, Donnelly, Gillenwater, Hill, Hudson, McLean, and Nicely, while those by Hauser and Solecki offer insights on these topics from a state and Appalachian regional perspective.

Theses and Dissertations

Bailey, Kenneth Ellis. "Some Changes In West Virginia Farming Between 1929 and 1959." Unpublished M. A. thesis, West Virginia University, 1964.

Thomas, Jerry Bruce. "Coal County: The Rise of the Southern Smokeless Coal Industry and its Effect on Area Development, 1872-1910." Unpublished Ph.D. dissertation, University of North Carolina, 1971.

Witzel, William Thomas. "The Resources and Industries of the New River Drainage Basin in West Virginia." Unpublished M.S. thesis, University of Tennessee, 1957.

The thesis by Witzel provided an overview of settlement and agricultural production in the New River region during the mid-1950s, while that by Bailey offered a descriptive analysis of West Virginia agricultural trends from the beginning of the Great Depression to the late 1950s. The dissertation by Thomas discusses the impact of industrialization on southern West Virginia agricultural patterns and practices.

Technical Studies

Hennen, Ray V., and Teets, D. D., Jr. *West Virginia Geological Survey, Fayette County*. Wheeling, West Virginia, Wheeling News Litho. Co., 1919.

Hudson, Karen E. *Final Report, New River Gorge Folklife Project, Cultural Landscape Windshield Survey*. Submitted to American Folklife Center, Library of Congress, Washington, D.C., March 1992.

Institute for the History of Technology and Industrial Archaeology, West Virginia University. "The Trump-Lilly Farm: Historic Structures & Cultural Landscape Report," Technical Report No. 7. Draft, April 26, 1993.

Krebs, Charles E., and Teets, D. D., Jr. *West Virginia Geological Survey, Raleigh County and the Western Portions of Mercer and Summers Counties*. Wheeling, West Virginia, Wheeling News Litho. Co., 1916.

Louis Berger & Associates, Inc. *Archaeological Testing For Boardwalk and Bridge Improvements at Sandstone Falls, New River Gorge National River, Raleigh County, West Virginia*. June 1989.

_____. *Historical and Archaeological Investigations, Canyon Rim Visitor Center Improvement Project, New River Gorge National River, Fayette County, West Virginia*. September 1990.

Paul D. Marshall & Associates, Inc. *A Cultural Research Project: The New River Gorge National River, West Virginia*. 3 vols. Charleston, West Virginia, 1981.

Reger, David B., and Price, Paul H. *West Virginia Geological Survey: Mercer, Monroe, and Summers Counties*. Wheeling, West Virginia, Wheeling News Litho, Co., 1926.

Rice, Otis R. "History of the New River Gorge Area." Typescript. Montgomery, West Virginia Institute of Technology, [1986]. (Copy in Historical files, NERI).

Scott, Shirley Claymore. "New River Crossings, Then and Now: Ferries and Bridges From the Narrows to Kanawha Falls." ca. 1986. (Copy in Historical files, NERI).

U.S. Department of Commerce. Bureau of the Census. *United States Census of Agriculture: 1925, West Virginia Statistics by Counties*. Washington, Government Printing Office, 1928.

U.S. Department of the Interior. National Park Service. National Register of Historic Places — Registration Form, "Trump-Lilly Farmstead," prepared by Leigh McGowan. January 31, 1990.

West Virginia. Department of Agriculture. *West Virginia Agriculture*. Charleston, West Virginia, 1928.

West Virginia University. Agricultural Experiment Station. College of Agriculture, Forestry, and Economics. *Agricultural Changes In West Virginia, 1940-1950-1959*, Current Report 38. May 1963.

The county surveys by the *West Virginia Geological Survey* are useful for understanding the status of agriculture in the three-county area (Fayette, Raleigh, Summers) in which New River Gorge National River is located during the post-World War I period. The draft study by the Institute for the History of Technology and Industrial Archaeology provides significant information on the Trump-Lilly Farm as well as contextual data on self-sufficient, subsistence farming in the upland areas of the New River Gorge area. The studies by Marshall and Rice were most helpful in understanding settlement and agricultural development in New River Gorge National River and its surrounding region.

RECREATION/STATE PARKS

Manuscripts/Collections

Charleston, West Virginia. West Virginia, Education and the Arts Department, Division of Culture and History, State Historic Preservation Office.

Glen Jean, West Virginia. New River Gorge National River. Historical Files.

Washington, D.C. National Archives and Records Administration. Record Group 35, Records of the Civilian Conservation Corps.

Entry 4, Monthly Progress Reports, 1933-1942.

Entry 115, Division of Investigations, Camp Inspection Reports, 1933-1942.

_____. _____. Record Group 79, Records of the National Park Service.

Entry 41, Project Reports on CCC Projects In State and Local Parks, 1933-1937.

Entry 65, Memoranda and Correspondence Concerning CCC Camps, 1935-1942.

_____. _____. Record Group 95, Records of the U.S. Forest Service.

Entry 144, Records Relating to Civilian Conservation Corps Work, 1933-1942.

Entry 145, Camp Records, 1933-1942.

