3.0 HERITAGE AREA
ENVIRONMENT
3.0 HERITAGE AREA ENVIRONMENT

3.1 HISTORIC AND CULTURAL RESOURCES

History lies deep in the Schuylkill River Valley. Century after century, the history of human life in this region has accreted, one layer after another. As a result, there are few places within the Schuylkill River Valley National Heritage Area that fail to reveal multiple periods of occupancy and use. Virtually every acre is a cultural landscape that reveals the impacts and intentions of previous generations.

Seen from the perspectives of history, ethnography, archaeology, folklife, ecology, and landscape studies, the many landscapes, sites, and structures of the heritage area provide insights into what it has meant to be human in this place. The sheer number and variety of resources is enormous, as evidenced by the many registers of historic buildings, structures, and districts; lists of archaeological sites; directories of museums, libraries, historical organizations, and folklife resources; and bibliographies of local, county, and regional history available for the area. Table 3-1 provides one measure of this diversity: the total number of designated National Register properties and National Historic Landmarks in the five counties within which the heritage area is located.¹

Table 3-1. National Register Properties and National Historic Landmarks by County

<table>
<thead>
<tr>
<th>County</th>
<th>National Register Properties</th>
<th>National Historic Landmarks</th>
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<tr>
<td>Berks</td>
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<td>Chester</td>
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<td>10</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>493</td>
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<tr>
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</tr>
<tr>
<td>TOTAL</td>
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</tr>
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The overview presented in this section characterizes regionally significant historical and cultural sites, landscapes, and communities found in the Schuylkill River Valley National Heritage Area. Key resources are also illustrated on Figure 3-1. It should be noted that no one list of historical and cultural resources can do full justice to the heritage area. Whole resource categories have been passed over; factories, churches, cemeteries, and public buildings are only some of the many kinds of

¹The low number of properties in Schuylkill is due not to the absence of significant historic resources, but rather to relatively few actions that have been taken to formally nominate and designate such properties.
heritage resources that merit attention but cannot be addressed in this inventory. Instead, the resources identified below are intended to be illustrative and suggestive rather than comprehensive and definitive in nature.

It is important to note that the resources chosen for inclusion and reference are among the most telling, the most legible, and the most accessible within the larger universe of possibilities. Each resource inventoried presents opportunities for interpretation, programming, and linkage to the larger regional history. For the sake of convenience these resources are divided into a number of discrete categories, but these categories, like the realities of life and the layering of history, intersect and inform each other.

### 3.1.1 Environmental Context

The first step in revealing the layers of history in the Schuylkill River Valley National Heritage Area is to envision this region as an interrelated system of natural conditions and human activity. Ecology and environmental studies encourage us to conceive and visualize whole systems, including the role of people within those systems. Whereas Section 3.2 describes natural resources within the heritage area, this section addresses more specifically the interactions between humans and those resources, beginning with environmental education centers.

#### A. Environmental Education Centers

Environmental centers provide a variety of educational activities for students, groups, and individuals, typically including passive exhibits, hands-on exhibits, outdoor education, and participation in natural land restoration. Most centers also provide trails and manage and preserve land as well. The agenda of interpretation and learning in these centers focuses on the changing relationship of humankind and the natural world, society, and environment. In a riparian valley this relationship is critical and, therefore, a logical place to begin an inventory of historic and cultural resources. Environmental centers within the heritage area include:

- **The Schuylkill Center for Environmental Education**: This center is located in Northwestern Philadelphia, above the Schuylkill River. The site contains about 500 acres, including natural lands with about six miles of hiking trails and a center with a discovery room and library. The center also supports an extensive library and an organic community garden. Tours, workshops, lectures, and educational programs are offered to adults and children.
• **Riverbend Environmental Education Center:** This center is located on 31 acres of farm land, forest, pond, and stream in Gladwyne above the Schuylkill River. The center also manages additional acreage in Merion and Rosemont. Riverbend maintains a discovery room, classroom, and library.

• **Fairmount Park Environmental Education Center:** Fairmount Park maintains an environmental education center at the Andorra Natural Area along Wissahickon Creek.

• **Nolde Forest Environmental Education Center:** Nolde Forest is located on over 665 acres near Reading and is operated by the Pennsylvania Bureau of State Parks. The site contains native deciduous woods and conifer plantations. The Environmental Education Center provides a variety of activity-oriented programs for students, teachers, and other visitors.

• **Briar Bush Nature Center:** Located in Abington, this center offers educational programs for children and adults. Exhibits emphasize the ecology of the Mid-Atlantic region.

• **Fairmount Waterworks Interpretive Center:** This center is located in the historic Waterworks at the Fairmount Dam in Philadelphia. The site is part of Fairmount Park and is operated by the Philadelphia Water Department. Interpretation and education emphasize the importance of water and the watershed.

**B. Preserved Lands**

A significant amount of land in the heritage area is preserved in a predominantly natural condition. Key categories of resources include **natural land preserves** and **riparian corridors**.

**Natural Land Preserves**

Section 3.3 (Recreational Resources) identifies a number of parks within which natural lands are preserved. In addition, other private and municipal sites are maintained primarily for natural land preservation. Conservation easements on private lands are increasingly being used to protect natural areas. The type of facilities, the level of public access, and permitted activities varies with each area.

Much preserved land is in forested upland areas, because of the scenic values of these areas and the lower suitability of these areas for farming, leading to preservation or reforestation after agricultural abandonment. Major areas of preservation include:

• **Blue Mountain (Kittatinny Ridge):** Located in the Valley and Ridge Province, preserved lands include Weiser State Forest, Hawk Mountain Sanctuary, and state game lands.
• **The “Highlands” (including the Reading Prong):** The Reading Prong is a belt of igneous rock south of Blue Mountain in the Reading area (see Section 3.2.1). Highlands sites are preserved near Reading (Mount Penn Preserve and Neversink Mountain Preserve); around French Creek (French Creek State Park, Hopewell Furnace National Historical Site, state game lands, Crow’s Nest preserve of the Natural Lands Trusts, and Warwick County Park); and in the diabase ring around the Upper Perkiomen valley. The latter area contains private preserves (e.g., the Fulshaw-Craig Preserve of the Natural Lands Trust); municipal preserves (e.g., White’s Mill Park); and conservation easements on private lands (e.g., easements on the Musser Scout Reservation in the Unami Creek Watershed implemented by several conservation groups).

**Riparian Corridors**

Corridors along major rivers and streams are the second main type of preserved area. These areas were originally preserved to protect against industrial development (e.g., stream valley parks in Philadelphia), to preserve historical sites (e.g., Valley Forge National Historical Park), or to provide recreational access to rivers and reservoirs (e.g., Lake Ontelaunee, Blue Marsh Lake, and Green Lane Reservoir). More recently, continuous or linked riparian corridors for trails and other recreational uses and for land preservation have been developed along several streams and rivers. These corridors include:

• **Schuylkill River:** Riparian sites are preserved in the vicinity of Reading (Riverdale and Heritage Parks and Reading Greenway); Pottstown (Riverfront Park); Phoenixville (Upper Schuylkill Valley County Park, Black Rock County Preserve, and Schuylkill Canal Park); Valley Forge National Historical Park; Conshohocken (Riverfront Park); and Philadelphia (Fairmount Park). Smaller parks and preserves are present in other communities along the river.

• **French Creek:** The French and Pickering Creeks Conservation Trust has approximately 3,500 acres under easement in the French Creek watershed. The organization is working on a trail along the French Creek from the eastern end of Warwick County Park to the Kennedy Covered Bridge at the border of East and West Vincent Townships.

• **Perkiomen Creek:** Preserves include the Lower Perkiomen Preserve Park in Oaks and the Audubon Wildlife Sanctuary in Audubon. Recent acquisition of land and easements to complete a trail along the Perkiomen Creek also preserves land along the river.

• **Skippack Creek:** A major section along Skippack Creek is preserved in Evansburg State Park.
• **Wissahickon Creek:** The lower Wissahickon Creek (in Philadelphia) is almost entirely preserved with the Fairmount Park system. Forbidden Drive along Wissahickon Creek is a heavily used recreational trail. Recently installed interpretive signs provide information about the cultural and natural history of the Wissahickon Valley, a good example of the potential for linking recreation and interpretation in the heritage area. Other sections of the watershed are preserved in municipal parks (e.g., Wissahickon Valley Park in Whitemarsh) and private preserves (e.g., Gwynned and Dodge Parks of the Natural Lands Trust). The Four Mills Nature Reserve in Ambler is owned by the Wissahickon Valley Watershed Association and is the center of the association’s educational activities.

• **Other Creeks:** Parks are present on many smaller creeks in the valley, although most of these do not preserve long, continuous stream reaches. Such sites are present along Swamp Creek, Pickering Creek (Pickering Creek Preserve in Phoenixville), Valley Creek (Valley Creek Park in Malvern), and Manatawny Creek (Memorial Park in Pottstown and Ironstone Recreation Area north of Pottstown). A number of other preserves are owned by municipalities and private groups. These provide habitat for various plants and animals and provide recreational activities for local residents.

### 3.1.2 Historic and Cultural Context

Given the large scale of the Schuylkill River Valley National Heritage Area, for the purposes of this inventory historic and cultural resources are organized into “cultural landscapes.” According to an inventory completed in the early 1990s by the National Park Service (NPS) for the Schuylkill Heritage Corridor, cultural landscapes are:

…*the places where people live and work, where there is a visible relationship between the natural resources and the built environment which has been superimposed. They are the creation of hundreds of individuals acting over the centuries—and each individual action has added something to the patina of the landscape. The cultural landscape is all-inclusive: farms, forest, towns, and workplaces. It is what we have created on the land we found.*

The NPS inventory defined a great variety of cultural landscapes that can be found within the heritage area. The following text re-casts some of those types, merging some categories into others, re-naming them, and introducing at least one new category—the landscape of sprawl. In each category outlined below, a number of representative landscapes have been selected to make the larger ideas concrete. Other instances might be cited, but those chosen generally respond to a set of

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2 National Park Service Division of Park and Resource Planning, Mid-Atlantic Region, *Draft Inventory and Assessment of Cultural Landscapes*, July 1993
explicit criteria for sites and resources that are of regional or national significance.

A. Landscapes of Commemoration

Although many landscapes of commemoration routinely fall below our level of consciousness, like all peoples we have chosen myriad ways to recall exemplars and heroes, momentous events and influential movements of earlier generations. Street names and highway designations; building names and dedication plaques; squares, plazas, and public buildings; monuments and statues; cemeteries, historic houses, plantings, parades, and ceremonies all mark our lives and the places where we live.

These landscapes of commemoration invite us to consider the days of old and to reflect on how the past has become the present and how our present will very soon become the future. Because commemoration is so central to our lives, we invest heavily in commemorative landscapes, giving them diverse meanings that reflect our generations and particular points of view. A commemorative landscape like Valley Forge, which has been invested with meaning over several generations, has accrued multiple meanings over time, each responsive to a particular moment and perspective. At least two such landscapes in or near the heritage area have acquired national and international renown: Valley Forge National Historical Park and Independence National Historical Park (the Liberty Bell and Independence Hall). Germantown Avenue has been identified as a third landscape of commemoration.

• Valley Forge National Historical Park/Valley Forge Historical Society: This National Historic Landmark site commemorates Washington’s encampment (December 1777-June 1778) after the Battle of Germantown and the failed attempt to force the British from Philadelphia. The Park’s Visitor Center houses orientation and interpretive exhibits, collections of 18th-century military gear, and an archive. The Historical Society Museum tells the story of the encampment in the context of local and regional history. A new National Center of the American Revolution is planned for this site.

• Independence National Historical Park/Society Hill/Old City: Although these areas of old Philadelphia lie just outside the Schuylkill River watershed, they constitute the core of current heritage marketing efforts in the region focused on the Liberty Bell and Independence Hall. The new Independence Visitor Center on the re-designed Independence Mall provides information and access to many regional sites, including those in Montgomery and Chester Counties. Literally hundreds of 18th and 19th-century buildings survive in so-called “Historic Philadelphia,” as well as hundreds of more recent landmarks such as the PSFS Building.

- **Colonial Germantown Historic District/Germantown Avenue Corridor:** Upper Germantown Avenue in Philadelphia contains numerous 18th and 19th-century buildings, including several National Historical Landmarks. Taken together, these resources bear eloquent testimony to 300 years of American history and preserve memories of William Penn’s vision, the American Revolution, the early Republic, and the Civil War.

Germantown Avenue sits on a ridge above Wissahickon Creek. The heart of Germantown Avenue represents an important instance of an early street village with houses built alongside the road and fields scattered beyond. Among the numerous historic buildings and sites in this landscape are Grumblethorpe, the Deshler-Morris House, Germantown Academy, Germantown Historical Society, Wyck, Mennonite Meeting House, Johnson House, the Concord School, Cliveden, and Upsala. Nearby sites include the Ebenezer Maxwell House, Germantown Cricket Club (a National Historic Landmark [NHL]), Loudon, Awbury Arboretum, Stenton, and Rittenhouse Town.

**B. Landscapes of Cultivation: Agricultural and Rural Communities**

For more than 300 years, agriculture has been a mainstay of the region’s economy. In the 18th century Pennsylvania won renown as “the breadbasket of the colonies.” Cultivated fields, prosperous farmsteads, gristmills, smithies, crossroads, and market towns were the common landscape of this area. Agriculture is still practiced today, of course, and a good number of the old, established farms are still thriving (as indicated in lists of “Century Farms,” a misnomer as some have been actually been in existence for two centuries and more).

Less than 200 years ago, nine out of ten residents of the heritage area earned their living by farming. Today the ratio has more than reversed, and farming as a way of life is a matter of only passing interest to the vast majority of the resident population. The agrarian economy and society is among the “worlds we have lost,” yet this area has numerous survivals of earlier agricultural eras and rural towns. Examples include:

- **Orwigsburg, Schuylkill County:** In 1747 German immigrants arrived to settle the southern valley of Schuylkill County. Orwigsburg grew as
an agricultural village and in 1813 became the county seat, a role that passed to Pottsville in 1851. In the late 19th and early 20th centuries, a blacksmith shop, gun manufacturer, shoe factory, and knitting mill were established here. Today, the town's main street supports shops and offices in old storefronts. Rolling hills with working farmsteads bounded by mountains surround the town. The nearby Little Schuylkill River is a reclamation success story, as it has been designated a Pennsylvania Scenic River along with the main branch of the Schuylkill River and annually draws large numbers of trout fishermen.

• **Oley Valley, Berks County:** The Oley Valley is a geographic enclave surrounded by hills in which is located the unusual Oley Township National Register Historic District. Pennsylvania Germans settled the valley in the 18th century, and today it boasts more than 160 historic farmsteads, many with extensive outbuildings, and several historic gristmills. Oley Village, a classic “street town,” expanded in the 19th century and about 150 19th-century residences, shops, and public buildings are now clustered along Main Street. Although a number of forges and small mills were established here, the agricultural landscape remains largely intact (80% farmland).

The **Daniel Boone Homestead** anchors the Oley Valley at its southern end. Operated by the Pennsylvania Historical and Museum Commission (PHMC), the 579-acre site includes the 1730-1779 Boone House and several outbuildings, the Bertolet Sawmill, rural furniture and decorative arts, agricultural implements, and blacksmithing tools. The Boone Homestead facilities include a visitor center, wildlife sanctuary, camping facilities, and trails. Programs include tours, living history, and environmental education.

**Greater Kutztown Area, Berks County:** This area encompasses the historic communities of Kutztown Borough and Fleetwood and the Townships of Greenwich, Maxatawny, and Richmond. It contains a significant Mennonite population, may have the richest assemblage of Pennsylvania Dutch Hex signs in the world, and is home to the renowned Kutztown Folk Festival and the Pennsylvania German Research and Cultural Heritage Center at Kutztown University, which still teaches the rare Pennsylvania Dutch language. The heritage center consists of a 42-acre farm with several buildings showing the life of the Pennsylvania Germans in the 18th and 19th centuries.

• **Skippack Creek Valley, Montgomery County:** Skippack Creek Valley was settled primarily by German immigrants in the early 18th century, leapfrogging more settled areas. From 1710 to 1730 this area became the gateway for settlement of the Perkiomen region. Rural
industry in the form of fulling and carding mills, dye-houses, and gristmills were established along Skippack Creek, while farmsteads and street villages spread across the Valley. The economy peaked around 1850 and the landscape remained largely unchanged into the mid-20th century. Development of Evansburg State Park has constrained development in recent decades. Resources within the area include the street village of Skippack, the compact Welsh settlement of Evansburg, the Peter Wentz Farmstead, Jacob Reiuff Farmstead, and the Mennonite Museum in Harleysville.

- **Perkiomen Valley, Montgomery County:** Several important sites lie in the Perkiomen Valley, two of which merit special attention.

  **Pennypacker Mills** is a National Historic Landmark site located on 125 acres in rural Schwenksville. This turn-of-the-century gentleman’s country estate was the home of Pennsylvania Governor Samuel W. and Virginia Broomall Pennypacker from 1902 to 1916. Montgomery County maintains the estate as an historic house museum. The original 18th-century farmhouse, Washington’s headquarters during the Battle of Germantown, was transformed into a 20-room mansion filled with decorative arts from the 17th to the 20th centuries.

  Housed in a c. 1900 Red Men's Hall in Green Lane, PA, **Goschenhoppen Folklife Library and Museum** specializes in Pennsylvania German folklife and regional history. Extensive collections of Pennsylvania German art and material culture, agricultural implements, costumes, and archives are interpreted to the public through tours, concerts, lectures, education programs, and the annual Goschenhoppen Folk Festival in August.