The files in the State Historic Preservation Office provide data on single family seasonal hunting and fishing camps in New River Gorge. The historical files at New River Gorge National River contain copies of a variety of newspaper and periodical articles and other works relating to recreation, state parks, and Civilian Conservation Corps activities in and near the NPS unit. The manuscript materials in Records Groups 35, 79, and 95 at the National Archives provide considerable data on CCC activities in the New River Gorge region.

Books

Ambler, Charles H. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1940.

_____, and Summers, Festus P. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice - Hall, 1958.

Burrell, Bob and Davidson, Paul. *Wild Water West Virginia: A Peddler's Guide to the White Water Rivers of the Mountain State*. Hillsborough, North Carolina, Menasha Ridge Press, 1975.

Eller, Ronald D. *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*. Knoxville, University of Tennessee Press, 1982.

Fayette County Chamber of Commerce. *History of Fayette County, West Virginia, 1993*. Marceline, Missouri, Heritage Publishing House, 1993.

Foresta, Ronald A. *America's National Parks and Their Keepers*. Washington, Resources for the Future, Inc., 1984.

Huser, Verne. *River Running*. Chicago, Henry Regnery Company, 1975.

Jenkinson, Michael. *Wild Rivers of North America*. New York, E.P. Dutton, 1981.

McKeever, Kermit. *Where People and Nature Meet: A History of the West Virginia State Parks*. Charleston, West Virginia, Pictorial Histories Publishing Company, 1988.

Morris, Richard B. ed. *Encyclopedia of American History: Bicentennial Edition*. New York, Hagerstown, San Francisco, and London, Harper & Row, Publishers, 1976.

Peters, J.T. and Carden, H. B. *History of Fayette County, West Virginia*. Charleston, West Virginia, Jarrett Printing Company, 1926.

- Rathnow, Ron. *New River Gorge*. Birmingham, Alabama, Menasha Ridge Press, 1987.
- Rice, Otis K. *West Virginia: The State and Its People*. Parsons, West Virginia, McClain Printing Company, 1972.
- Tilden, Freeman. *The State Parks: Their Meaning in American Life*. New York, Alfred A. Knopf, 1962.
- Widner, Ralph R. ed. *Forests and Forestry in the American States: A Reference Anthology Compiled by the National Association of State Foresters*. Washington, D.C., 1968.
- Writers' Program. Work Projects Administration. comp. *West Virginia: A Guide to the Mountain State*. New York, Oxford University Press, 1941.

The most definitive work on the historical development of the West Virginia state park system and its individual units is that by McKeever, while the book by Tilden provides historical context for the nationwide state parks movement. Foresta's book offers historical detail and perspective on the National Park Service and the Civilian Conservation Corps and their interrelationship with the national state parks movement. The works by Ambler, Ambler and Summers, Rice, and the Writers' Program, Work Projects Administration provide useful data on the growth and expansion of recreation and the state park system in West Virginia, and that by the Fayette County Chamber of Commerce offers information on several state parks in that county that are in or near the national river's authorized boundaries. The books by Burrell and Davidson,

Huser, Jenkinson, and Rathnow provide information on whitewater use of the New River in the gorge. The work by Peters and Carden gives insights into traditional recreational activities in the New River Gorge region.

Periodicals

- "A Daughter Remembers," From An Interview by William E. Cox. *Goldenseal*, X (Spring 1984), pp. 17, 19-21.
- Bowers, Robert R. "Glade Creek...Hallmark of Babcock." *West Virginia Conservation*, XXIII (June 1959), pp. 9-11.
- Carpenter, Charles. "The New River Canyon." *West Virginia Review*, VII (August 1930), pp. 352-53, 371.
- Corbett, Marjorie. "Protecting the New River Gorge." *National Parks*, LVI (March - April 1982), pp. 10-11.
- Dragan, K. Christopher. "Whitewater Use of the New River." *New River Symposium, Proceedings*, 1982, pp. 20-22.
- Farley, Yvonne Snyder. "A Good Part of Life,' Remembering the Civilian Conservation Corps." *Goldenseal*, VII (January-March 1981), pp. 42-49.

Fearnow, Ted. "Civilian Conservation Corps — Impact on West Virginia's Outdoors." *Wonderful West Virginia*, XLI (October 1977), pp. 4-9

Hersel, George. "Legacy of the CCC." *Wonderful West Virginia*, XLVII (October 1983), pp. 3-11.

Hill, Frank. "Big, Wild Country." *West Virginia Conservation*, September 1965, pp. 8-15.

_____. "Tourists Haunt Ghost Town, Bandits Cave." *West Virginia Conservation*, January 1967, pp. 16-21.

"Honey in the Rock." *West Virginia Conservation*, August 1961, pp. 5-7.

Randolph, Jennings. "The Civilian Conservation Corps: America's Productive Investment." *Wonderful West Virginia*, XLVII (October 1983), pp. 12-13.

Scott, Shirley C. "Thurmond to Fayette Station: A New River Guide for Boaters and Hikers." *New River Symposium, Proceedings*, 1985, pp. 65-73.

"The Civilian Conservation Corps and Babcock State Park: Yvonne Snyder Farley Interviews Jennings Boley." *Goldenseal*, VII (January-March 1981), pp. 50-54.

Articles in *Goldenseal* and *West Virginia Conservation* provide useful data on state parks in and near the national river, while those by Farley, Fearnow, Hersel, and Randolph offer historical perspective on CCC contributions to the West Virginia state park system. The article by Carpenter describes the scenic attractions at Grandview before it was established as a state park, while the articles by Corbett, Dragan, and Scott provide an overview of whitewater rafting and boating opportunities in present-day New River Gorge National River.

Technical Studies

Annual Reports of the Conservation Commission of West Virginia, 1933-1962.

Annual Reports of the Department of Natural Resources, State of West Virginia, 1963-1969.

Brooks, A.B. *West Virginia Geological Survey: Volume Five, Forestry and Wood Industries.* Morgantown, West Virginia, Acme Publishing Company, 1910.

Civilian Conservation Corps. *Pictorial Review, Civilian Conservation Corps, Ohio-West Virginia District, Company 1522, SP-6, Clifftop, West Virginia.* [1940].

Governor's Office of Community and Industrial Development. *West Virginia State Comprehensive Outdoor Recreation Plan, Calendar 1988-1992.* July 1988.

Harr, Milton. *The C.C.C. Camps In West Virginia: A Record of the Civilian Conservation Corps in the Mountain State, 1933-1942, N.P., 1992.*

Land and Community Associates. *Cultural Landscape Report, Grandview, New River Gorge National River, West Virginia*. June 1994.

U.S. Department of the Interior. Bureau of Outdoor Recreation. *Final Environmental Statement, FES 76-42, Proposed New River Gorge National Wild and Scenic River in West Virginia*. 1976.

_____. _____. *New River Gorge Study*. 1975.

_____. National Park Service. *A Study of the Park and Recreation Problem of the United States*. Washington D.C., Government Printing Office, 1941.

_____. _____. *A Trail Development Plan For the New River Gorge National River*, by Peter Jensen, Dennis Regan, and Jeffrey L. Marion. March 16, 1992.

_____. _____. *Appropriate River Recreation Use Study: Ecological Impacts on Recreation Sites at New River Gorge National River, West Virginia, Final Report*, by David N. Cole and Jeffrey L. Marion. September 1987.

_____. _____. *Appropriate River Recreation Use Study: Inventory and Impact Monitoring of River Recreation Sites Within the New River Gorge National River*, by Jeffrey L. Marion. December 1990.

_____. _____. *Development Concept Plan/Environmental Assessment, Interpretive Prospectus, Grandview, New River Gorge National River, West Virginia*. (Draft). January 1993.

_____. _____. *Feasibility Study for Development of a New River Gorge National Parkway, Virginia and West Virginia*. October 1963.

_____. _____. *General Management Plan, New River Gorge National River, West Virginia*. 1982.

_____. _____. *Interpretation Program Plan, New River Gorge National River, West Virginia*. May 1989.

_____. _____. *Management and Development Guidelines For New River Gorge National River, West Virginia*. November 1988.

_____. _____. *Management and Development Guidelines, New River Gorge National River, West Virginia, Reference Material*. December 1988.

_____. _____. *National Park Service Rustic Architecture: 1916-1942*, by William C. Tweed, Laura E. Soulliere, and Henry G. Law. February 1977.

_____. _____. *Resource Inventory and Analysis, New River Gorge National River Gorge National River, West Virginia*. July 1989.

_____. _____. *The Civilian Conservation Corps and the National Park Service, 1933-1942: An Administrative History*, by John L. Paige. 1985.