- **French Creek Valley, Chester County:** This valley is bounded to the north by Ridge Road, to the south by the south hills, and to the west and east by Elverson and Phoenixville, respectively. Coventry Forge, founded in 1717 during the European contact period, laid the foundation for the valley to become a center of the iron industry during the colonial period and early 19th century. Today, several industrial towns and villages (notably Phoenixville, Coventryville, and St. Peter’s) and crossroad villages and hamlets like Birchrunville, Kimberton, and Nantmeal preserve their historic character and integrity. Warwick County Park, encompassing about 500 acres, has an historical landscape that supports interpretation. Other properties within easy driving distance include Springton Manor Farm (Chester County Park), Hopewell Furnace National Historical Site and Valley Forge National Historical Park.

- **Middle Pickering Creek Valley, Chester County:** This valley was settled in the 18th century by Welsh Baptists and Presbyterians and
German Lutherans. The landscape is rolling with fields, pastures, and wet meadows enclosed by woodlands. Three small villages punctuate the landscape: Yellow Springs (Chester Springs Historic District), Anselma, Merlin, and Charlestown, all of which reflect their 19th-century character. Multi-generational ownership and perpetuation of traditional lifestyles tended to preserve the integrity of rural landscape and village clusters. The Valley is close to Valley Forge National Historical Park.

C. Landscapes of Extraction: Coal Patches and Mining Towns

The landscape of northern Schuylkill County has been shaped and re-shaped by coal mining and processing. Coal patches, mine shafts, culm piles, and breakers punctuate the landscape, together with remnants of canal and railroad. The “landscape of extraction” as it has been termed is highly visible in northern and western Schuylkill County along Broad Mountain Ridge.

The 1993 NPS Inventory characterizes the towns of this region as follows:

All the towns have remarkable similar built landscapes: in each town, the railroad and river are at the deepest cut in the valley; the town extends on regular blocks up the steep hillside; the commercial street is the main axis, perpendicular to the river and railroad at the bottom; smaller houses gather lower on the hills; the larger houses of the manager class are above. Churches of several ethnic groups dot the townscape with distinctly different steeples. The graveyards of the traditional ethnic communities are found where the grid-blocks end, at the highest points in town.³

Patch towns, villages of small, nearly identical houses built along the roadways by mining companies, typically consisted of 30 to 40 houses and a company store adjacent to a colliery. Lacking churches or commercial buildings and with waste piles pushing up against the houses, these towns were isolated and vulnerable.

The advent of strip mining in this century radically altered the anthracite landscape, cutting into mountainsides and creating in their place new mountains of coal refuse. The 1993 Inventory remarks:

It is a landscape in use. All of the natural elements – coal, rivers, and the forests – have been exploited for the production and transport of coal.⁴

Significant resources include:

³ National Park Service Division of Park and Resource Planning, Mid-Atlantic Region, Draft Inventory and Assessment of Cultural Landscapes, July 1993
⁴ ibid
• **Museum of Anthracite Mining/Pioneer Tunnel Coal Mine, Ashland:**

The work of mining and processing anthracite coal is interpreted in a complex at Ashland. Operated by the PHMC, the Museum of Anthracite Mining tells the story of owners, workers, and changing technologies. The Pioneer Tunnel Coal Mine, a horizontal drift mine operated for 20 years (1911-31), can be toured with retired miners as docents. A steam train ride at the site offers visitors an overview of contemporary strip mining.

• **Shenandoah and Shenandoah Heights, Schuylkill County:** In the 1860s the arrival of the railroad precipitated the growth of Shenandoah as a mining town. Between 1880 and 1915 an influx of Slavic immigrants filled the mines, though Irish, Italians, and Germans were also resident in numbers. Workers lived below in Shenandoah, managers on the Ridge above. As mining declined a number of mills and factories were established; these, too, are now defunct. The town’s houses, commercial buildings, abandoned factories, and ethnic churches retain their historical integrity. A strip mine landscape surrounds the town and the Mahanoy Valley below. The largest coal breaker in the world (now abandoned) is located one mile from Shenandoah in Saint Nicholas alongside Route 54. Half a mile beyond lie the remnants of Wiggins Patch, several frame houses and an old school house.

• **Mahanoy Valley Patch Towns, Schuylkill County:** Along Route 54 between Ashland and Shenandoah the landscape is in motion. Mountains of mine refuse rise and fall, as this contaminant laden waste product of over a century of mining is now being reclaimed and prepared as fuel for several nearby cogeneration plants. Electricity generated from these facilities is sold on the power grid, making Schuylkill County a net exporter of “green energy.” The roadway is dotted with patch towns: Big Mine Run, Lost Creek, West William Penn, and East William Penn. Similar landscapes can be seen along Old Route 209 between Pottsville and Tamaqua, where visitors encounter New Philadelphia, Cumbola, Brockton, Mary D, Tuscarora, Reevesdale, and Newkirk.

• **Frackville and Gilberton, Schuylkill County:** The vast scale of the Anthracite industry was exemplified by the Mahanoy Plane, a power-driven hauling system that brought loaded coal cars from Mahanoy City and Gilberton at the foot of the Plane up to Frackville at the top, a change in elevation of approximately 800 feet. The Mahanoy Plane was used to haul more than a billion tons of coal over 70 years of service beginning in 1862, making the Mahanoy Valley accessible to the markets along the lower Schuylkill. Frackville retains its distinctive churches, but the Mahanoy Plane was dismantled in
1952, leaving little trace. The contemporary cogeneration plant at Gilberton, on the other hand, evokes for observers the vast scale of mining in this region.

- **Pottsville, Schuylkill County**: Pottsville became the seat of Schuylkill County in 1851. It has long been the financial and commercial center of the anthracite region, sited at the center of the region’s highway network. The County Courthouse was the scene of the Molly Maguire trials and remains a prominent feature of the urban scene. Pottsville is also the locus of the Yuengling Brewery, a popular regional attraction. Jerry’s Classic Car Museum is another Pottsville attraction. Based in Pottsville, the Historical Society of Schuylkill County has important collections of local and county history and has moved into a new building, which may make it a more active attraction. Pottsville is a short distance from the towns of Minersville and Saint Clair, the site of John’s Patch.

- **Tamaqua, Schuylkill County**: Like Pottsville, Tamaqua was a commercial center for its hinterland as well as a gateway to the Lehigh Valley. While much of the old downtown area has been compromised, the historical residential neighborhoods and several factories remain intact. The borough’s historic character was recognized through designation of a National Register District in 2001 encompassing nearly 1,000 properties. The old Tamaqua Train Station is being restored and will include a Heritage Corridor Visitors Center. The Tamaqua Historical Society maintains a small, eclectic, and fascinating museum in a former bank building.

**D. Landscapes of Industry: Canal and Manufacturing Towns**

Many riverside towns in the heritage area were sited near sources of water power. The nucleus of these communities was often a mill, a furnace, or a forge. Beginning in the 1820s, the Schuylkill Navigation made water transportation available to places which had not previously had access. After 1839, many places along the River Valley were linked by railroad to raw materials (including anthracite coal) and to local and regional markets.

The economies of the canal and manufacturing towns in the heritage corridor were typically diversified but focused on the needs of an older still-rural economy. Agricultural machinery, carriages and wagons, harnesses and textiles were common products, but by the 1920s the Schuylkill Canal was closed and manufacturers were shifting steadily away from smaller towns to cities like Philadelphia. Stagnant or declining economies and isolation from the emerging automobile-trucking-highway network spared the historical fabric of many towns from the impacts of modernization and renewal.
Many of the riverside towns share a common landscape or urban pattern. The Schuylkill Canal was close to the river bank. Railroad tracks were located close to the Canal. Large mills and other industrial buildings lined the railroad; these industrial districts often cut the town off from the River. Commercial streets ran parallel and perpendicular to the industrial district with clusters of public buildings, churches, and halls. The residential neighborhoods spread out beyond the commercial area, with clear segregation of workers, managers, and owners.

Significant canal and manufacturing towns include:

- **Schuylkill Haven, Schuylkill County:** Schuylkill Haven was founded in the mid-18th century at a ford just south of the confluence of the Schuylkill River with the West Branch. The town began as an agricultural village with saw and grist mills. In 1825 the Canal opened along the Schuylkill Haven portion of the River and in 1831 the first of four railroads reached the town. Schuylkill Haven served as a transportation center for decades, though little evidence of the canal and railroad remain in place. In the 1890s textile manufacture began, and two large mills remain intact in the center of town. The center of town retains a late 19th-century character and mills continue to be a feature of the streetscape.

- **Hamburg, Berks County:** Hamburg was laid out in 1772 by a German miller and landowner. Although located at the only gap in the Blue Mountain and a crossroads for two early roadways, Hamburg grew slowly as a market hamlet. The canal arrived in 1824, followed by railroads in 1842 and 1885. Hamburg burgeoned as a manufacturing center with mills, factories, foundries and machine shops, breweries, and a distillery. The old commercial center remains largely intact with many original storefronts and facades.