_____. _____. *Visitor Use Potential in Southern West Virginia*. September 1990.

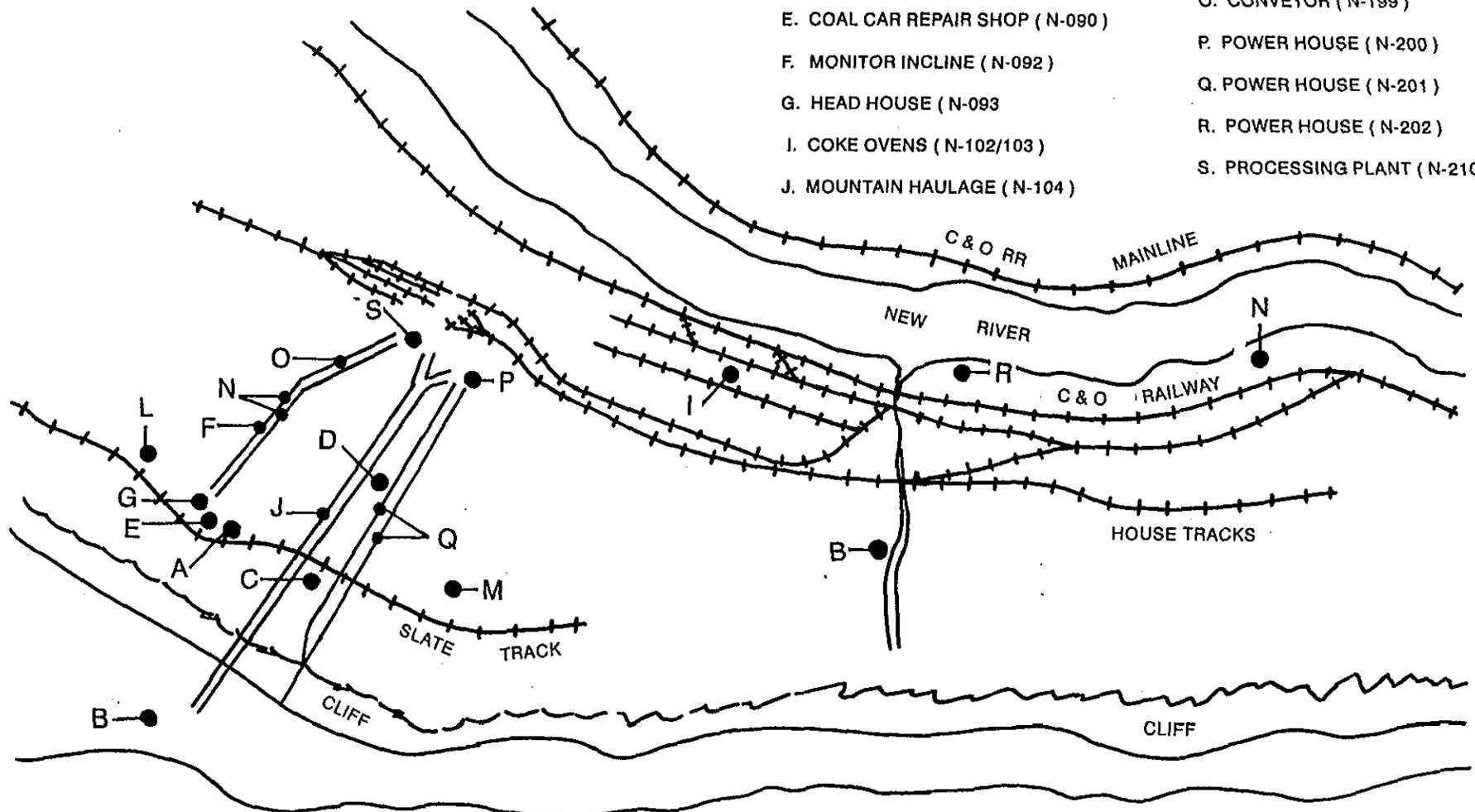
_____. _____. The National Survey of Historic Sites and Buildings. Theme XIX, *Conservation of Natural Resources*. 1963.

_____. _____. Office of the Secretary, Division of Information. *Natural Resources of West Virginia: The Mountain State*. Washington D.C., Government Printing Office, 1964.

West Virginia. Department of Natural Resources. Division of Wildlife Resources. *A Recreational Use Survey of a Section of the New River Below Bluestone Dam in West Virginia*, by Bert E. Pierce, Craig W. Shihler, and James E. Reed, Jr. April 1981.

The best source materials for the year-by-year operation and development of West Virginia's state parks are the *Annual Reports of the Conservation of West Virginia* and the *Annual Reports of the Department of Natural Resources, State of West Virginia*. The study by Brooks provides perspective on West Virginia recreation potential and issues in the early 20th century, and those by Harr and Paige offer historical context on CCC operations in West Virginia and the nation, respectively. The studies by the U.S. Department of the Interior, Bureau of Outdoor Recreation provide perspective on the recreation potential of the New River Gorge region prior to the national river's establishment, while those by the National Park Service enable one to understand the opportunities, issues, and problems associated with recreation management in the present-day national river. The study by Tweed, Soulliere, and Law provides the most definitive and comprehensive historical context for rustic architecture. The study by Land and Community Associates provides a thorough analysis of the establishment, historical development, and operation of Grandview State Park with special attention to its significant landscape components.

- | | |
|--|---|
| A. LAMP HOUSE /
SUPERINTENDENT'S OFFICE (N-084) | L. LOW MOOR IRON CO.
FAN HOUSE (N-195) |
| B. WATER TANKS (N-085) | M. LOW MOOR IRON CO.
ELECTRICAL SUBSTATION (N-196) |
| C. POWDER HOUSE (N-086) | N. MONITORS (N-198) |
| D. CAP HOUSE (N-088) | O. CONVEYOR (N-199) |
| E. COAL CAR REPAIR SHOP (N-090) | P. POWER HOUSE (N-200) |
| F. MONITOR INCLINE (N-092) | Q. POWER HOUSE (N-201) |
| G. HEAD HOUSE (N-093) | R. POWER HOUSE (N-202) |
| I. COKE OVENS (N-102/103) | S. PROCESSING PLANT (N-210) |
| J. MOUNTAIN HAULAGE (N-104) | |



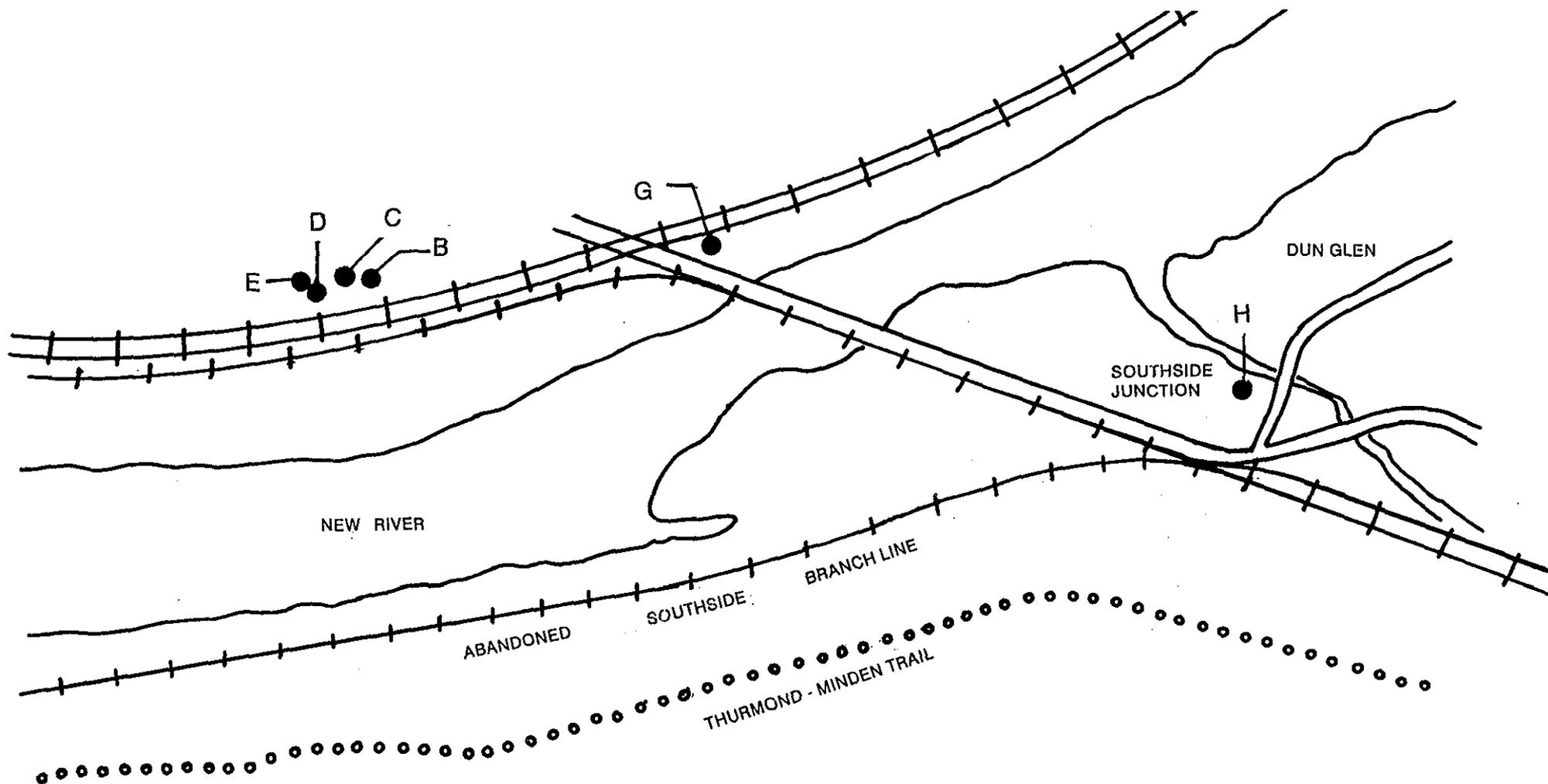
(not to scale)

KAYMOOR MAP NO.2

New River Gorge National River

United States Department of the Interior • National Park Service

637 • 20073 • DSC • AUGUST 1996



- B. MANKIN - COX BUILDING (N-002)
- C. GOODWIN - KINCAID BUILDING (N-003)
- D. NATIONAL BANK OF THURMOND (N-004)
- E. STONE STRUCTURE (N-006)
- G. THURMOND PASSENGER DEPOT AND OFFICES (N-008)
- H. BAPTIST CHURCH (BLACK CHURCH) (N-009)