- **Wyomissing, Berks County:** Wyomissing, sited on Wyomissing Creek, was settled by Welsh immigrants before 1740. By the mid-19th century a number of water-powered mills had been established, but these gradually ceased operation as competition from steam-powered mills made them uneconomical. At the very end of the 19th century, the Reading Suburban Real Estate Company acquired farmland in Wyomissing and began building speculative housing. The developers also encouraged the Textile Machine Works to re-locate to the area. Business expanded and consolidated as the Wyomissing Industries, occupying 60 acres along the main commercial street. The owners of the company, Henry Janssen and Ferdinand Thun, created a major “garden suburb” with a variety of architectural styles, a linear park along Wyomissing Creek, a cooperative store, a savings and loan association, and community gardens. In 1926 Wyomissing was the first borough in Pennsylvania to adopt zoning. Virtually all of the
major elements in this planned community remain intact and legible.

• **Reading, Berks County:** Reading was originally established as a county seat and market town by the Penn family in 1748. The new town was located on a ford and laid out in a grid pattern. In the 1840s Reading began its spectacular growth as a center of industry. The largest and most prominent enterprise was the Reading Railroad, at one time the largest corporation in America, whose yards and shops punctuated the city landscape.

Other industry also came to town in the second half of the 19th century: forging, tools, and hardware; hats, cigars, and breweries; textile and hosiery. Population swelled and whole new residential districts sprang up. The 1993 NPS inventory called out three historic districts as especially noteworthy: the Callowhill Historic District, including the original commercial and public center; Prince Historic District, a largely Victorian area of development; and the Centre Park Historic District, a neighborhood of early 20th-century housing for the middle-class and the wealthy. Other important Reading resources include the Historical Society of Berks County and the Reading Public Museum and Art Gallery.

Located near Reading, the **Berks County Heritage Center** is an outstanding complex that includes a museum dedicated to the history of canals (sited near a branch of the Union Canal), a restored covered bridge, and the Gruber Wagon Works, a National Historic Landmark. Gruber Wagon Works produced wagons and other vehicles for a hundred years beginning in mid-19th century. The **Mid-Atlantic Air Museum**, which contains a significant collection of vintage aircraft and a yearly World War II airshow, is located near the Heritage Center.

• **Pottstown, Montgomery County:** Pottstown was founded in 1752 by ironmaster John Potts at the confluence of Manatawny Creek and the Schuylkill River. Like Reading, Pottstown was a planned town, laid out on a grid. Pottstown developed as a market and service town for its agricultural hinterland. The arrival of the Schuylkill Canal in 1821 and the Philadelphia and Reading Railroad in 1836 led to the industrialization of the local economy. Pottstown produced textiles, steel, food products, and building materials. As industry declined in the second half of the 20th century, much of the industrial fabric was lost, though individual industrial buildings remain. The old commercial district along High and King Streets retains much of its early 20th-century character.

**Pottsgrove Manor** in Pottstown is operated by Montgomery County as an historic house museum specializing in the early history of the local iron industry, 18th-century Quakers, and African American history in the Colonial period. The site includes a Colonial Revival
garden and offers guided tours, educational programs for children, and special events. This important site has been cut off by modern roadways from both the Schuylkill River and the historic city center.

- **Phoenixville, Chester County**: Settlement of Phoenixville began with the establishment of a grist mill in 1732. A hamlet grew to serve the surrounding agricultural community and a succession of small iron works were operated here. The Civil War spurred the growth of the Phoenix Iron Works, which later became one of the largest iron and steel producers in southeastern Pennsylvania. The company was well-known for the “Phoenix Column,” widely used in buildings and bridges. The company closed in 1974.

  Most of the older parts of the Phoenix Works have been demolished, but the 1875 foundry building remains intact and is being restored to house a Heritage Corridor Visitors Center. Several blocks of early workers’ housing remain intact. Directly across the River from Phoenixville is Oaks Reach in Montgomery County, one of only two remaining watered segments of the Schuylkill Canal.

- **Norristown, Montgomery County**: Norristown was settled in the early 18th century and became the county seat in 1784. The town grew from the central core of the courthouse, jail, churches, and other public buildings. Industrial growth began early in the 19th century, intensified during the Civil War, and expanded into the 20th century. Much of this industry grew up along the River, south of the institutional core.

  The industrial district survives relatively intact, with some losses. The institutional core, the commercial district, and residential neighborhoods occupied by the working class (many of them immigrants) and by the wealthy are also intact.

- **Manayunk, Philadelphia**: The opening of the Flat Rock Canal in 1819 along the east bank of the Schuylkill provided abundant opportunity to establish water-powered mills. By 1830 more than 20 mills were operating here. Today Manayunk remains a classic example of a 19th-century mill town with a ribbon pattern of development. Elements of the Schuylkill Navigation remain in place (though the Canal was closed to active traffic in 1916), as do several prominent ethnic churches. The historical housing pattern also survives: modest row houses for workers nearest the mills and larger single dwellings for managers uphill toward Roxborough. Contemporary Main Street Manayunk is a thriving, up-scale shopping and dining center for the City and region. Adjacent neighborhoods of interest include Roxborough and East Falls.

  Three very early industrial sites are also of special interest:
• **Rittenhouse Town Historic District, Philadelphia:** Previously discussed in the context of Germantown, Rittenhouse Town is an enclave of historic structures on the banks of Wissahickon Creek in Fairmount Park. It preserves a colonial paper-making complex owned and operated by the prominent Rittenhouse family. The site sponsors educational programs and is planning for expanded interpretation.

• **Hopewell Furnace National Historical Site, Chester/Berks Counties:** Hopewell Furnace National Historical Site preserves an important complex of dwellings and early industrial structures associated with the charcoal iron industry. Hopewell Furnace supplied essential artillery to the Continental Army and also produced iron stoves and other domestic products. Extensive archaeology has been conducted here to guide historical interpretation.

• **The Mill at Anselma, Chester County:** Located in the Pickering Creek Valley in West Pikeland Township, the Anselma Mill was built in 1747 and is considered by many to be one of the finest examples of early American industrial technology still remaining. The 22-acre property was purchased by the French & Pickering Creeks Conservation Trust and conveyed to the newly-formed Mill at Anselma Preservation and Educational Trust. The Trust plans to preserve and restore the mill, its equipment, and other buildings on the site, while interpreting the everyday life of the village of Anselma.

In addition to the above resources, the industrial landscape has left its mark in prominent structures throughout the region, notably in its **bridges and tunnels**. Notable survivals include the Girard Avenue Bridge in Philadelphia, once the widest bridge in the world, the great railroad bridge at East Falls near the mouth of Wissahickon Creek, and Peacock Bridge in Berks County. Railroad tunnels, both abandoned and in use, are also significant markers of the industrial landscape, while covered bridges in places such as Wissahickon Creek, Valley Forge, and the Berks County Heritage Center harken back to an earlier period of industry.

**E. Landscapes of Romance: Parks, Arboreta, Zoos, and Gardens**

In 1889 Lafcadio Hearn exclaimed that Fairmount Park was “the most beautiful place of the whole civilized world.” By then, the idea of scenic landscapes, filled with moral and recreational value and imbued with the power of renewal, had taken hold in the region. Parks, arboreta, gardens, and zoos were created in many locales throughout the region. Indigenous and exotic elements were mixed together in sometimes fanciful fashion to capture the romance of nature. Of these efforts, Fairmount Park was—and is—the most compelling landscape of romance. Numerous arboreta, gardens, and zoos fall into this category as well.
Fairmount Park

Fairmount Park traces its origins back to 1822 when acreage adjacent to the Waterworks was landscaped to form the earliest planned municipal park in the U.S. In 1844 the City purchased Lemon Hill to protect its water supply. Additional purchases followed, and by 1867 the Pennsylvania General Assembly set aside a large area bordering the Schuylkill River “forever as an open public space.” Today this great urban park is a National Historic Landmark encompassing more than 4,000 acres of open land with numerous recreational and cultural sites. It includes virgin soil strata, rock outcroppings, and ancient trees, as well as tennis courts, playing fields, swimming pools, picnic areas, and two outdoor music centers. Within the Park lie many important historic/cultural complexes and sites, including Rittenhouse Town, Laurel Hill Cemetery, Boat House Row, the Fairmount Park Houses, Fairmount Waterworks, and the Centennial Exposition Complex. Other notable features include sculpture gardens, the Japanese Tea House, and numerous commemorative statues. Among the more significant resources are:

- **Laurel Hill Cemetery**: Laurel Hill Cemetery (NHL) is one of America’s earliest and most outstanding 19th-century rural cemeteries. Designed by architect John Notman in 1836, the site is “a romantically landscaped arboretum and sculpture garden highlighted by a handsome Doric gatehouse.”

- **Fairmount Park Houses**: More than 20 historic country homes are located within Fairmount Park, plus three other historic houses that have been moved to sites within the Park. Several of these are operated as historic house museums. Notable structures include Belmont Mansion (1755), Mount Pleasant (1761, NHL), Lemon Hill (1799), Strawberry Mansion (1797, 1825, 1870), Cedar Grove (1748, 1752), Sweetbriar (1797), Ormiston (1798), and Woodford (1756, 1772).

- **Boat House Row**: On the Kelly (East River) Drive of Fairmount Park lies an assemblage of ten river-boat clubhouses (NHL) dating from the late 19th and early 20th centuries. Boat clubs were first organized in the 1850s and the Schuylkill Navy was formed in 1858 to supervise regattas. Boat House Row was dramatically lighted in the 1970s and is now a prominent landmark along East and West River Drives, the Schuylkill Expressway, and Amtrak’s Northeast Corridor.

- **Fairmount Waterworks**: This group of buildings (NHL) housed the pumping system for Philadelphia. It was notable both as a 19th-century engineering marvel and as an architectural complex, styled like a Greek temple complex. The site served as the city aquarium, 1911-62. It is now an interpretive center that focuses on the ecology of the Schuylkill River watershed.
• **Centennial Exposition Complex:** The Centennial Exposition of 1876 was America’s first great world’s fair. Two exposition buildings survive, Memorial Hall and the Ohio House. The great Civil War Memorial (Smith Memorial Arch) was built in 1897-1912 under the auspices of the Fairmount Park Art Association. Close by Fairmount Park is the **Woodlands**, an Adamesque-Federal country house built c. 1742 that had the first giant portico on a Philadelphia building. Woodlands was enlarged and remodeled by William Hamilton in 1787-90 and was the country seat of the prominent Hamilton family. Noted for its exceptional gardens, the property became the site of a prominent rural cemetery in 1843. The mansion house survives and is used as administrative offices.

**Arboreta, Gardens, and Zoos**

Arboreta, gardens, and zoos are another regional manifestation of the romantic impulse. These resources provide cultivation and maintenance of native and exotic plants, public education, recreation, and research. Zoos provide public exhibition of plants and animals, and support research and conservation of animals. The Philadelphia region is nationally renowned for its concentration of public arboreta and gardens. Major sites in the Schuylkill River Valley National Heritage Area include:

• **Historic Bartram’s Gardens:** John Bartram, America’s first internationally known botanist built this house (1730-31; NHL) and lived here 1731-77, succeeded by his son. The 45-acre site has several gardens, historic trees, and natural meadows and wetlands. Specimen trees and plants, 18th-century garden layout, and the historic house provide a platform for historical and environmental interpretation.

• **Morris Arboretum of the University of Pennsylvania:** Morris Arboretum is located on 166 acres in Philadelphia along Wissahickon Creek. It maintains public gardens, including a fernery, a formal rose garden, and Victorian landscape plantings with 6,800 labeled, temperate woody plants. The Arboretum preserves natural lands along the creek and conducts botanical and horticultural research, outreach on urban forestry, public education, and natural land restoration. Research interests include Pennsylvania flora and the adaptability of trees to urban sites. The Arboretum maintains an extensive library and an education center. As the Commonwealth’s official arboretum, the Morris Arboretum houses the state tree collection.

• **Mill Grove (the Audubon Wildlife Sanctuary):** A National Historic Landmark, Mill Grove was the first American home of noted naturalist and artist John James Audubon. Operated by Montgomery County, the site includes the 18th-century house, displays of...
Audubon’s artwork, nature trails, and a variety of educational programs.

- **Awbury Arboretum (Francis Cope House):** Awbury Arboretum in Germantown occupies 55 acres of landscaped parkland with specimen trees. The Arboretum specializes in nature education, horticulture, and local history with guided tours and educational programs for children and adults.

- **College and University Gardens:** Several campuses in and near the heritage area support gardens and arboreta. The grounds of the Temple University Campus at Ambler have been designated as an arboretum, and the campus includes formal gardens, a variety of other gardens, nurseries, and field and woodlands around the campus. The university has major programs in landscape architecture and horticulture. The American College campus in Bryn Mawr contains 35 acres with specimen trees, gardens and a pond. The grounds of Bryn Mawr College were designed by Calvert Vaux and Frederick Law Olmstead and contain specimen trees and gardens. The Villanova Arboretum at Villanova University supports a variety of trees and gardens. The University of Pennsylvania maintains gardens and a pond at its campus in west Philadelphia. The Haverford College Arboretum includes a Pinetum and Japanese garden. Tours, classes, lectures, and films are offered to the public by the Campus Arboretum Association.

- **Other Public Arboreta and Gardens:** Other public arboreta and gardens in and near the heritage area include the Henry Foundation for Botanical Research, Jenkins Arboretum, and the Barnes Foundation. The Henry Foundation is located on 50 acres in Gladwyne (Montgomery County) and focuses on native flora. The site contains public gardens and is used by classes, civic groups, and tours. Jenkins Arboretum in Devon (Chester County) contains plantings among natural woods. The arboretum specializes in rhododendrons and azaleas. The Barnes Foundation in Merion maintains one of the world’s foremost collections of French impressionist and post-impressionist art surrounded by twelve acres of rare and specimen plants. The Arboretum School offers courses on horticulture, botany, and landscape architecture.

- **Other Historic House Gardens:** Several of the historic houses in the Schuylkill River Valley support gardens. The Highlands Mansion and Gardens in Fort Washington is an example. Wyck Gardens, at the Wyck estate in Germantown, Philadelphia, feature 18th-century gardens, including rose, herb, vegetable gardens, and a woodlot. Gardens are also maintained at Hope Lodge in Fort Washington and the Ebenezer Maxwell Mansion in Philadelphia. The grounds
of the Conrad Weiser House in Berks County were designed by the Olmstead Brothers. The Pinetum and Hillside Garden at historic Welkinweir in Chester County, now the headquarters of the Green Valleys Association, is another example.

• **Fairmount Park:** Fairmount Park in Philadelphia maintains several horticultural sites. The Japanese Gardens, within West Park, contain a 17th Century style house, a pond and gardens. Horticulture Hall, also in West Park, includes a conservatory, formal outdoor gardens, and naturalistic plantings.

• **Philadelphia Zoological Society:** The Philadelphia Zoological Society is the oldest zoo in the country. It maintains indoor and outdoor collections, supporting about 1,800 species of animals, including species indigenous to this region. The Zoo also contains specimen plantings and historic buildings including Solitude (1785) and the Furness Gates.

• **Elmwood Park Zoo:** Located in the Borough of Norristown’s Elmwood Park, the 16-acre Elmwood Park Zoo contains a variety of North American animals, as well as a petting barn.

**F. Landscapes of Consumption: Suburbia and Exurbia**

The 1993 NPS Inventory categorized the post-war period as an age of “sprawl.” The new Interstate Highway System intensified several key trends: movement from the aging city cores to rapidly growing suburban and exurban developments; isolation of residential, commercial, and industrial districts from each other; and shifts from 19th-century manufacturing to emergent technologies sited in highway-oriented industrial parks.

The 1993 Inventory characterized these movements as follows:

*The draining of commerce, manufacturing and population from the cities, and the filling of the city edges and countryside with these attributes can be compared with a mudslide that erodes a great mountain and fills the fertile agricultural plain below it.*

This view is tempered by recognition that we are participants in the ongoing post-war changes. Our vision of what is happening is obscured to some degree because of our proximity to the movements and trends of this era—and our stakes in their outcomes. But perhaps another way to characterize this period of transformation is to conceptualize it in terms of the consumption that results from the affluence of contemporary society. From this perspective, the spread of population across tracts of

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5 National Park Service Division of Park and Resource Planning, Mid-Atlantic Region, *Draft Inventory and Assessment of Cultural Landscapes*, July 1993

6 ibid
formerly rural and agricultural lands can be construed as a pattern of consumption.

The new landscape of consumption has its landmarks: the limited access highway; the suburban development; the strip mall and the shopping center; the chains of franchised stores and restaurants; the industrial park and the office park; the video arcade and the internet café. The heritage area can boast numerous instances of these and related sites, although little has been done to date to mark and interpret these relatively recent landmarks. Nevertheless, it is worth noting several of the most important of these sites within the region:

- **Valley Forge Interchange:** The juncture of the Schuylkill Expressway (itself a significant post-war landmark) and the Pennsylvania Turnpike constitutes one of the area’s largest, most complex, and most-trafficked interchanges. An entire “edge city,” as documented in the well-known book by Joel Garreau⁷, has developed at and around this interchange.

- **King of Prussia Mall:** Typical of the contemporary American landscape, shopping malls are common along arterial highways in portions of the heritage area outside of traditional urban centers.

The King of Prussia Mall, with its large concentration of up-scale stores, sophisticated architecture, and intense marketing, is of special note due to its size and its status as a major regional visitor attraction.

- **Reading Outlets:** The outlet store as mass consumption is a post-war phenomenon. The Reading Outlets, though declining in the number of visitors in recent years, still outdraw Valley Forge and Independence Hall and the Liberty Bell combined.

### G. Other Historical and Cultural Resources

The Schuylkill River Valley National Heritage Area contains so many historic resources, sites, and opportunities that no inventory can possibly do them full justice. However, a number of important sites and institutions that do not fit under one or another of the above categories deserve mention, including:

- **Historic Fort Mifflin:** This notable fort is a National Historic Landmark located at the confluence of the Schuylkill and Delaware Rivers. Its stone and brick walls are surrounded by a moat. The original fort was the site of the Battle of Mud Island during the American Revolution. Portions of the original wall built in 1772-1798 are still standing, but the fort represents primarily a 19th-century plan and construction. Notable structures include the Barracks, Commissary, Arsenal, Magazines, Artillery Shed, and

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Smith’s Shop. The environs constitute an important nature preserve.