THURMOND MAP NO.1

New River Gorge National River

United States Department of the Interior • National Park Service

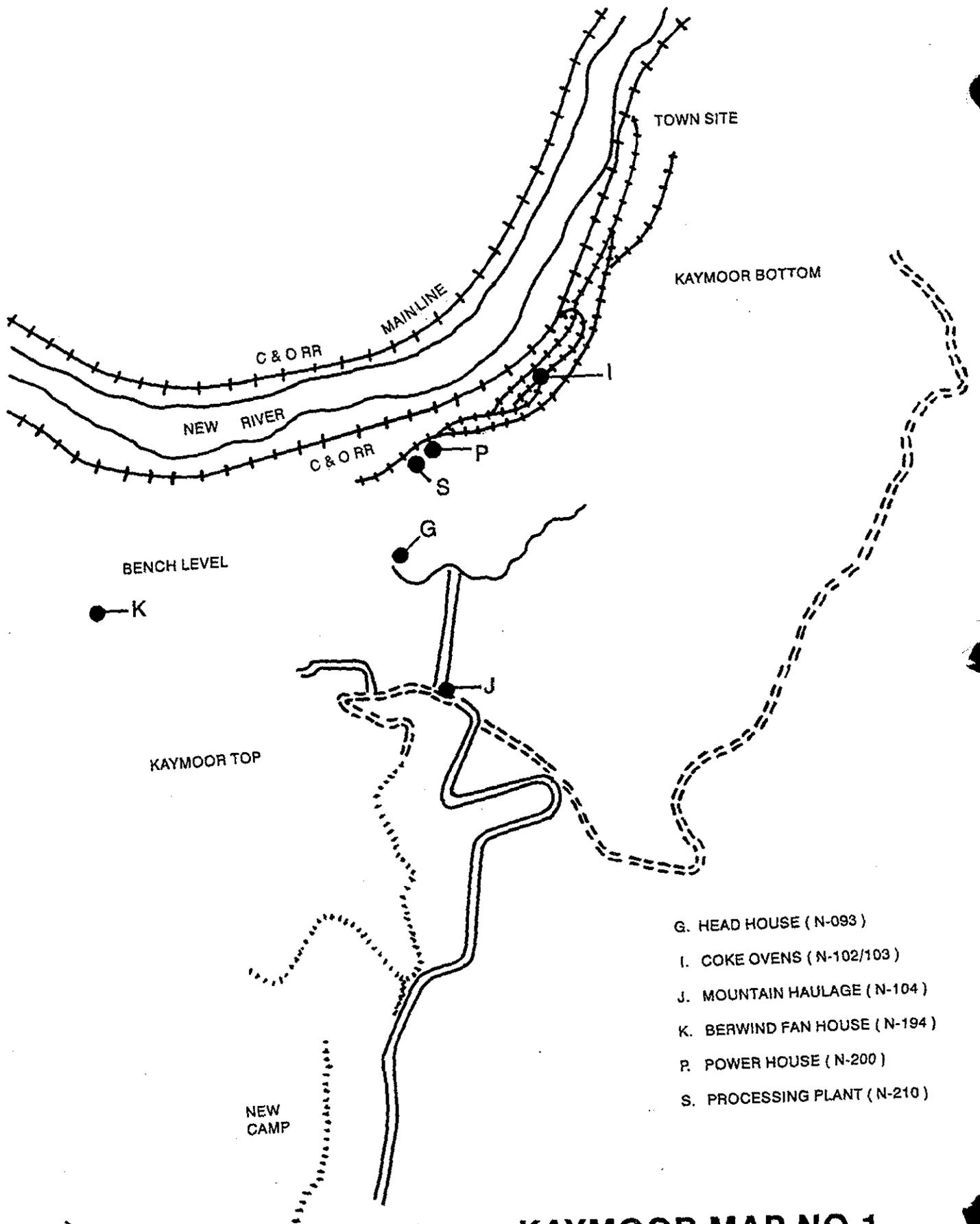
637 • 20074 • DSC • AUGUST 1996



(not to scale)

MAPS

(Small-scale landscape features and individual components of a historic property such as the Thurmond-Minden Trail, although listed in the tabular summaries, are not identified on the maps.)



BENCH LEVEL



KAYMOOR TOP

NEW
CAMP

TOWN SITE

KAYMOOR BOTTOM

G. HEAD HOUSE (N-093)

I. COKE OVENS (N-102/103)

J. MOUNTAIN HAULAGE (N-104)

K. BERWIND FAN HOUSE (N-194)

P. POWER HOUSE (N-200)

S. PROCESSING PLANT (N-210)



(not to scale)