- **Philadelphia Museum of Art**: Sited atop Fairmount at the northwest end of the Benjamin Franklin Parkway, the Museum is an outstanding example of early-20th-century eclectic Neoclassical design. Collections include outstanding examples of regional art, furniture, furnishings, and decorative arts from the 17th century to the present.

- **University of Pennsylvania**: Originally founded by Benjamin Franklin, the University moved to its West Philadelphia site in 1871. The University complex contains numerous outstanding buildings, including College Hall (Thomas Richards, 1871), Furness Library (Frank Furness, 1888), the University Museum (Wilson Eyre, et alia, 1890s), Men’s Dormitories (Cope and Stewardson, 1895), Hill House (Eero Saarinen, 1958-60), Parking Garage (Mitchel/Giurgola Associates, 1963), and Richards Medical Research Building (Louis Kahn, 1957-61).

- **Academy of Natural Sciences**: The Academy, one of America’s most important natural history museums, is located on Logan Circle in Philadelphia. Many of its collections and exhibitions pertain to the region, and the Academy has taken special interest in promoting environmental education within the Schuylkill River Valley.

- **Conrad Weiser House**: A designated National Historic landmark, this stone farmhouse was built in 1729 by Johann Conrad Weiser. Weiser was an early settler who promoted friendly relations between the Iroquois and the British, a decisive factor in Britain’s victory in the French and Indian War. Located in Berks County, the site is operated by the PHMC.

- **American Swedish Historical Museum**: This museum, located in South Philadelphia on a part of the 17th-century Queen Christina land grant, houses an extensive library and material culture collection relating to the history of Swedish immigration and settlement in the United States, with special reference to this region.

- **League Island (United States Navy Yard)**: In 1876, the U.S. Navy Yard was moved to League Island at the confluence of the Schuylkill and Delaware Rivers, where it eventually became the Navy’s largest shipbuilding center and a pioneering site for naval aviation. The Navy Yard was closed, but remains the berth of a large number of decommissioned ships. The shipbuilding and industrial complex are now home to a variety of private industries.

- **United States Naval Asylum**: A National Historic Landmark, this former home for retired naval personnel at Gray’s Ferry Avenue and 24th Street was the site of the original U.S. Naval Academy.
The complex includes four historic buildings on nine acres. The main building, Biddle Hall, is a Greek Revival structure designed by William Strickland in 1827-33 and incorporates one of the first uses of cast-iron construction. The site was abandoned by the Navy in 1976 and is now in private hands.

- **Drexel Institute of Art, Science, and Industry (Drexel University):** The main building of Drexel Institute opened at 32nd and Chestnut Streets in Philadelphia in 1892. It is an outstanding example of academic architecture with ornate terra-cotta detailing. The building houses the Drexel University Art Museum.

- **Wharton Esherick Museum:** Located in Paoli, Chester County, the Wharton Esherick Museum is recognized as one of the most unique buildings in the United States and was declared a National Historic Landmark in 1993. A painter and woodworker, Esherick created a studio and shop along the crest of Valley Forge Mountain and spoke of the structure as an autobiography in wood. The interior is a unified environment of wooden architectural forms, structural elements and furnishings executed in the spirit of sculpture.

- **Boyertown Museum of Historic Vehicles:** The Boyertown Museum collection features important horse-drawn and mechanized vehicles with local and regional associations, including wagons, carriages, automobiles, and trucks. Art, models and tools used by builders, exhibits, and public and educational programs interpret this subject.

- **Historical Society of Berks County:** The Society focuses on County history with an extensive library and archives. Special strengths of the collections include agricultural implements, decorative arts, Indian artifacts, and Pennsylvania German material culture. The Society offers exhibitions, lectures, concerts, and educational programs.

- **Reading Public Museum and Art Gallery:** This general-purpose museum maintains notable collections of Pennsylvania folk art, Native American artifacts, decorative and fine arts, mineralogy, and natural history. The Museum offers exhibitions, tours, lectures, concerts, and educational programs.

- **Community Cultural Center for Schuylkill County:** Housed in the former Yuengling Mansion in Pottsville, a National Register-listed property, this center houses a professional and volunteer staff dedicated to fostering growth in the art and ethnic heritage of Schuylkill County. The Center sponsors a variety of arts and cultural activities, such as an Artist-in-Residence series and exhibits, arts and crafts classes, and uniquely themed special events and entertainment.
3.1.3 Archaeological Resources

In addition to historic resources, the Schuylkill River Valley National Heritage Area is rich in pre-historic and historical archaeology. Native American communities flourished along the river we call the Schuylkill for over 12,000 years, with European settlers a relatively recent influence on the landscape. Each generation has left its mark on the land, from scattered stone tools and flakes to the massive structures of the 20th century. Written records exist only for the last 350 years. All knowledge of earlier peoples is based on physical clues such as stone tools, pottery fragments, and earth discolored by the remains of fireplaces, storage pits, and houses. Even for the documented past, buried evidence may tell us more than the written record. The architecture of a house or barn, the landscape of a garden, the power system of a mill, or the living standard of a mill hand may be preserved better beneath the sod than in a document, and almost always the combination of archaeology and history is more powerful than either by itself.

PHMC staff have catalogued 1,130 archaeological sites, most predating European settlement, along the Schuylkill River. Even these extensive surveys are not exhaustive. To the known count of prehistoric sites must be added the buried remains of farms and industries, towns and suburbs. Everywhere people live, they leave traces in the ground – at least until others erase the archaeological evidence by re-arranging the surface of the earth.

The goal of preserving the Commonwealth’s archaeological, historic, and natural resources is incorporated in Pennsylvania’s constitution (Article I, section 27), History Code (Statutes Title 37), and Municipalities Planning Code. Any public or private development requiring a federal or state permit or benefiting from federal or state funds must be reviewed by the PHMC staff to ensure that it does not damage archaeological resources on or eligible for the National Register of Historic Places. Extensive information on Pennsylvania’s historic preservation goals, rules, and regulations is available at the PHMC website (www.phmc.pa.us).

3.1.4 Folklife

Dr. Kenneth Thigpen, in his 1993 report on folklife prepared for the Schuylkill Heritage Corridor, notes that:

*Folklife is the representation of special activities in the lives of ordinary people, as well as the customary activities of all people, regardless of class or background.*

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* Kenneth A. Thigpen, *Folklife and Ethnic Resources Inventory*, July 1993

Dr. Susan Isaacs asserts in her 1993 report on the same subject that:

_The field of folklore and folklife has long been concerned with relationships between people and their surroundings—the natural and built environments in which they live work and play._

In effect, folklife is the “landscape of living.”

Folklife takes many forms: material culture including decorative arts; expressive culture including play, dance, and ritual; and intangible cultural forms such as custom and belief. Conservation of folklife and ethnic traditions typically focuses on three (of many) important dimensions: the tradition bearers, the process of culture-making, and the products, tangible and intangible. The two 1993 studies identified hundreds of significant folklife expressions in the heritage area, many inventoried in the Pennsylvania Heritage Affairs Commission (PHAC) Traditional Arts Survey, the PHAC Database of Pennsylvania Ethnic Organizations, and other listings. Key resources for the documentation and encouragement of regional folklife resources are:

- **Institute for Cultural Partnerships, Harrisburg**: This not-for-profit organization is headed by Dr. Shalom Staub, former head of the Pennsylvania Folklife Office. The Institute works with schools and communities on programs that celebrate ethnic traditions and minority cultures.

- **Historical Society of Pennsylvania/Balch Institute for Ethnic Studies, Philadelphia**: The recent amalgamation of the Balch Institute and the Historical Society of Pennsylvania (HSP) brought to HSP extensive collections of books, archives, photographs, and objects that illustrate ethnic heritage in this area.

- **Folklife Center, International House of Philadelphia**: International House has offered multi-cultural programs for more than 80 years. The Folklife Center presents international music programs, workshops, an annual craft fair, and school programs.

- **Philadelphia Folklife Project**: This research organization has documented numerous ethnic cultures and folk traditions in Philadelphia and beyond. Staff and archives are both key resources for regional folklife.

### 3.2 NATURAL RESOURCES

#### 3.2.1 Physiography and Soils

Geology, topography, and soils vary throughout the Schuylkill River Valley National Heritage Area, generally corresponding to the four major physiographic provinces in the region: the Ridge and Valley, Piedmont, New England, and Atlantic Coastal Plain (Figure 3-2). Overall elevation
in the heritage area ranges from near sea level in downtown Philadelphia to over 1600 feet in the mountains of Schuylkill County.