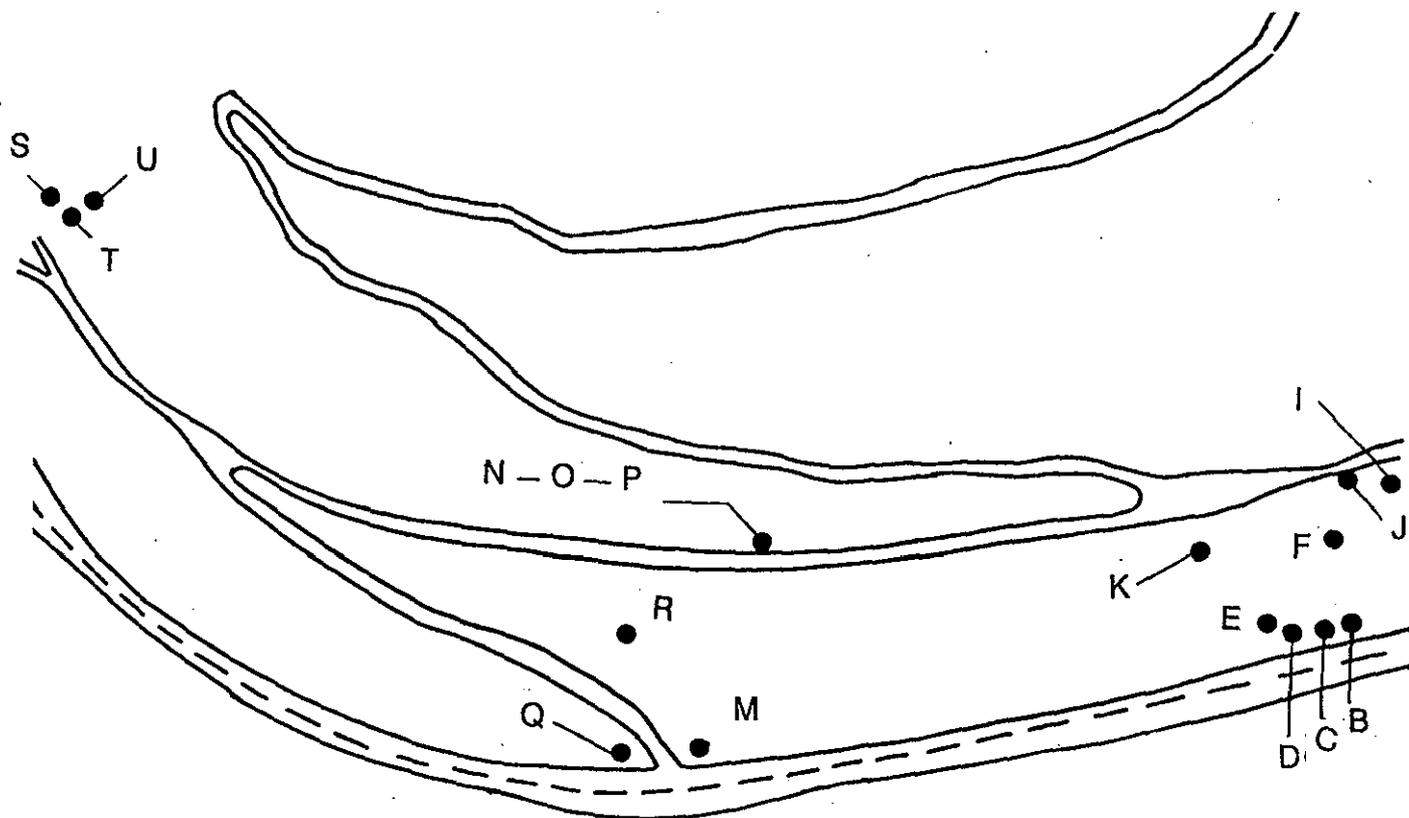
KAYMOOR MAP NO.1

New River Gorge National River

United States Department of the Interior • National Park Service

637 • 20072 • DSC • AUGUST 1996

- B. MANKIN - COX BUILDING (N-002)
- C. GOODWIN - KINCAID BUILDING (N-003)
- D. NATIONAL BANK OF THURMOND (N-004)
- E. STONE STRUCTURE (N-006)
- F. ERSKINE PUGH HOUSE,
RENTAL (N-007)
- I. PHILIP McCLUNG HOUSE (N-168)
- J. PHILIP McCLUNG HOUSE,
RENTAL (N-169)
- K. PHILIP McCLUNG HOUSE- HOME PLACE,
RENTAL (N-170)
- M. SID CHILDERS / MARGIE RICHMOND
HOUSE (N-181)
- N. FATTY LIPSCOMB'S HOUSE (N-182)
- O. FATTY LIPSCOMB'S HOUSE
RETAINING WALL (N-182A)
- P. FATTY LIPSCOMB'S YARD FENCING (N-182B)
- Q. MARILYN BROWN HOUSE (N-183).
- R. SIDNEY WARD HOUSE (N-186)
- S. HOMER NICELY / CHARLES A. ASHLEY
HOUSE (N-191)
- T. ASHLEY GARAGE (N-191)
- U. ASHLEY SHED (N-193)



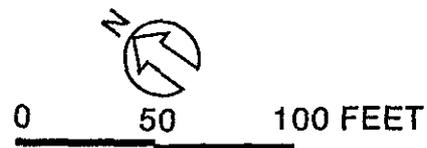
Thurmond Maps Nos.2 and 3 show Thurmond west of the commercial district, up the mountain side west of town, across the hillside east of town, and back down the hill to the commercial district.