The **Ridge and Valley Province** encompasses the largest portion of the heritage area. It includes most of Berks and Schuylkill Counties and has two distinct sections. The Schuylkill River has its origin in the Appalachian Mountain Section, which is characterized by long and narrow mountain ridges separated by valleys of varying width. The elevations of the mountains can be several hundred to almost a thousand feet higher than in the neighboring valleys. Soils in the Appalachian Mountain Section consist of well to moderately well drained silty loams derived from siltstones and shales. Bands of limestone and dolomite can be found in the valleys and erode to form more fertile soils. The ridges are often composed of highly resistant sandstones and have shallow soil depths.

The Great Valley Section of the Ridge and Valley Province includes most of Berks County. It is characterized by gentle rolling hills in the northern part and a flatter, low-lying landscape in the south. The northern part of the Great Valley is underlain by shales and siltstones, while the southern is underlain by limestone and dolomite. The combination of a flat landscape, proximity to large waterbodies, and limestone and dolomite bedrock makes the southern portion of the Great Valley especially fertile. Soils in the Great Valley are generally well drained silty loams.

The **New England Province** makes a couple of intrusions in the heritage area. The Reading Prong Section of the New England Province is composed of the hills to the east of Reading. A small section is also located to the west of Reading. The Reading Prong is characterized by resistant bedrock that forms steep hills and ridges. The bedrock in this area is most often granitic gneiss, quartzite, and granodiorite. Soils in the Reading Prong Section are often well drained and fine grained silty loams.

The **Piedmont Province** encompasses the southwestern part of Berks County, the northwestern part of Philadelphia County, and all of Montgomery and Chester Counties within the heritage area. It consists of three distinct sections. The Gettysburg-Newark Lowland section is the most extensive and is characterized by low rolling hills and shallow valleys that are developed on sedimentary rock. Bedrock consists of sandstones, siltstones, and shale. The soils in this section range from well drained to poorly drained silty loams that are often red in color.

Southeastern Montgomery County, northwestern Philadelphia, and much of Chester County are located in the Piedmont Upland Section. This section is characterized by gently rolling hills that developed on metamorphic schists and gneiss. Soils are generally well drained silt loams that form from the schists.
The Piedmont Lowland Section is a narrow valley that extends across the heritage area. It is located mostly in Chester County where it is known as the Chester Valley. This section is characterized by limestone and dolomite bedrock and karst topography. Soils in the area are often fertile and well drained silty loams.

In northwestern Philadelphia County, the Schuylkill River crosses the fall line from the uplands of the Piedmont province into the generally flat Atlantic Coastal Plain province. The area is characterized by unconsolidated sand and gravel underlain by metamorphic bedrock. Soils usually consist of well drained loams where they have not been urbanized.

### 3.2.2 Water Resources and Quality

#### A. Surface Water Resources

The Schuylkill River is the principal water resource in the heritage area (Figure 3-2). It originates in the mountains of Schuylkill County as the Little Schuylkill, Main Branch, and West Branch. The Little Schuylkill and Main Branch combine at Port Clinton to form the Schuylkill River, which generally flows southeast from Schuylkill County. Along its path the river flows through forested uplands and rich agricultural regions, forms the Montgomery and Chester County border, and eventually flows through Philadelphia and into the Delaware River. It has several major tributaries, the two largest being Tulpehocken Creek and Perkiomen Creek. Other major tributaries include French Creek, Manatawny Creek, Maiden Creek, and Wissahickon Creek. There are also several lakes within the heritage area, many of them formed by impoundments or dams on the Schuylkill River or its major tributaries. Significant lakes include the Blue Marsh Lake, Lake Ontelaunee, and the Green Lane Reservoir.

The Schuylkill River is the main water source for the City of Philadelphia and together with its tributaries provides drinking water for other communities within and near the heritage area. The river and tributary creeks also provide water for power generation, mining, and other important industries; recreational opportunities; and an important ecological system for fish and native wildlife. In 1987, the Schuylkill River was designated Pennsylvania's first Scenic River. Parts of French Creek and Tulpehocken Creek have also been designated Scenic Rivers.
3.0 Heritage Area Environment

Table 3-2. Exceptional Value Streams in the Schuylkill River Valley National Heritage Area

<table>
<thead>
<tr>
<th>Stream</th>
<th>County</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rattling Run</td>
<td>Schuylkill</td>
<td>Source to Route 61</td>
</tr>
<tr>
<td>Saucony Creek</td>
<td>Berks</td>
<td>Source to Route 1029</td>
</tr>
<tr>
<td>Peter's Creek</td>
<td>Berks</td>
<td>All</td>
</tr>
<tr>
<td>Northkill Creek</td>
<td>Berks</td>
<td>Source to Route 78</td>
</tr>
<tr>
<td>Hay Creek</td>
<td>Berks</td>
<td>Source to River Mile 8.1, Beaver Run to Birdsboro</td>
</tr>
<tr>
<td>Pine Creek</td>
<td>Berks</td>
<td>All</td>
</tr>
<tr>
<td>Beiber Creek</td>
<td>Berks</td>
<td>All</td>
</tr>
<tr>
<td>Trout Run</td>
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<td>All</td>
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<td>French Creek</td>
<td>Chester</td>
<td>Source to Beaver Run</td>
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<tr>
<td>Birch Run</td>
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<td>All</td>
</tr>
<tr>
<td>Valley Creek</td>
<td>Montgomery/Chester</td>
<td>All</td>
</tr>
</tbody>
</table>

A number of streams have been designated as Exceptional Value streams by the Pennsylvania Department of Environmental Protection (DEP) due to their excellent water quality and ecological importance. This designation also ensures special protections from permitted activities that may compromise water quality or critical habitat in the watershed. Table 3-2 lists the exceptional value streams in the heritage area.

Water quality in the heritage area is variable, but has been steadily improving over the last 30 years. A number of factors have been responsible for this improvement, including the passage of the Clean Water Act, an increased awareness of environmental and water related issues, and restoration activities by local governments and non-profit organizations. In the early 1900s, the Schuylkill River and its tributaries suffered from siltation from agricultural practices and runoff from abandoned mines. It was also used as an open sewer by residents and industrial practices that discharged untreated wastes into the river. During this time the river was thick with coal silt and degraded by heavy metals and pathogens. Since that time period, there has been a major overhaul in the way the river has been treated. Industrial practices have ceased dumping untreated waste into the river. Runoff and siltation are contained from roads, coal mines, agricultural areas, and new construction. Water quality monitoring occurs frequently throughout the heritage area to measure progress and locate problem areas. Local and state governments as well as nonprofit organizations have actively been working to restore the heritage area’s wetlands, streambanks, floodplains, abandoned coal mines, and abandoned industrial sites.
These efforts have restored the river as a recreational resource and provide a basis for future improvements.

Despite the improvements, many watercourses in the heritage area continue to experience significant stress, including the Schuylkill River itself. Major sources of contamination in the heritage area include:

- **Abandoned Mine Drainage**: Abandoned mine drainage is one of the two largest contributors to water quality contamination in the heritage area. It occurs from runoff out of abandoned coal mines in Schuylkill County and primarily affects the headwaters of the Schuylkill River (the Upper Schuylkill River and the Little Schuylkill River).

- **Urban Runoff**: Urban runoff is a potential source of contamination where impervious surfaces associated with development increase the quantity and rate of stormwater flows into surface water resources. It is of greatest concern in the watersheds of Wissahickon Creek and Perkiomen Creek in Montgomery and Philadelphia Counties.

- **Agricultural Runoff**: Agricultural runoff is a significant source of contamination in the heritage area. Water quality degradation in several small stretches of stream, most of which are in the Tulpehocken Creek Watershed in Berks County, is attributed to agricultural runoff.

- **Wastewater Systems**: Malfunctioning on-lot septic systems and overflow from municipal wastewater treatment plants is a source of contamination in the heritage area, especially in the Perkiomen, Wissahickon, and lower Schuylkill watersheds.

- **PCBs and Mercury**: PCB and mercury contamination of fish tissue has prompted the establishment of fish consumption advisories throughout the heritage area. These advisories suggest limiting consumption of certain types of fish, especially for high risk populations.

There are several efforts underway to assess and protect water quality within the heritage area. The Philadelphia Water Department (PWD) administers the Source Water Assessment Program that is mandated by the federal Safe Drinking Water Act. PWD is currently inventorying the potential sources of contamination in the watershed and developing a plan to protect water quality and provide high quality drinking water. A number of nonprofit watershed organizations are active in the heritage area. Typical activities of these organizations include monitoring local streams, restoring critical streambanks and habitat, and protecting waterways through land acquisitions. The Pennsylvania DEP monitors the health of streams in the heritage area as part of its obligations under the Clean Water Act. The Stroud Water Research Center also monitors...
the biological health of streams within the heritage area at several sampling stations.

B. Wetlands

Wetlands are limited within the heritage area, accounting for less than one percent of the land area. The greatest concentration of wetlands is found in the headwaters of the Perkiomen Creek, French Creek, Manatawny Creek, and Tulpehocken Creek. There are also significant wetlands in the headwaters of the Schuylkill River in Schuylkill County. Wetlands are less extensive in much of Philadelphia, Chester, and Montgomery Counties, which are downstream from these areas.