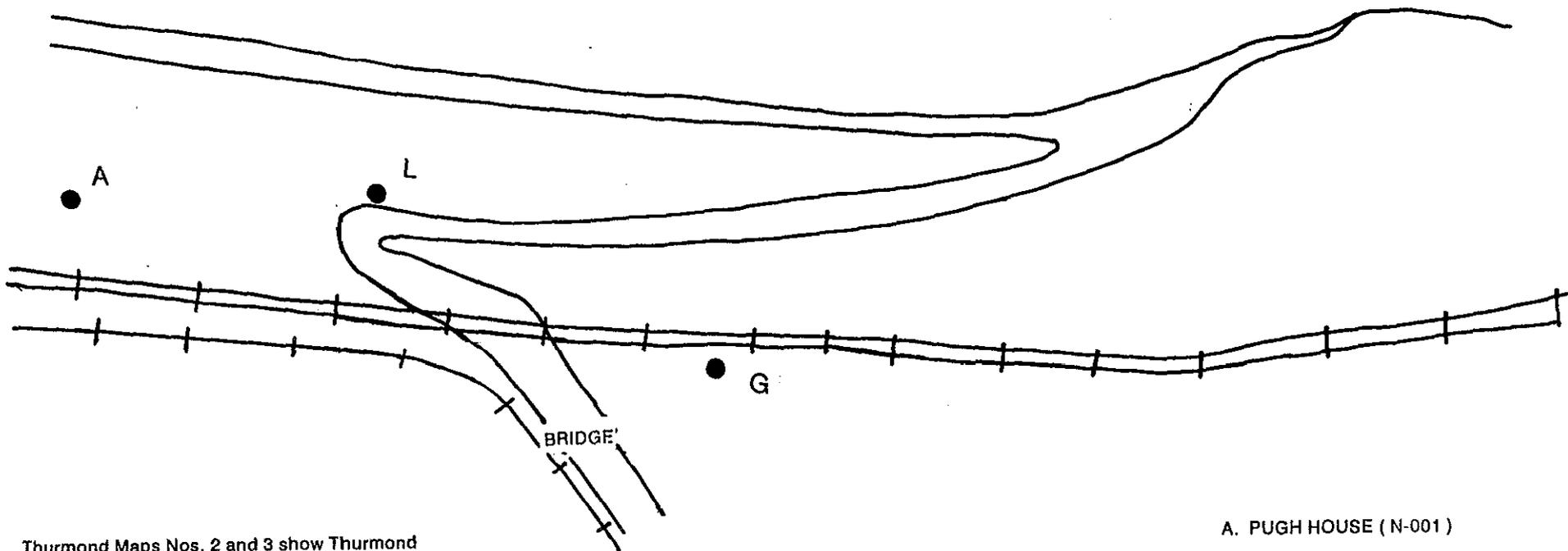
THURMOND MAP NO.2

New River Gorge National River

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Thurmond Maps Nos. 2 and 3 show Thurmond west of the commercial district, up the mountain side west of town, across the hillside east of town, and back down the hill to the commercial district.

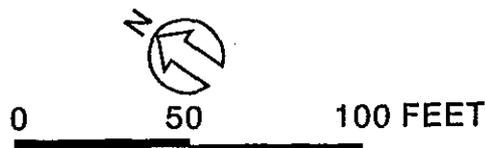
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- G. THURMOND PASSENGER DEPOT AND OFFICES (N-008)
- L. TOM KELLY HOUSE (N-179)

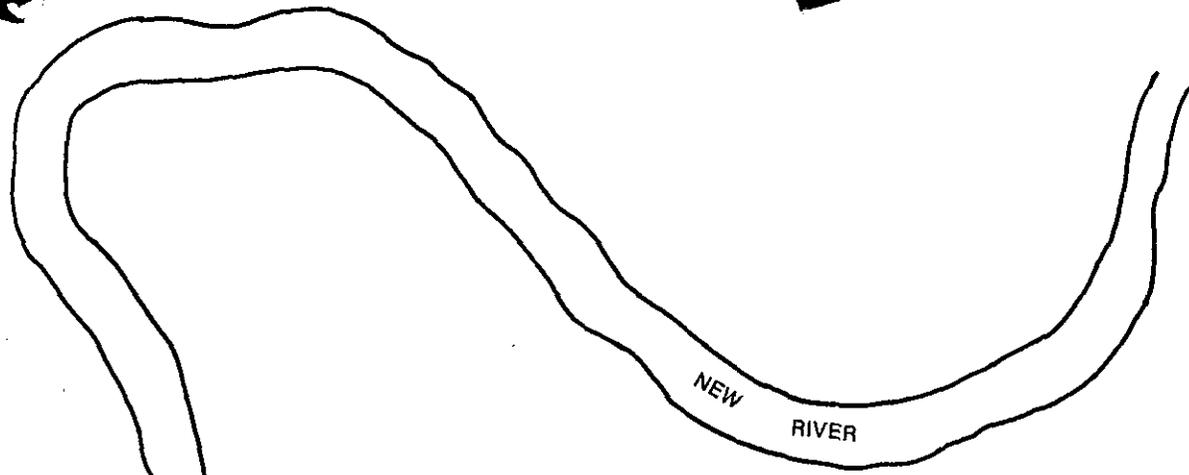
THURMOND MAP NO.3

New River Gorge National River

United States Department of the Interior • National Park Service

637 • 20076 • DSC • AUGUST 1996





TURKEY SPUR

NEW RIVER

MAIN OVERLOOK

NORTH OVERLOOK

G

H

E

B

C

I

D

A

9

TO I-64

PICNIC AREA NO. 3

PICNIC AREA NO. 2

BOUNDARY

FORMER GRANDVIEW STATE PARK

- A. MAIN PARK ROAD TO OVERLOOK PARKING AREA AND PICNIC AREA NO. 1.
- B. PICNIC AREA NO. 1 PARKING AREA
- C. PICNIC AREA NO. 1
- D. MAIN OVERLOOK PARKING AREA
- E. WOODEN BENCHES WITH STONE BASES
- F. STONE PYLONS WITH SUSPENDED ENTRY SIGNS
- G. TUNNEL TRAIL
- H. HISTORIC BASE CLIFF TRAIL
- I. HISTORIC MAIN TRAIL
- J. MAIN PARK ROAD FROM PICNIC AREA NO. TO PICNIC AREA NOS. 2 AND 3



(not to scale)

GRANDVIEW

New River Gorge National River

United States Department of the Interior • National Park Service

637 • 20077 • DSC • AUGUST 1996



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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