In addition to naturally occurring wetlands, wetlands are being created and restored in the heritage area. This is occurring most significantly in Schuylkill County, where wetlands are incorporated into the design of abandoned mine projects to diversify habitat. They also assist in the removal of contaminants in polluted water. Wetland restoration is also occurring in other areas. In Berks County, wetlands are being created and restored to mitigate the effects of agricultural runoff. In Chester County, wetlands are restored or created as mitigation for public and private development. In Philadelphia and Montgomery Counties, wetlands are being restored to mitigate the effects of urban runoff and streambank erosion. Much of this work is taking place in the Wissahickon Creek watershed.

C. Floodplains

Floodplain resources in the heritage area include the floodway and 100-year floodplain defined by the Federal Emergency Management Agency (FEMA) for the Schuylkill River and its tributaries. Residents of the heritage area have historically lived close to these waterways due to their reliance on water for various purposes. Thus industrial, agricultural, and residential land uses are all common within the 100-year floodplain. As a result, flooding threatens economic interests, recreational interests, and water quality in portions of the heritage area.

State, federal, and local laws restrict development in the floodway and floodplain. However, these laws restrict future development and improvements within the floodplain, not current uses. Floodplain restrictions are set at the municipal level in the heritage area and can vary, though they must at least comply with FEMA regulations. Typically, new construction is prohibited within the floodway but permitted within the 100-year floodplain if certain conditions are met.
3.2.3 Vegetation and Wildlife

A. Vegetation

Forests are the native vegetation of most of the Schuylkill River Valley National Heritage Area, which lies within the Eastern Broadleaf, Central Appalachian Broadleaf, and Outer Coastal Plain Mixed Forest Ecoregional Provinces. Five subsections are dominant within these provinces:

- **New Jersey Inner Coastal Plain Subsection:** This subsection encompasses the smallest portion of the heritage area, generally corresponding to the Atlantic Coastal Plain Physiographic Province in Philadelphia. It is characterized by an Oak and Beech dominated forest in areas that are not urbanized.

- **Piedmont Upland Subsection:** This subsection is located along the Piedmont Upland Physiographic Province. It is characterized by an Oak dominated forest with a Heath shrub understory. Dominant trees include chestnut oak, scarlet oak, black gum, sassafras, gray birch, and red maple. Typical shrub and herbaceous vegetation varies but can include blueberry, huckleberry, sweet fern, mountain laurel, bracken fern, Canada mayflower, ricegrass, and wild sarsaparilla.

- **Gettysburg Piedmont Lowland Subsection:** This subsection encompasses much of the rest of Montgomery and Chester Counties within the heritage area. It is dominated by a Red Oak-Hardwood Mesic Forest. Dominant trees include red oak, red maple, black oak, white oak, sweet birch, yellow birch, and beech. Shrub and herbaceous vegetation often includes arrowwood, maple leaved viburnum, shadbush, mountain laurel, hayscented fern, blue cohosh, and wild-oats. Much of the area covered by this subsection is in agricultural use, as it is well suited for farming when cleared of native vegetation.

- **Northern Great Valley Subsection:** Mostly located in the southern part of Berks County in the Great Valley Physiographic Province, this subsection consists of Oak-Heath-Dry Forest and Chinquapin Oak Forest. The Chinquapin Oak Forest occurs on fertile limestone soils and has a rich herb understory. The Oak-Heath-Dry forest is dominated by scarlet and white oak, red maple, gray birch and a heath shrub understory. Much of this subsection is in agricultural production due to its fertile soils.

- **Northern Ridge & Valley Subsection:** This subsection covers much of Schuylkill and northern Berks Counties. It is characterized by two forest types, the Oak-Heath-Dry Forest and the Oak-Pine Forest. The Oak-Pine Forest is characterized by red and white oak, white pine, hemlock, and red maple. The understory includes witch hazel,
blueberry, mountain laurel, and huckleberry. Most of this area is forested, interspersed with pockets of agricultural production.

In addition to these general communities, the heritage area has several localized vegetative communities:

- **Floodplains:** Common vegetation along streams and in floodplain areas includes red maple, silver maple, box elder, river birch, sycamore, ironwood, witch hazel, and elderberry.
- **Wetlands:** Wetlands are scattered throughout the heritage area and vegetation can vary greatly.
- **Abandoned Mine Lands and Cleared Lands:** Disturbed lands usually support vegetation that is most adaptable to harsh conditions. Gray birch, aspen, black locust, sumac, box elder, and several types of herbaceous growth are typical species found in these areas.

**B. Wildlife**

Wildlife is abundant within the heritage area. Deer can be found throughout the Schuylkill River Valley. In some areas, notably Fairmount Park in Philadelphia, overabundance of deer causes problems such as overgrazing of native vegetation. Skunk, raccoon, squirrel, and chipmunk can be found in almost any wooded area and in many residential areas.

While present in the heritage area, black bear are mostly found in the mountains of Schuylkill County and occasionally the more rural sections of Berks County. Very occasionally a black bear wanders into residential areas of Chester and Montgomery counties. Coyote have made a comeback in recent years due to their ability to adapt to changing conditions and now occur throughout the heritage area except for the most urbanized locations. However, due to their secretive nature, coyote are rarely seen. Turtles can be found throughout many of the moist habitats of the heritage area, mostly in wetlands and along river banks. Other wildlife that can be found in the heritage area include woodchuck, many bird species, snakes, and several fish species.

**C. Threatened and Endangered Species**

The Pennsylvania Department of Conservation and Natural Resources and The Nature Conservancy maintain the Pennsylvania Natural Diversity Inventory (PNDI). The PNDI identifies and monitors flora and fauna species and ecological communities in Pennsylvania. The Schuylkill River Valley National Heritage Area is home to several species of concern. Table 3-3 lists those species or communities within the heritage area that are listed as globally imperiled or vulnerable.
Table 3-3. Threatened and Endangered Species in the Schuylkill River National Heritage Area

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Global Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flypoisin Borer Moth</td>
<td>Imperiled/Vulnerable</td>
</tr>
<tr>
<td>Fizzini's Cave Amphipod</td>
<td>Imperiled/Vulnerable/Apparently Secure</td>
</tr>
<tr>
<td>Spreading Rockcress</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>Bog Turtle</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>Frosted Elfin</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>Bog Bluegrass</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>Regal Fritillary</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>Price's Cave Isopod</td>
<td>Vulnerable</td>
</tr>
<tr>
<td>Northern Metalmark</td>
<td>Vulnerable/Apparently Secure</td>
</tr>
<tr>
<td>A Sallow Moth</td>
<td>Vulnerable/Apparently Secure</td>
</tr>
<tr>
<td>A Hand-Maid Moth</td>
<td>Vulnerable/Apparently Secure</td>
</tr>
<tr>
<td>Abbreviated Clubtail Dragonfly</td>
<td>Vulnerable/Apparently Secure</td>
</tr>
<tr>
<td>Doll's Merolonche</td>
<td>Vulnerable/Apparently Secure</td>
</tr>
<tr>
<td>Allegheny Woodrat</td>
<td>Vulnerable/Apparently Secure</td>
</tr>
</tbody>
</table>

D. Aquatic Ecosystems

Aquatic ecosystems are an important heritage area resource; much of the region's history and heritage can be traced to the Schuylkill River and its tributaries. The fish industry, particularly shad, once thrived along the Schuylkill River. In the early 1800s, shad was a reliable source of food and fertilizer. Dried shad is credited as saving George Washington's troops from starvation when they were camped in Valley Forge. Today, the aquatic ecosystem is fragmented by dams and stressed by variable water quality. Dams of all different sizes and purposes fragment habitat, increase water temperature, impede nutrient and sediment flow, and are costly to maintain. Shad can only be found in the extreme lower portions of the Schuylkill River, as they are unable to migrate further. Several other species of fish can be found in the heritage area, including popular sport fish such as bass and trout. However, fish consumption advisories remain in effect statewide and for several of the region's waterways.

Efforts are underway to improve the aquatic ecosystem in the heritage area. Dams are slated for removal or fish passage, particularly on the Schuylkill River. Shad is being restored and along with other fish species will likely have pathways back to spawning grounds in the near future. It is estimated by the Pennsylvania Fish and Boat Commission that the return of shad to the Schuylkill River could generate $2.5 million in annual revenue from fishing trips.

Fishing is a common recreational pursuit in the heritage area. Trout are stocked in most of the popular tributaries, including Wissahickon.
Creek, Perkiomen Creek, French Creek, Pickering Creek, Perkiomen Creek, Skippack Creek, Tulpehocken Creek, and Maiden Creek. A number of creeks in the heritage area support native trout populations, particularly in Berks and Schuylkill Counties. Fishing is encouraged in all of the heritage area state parks.

### 3.2.4 Prime Farmland

The Schuylkill River Valley has a rich agricultural heritage that stems from an abundance of productive soils. Many of these soils are classified as prime farmland soils by the United States Department of Agriculture (USDA). The USDA designates prime farmland in order to identify, create an awareness of, and preserve well-suited agricultural soils and regions. A number of factors combine to make portions of the Schuylkill River Valley exceptionally fertile.

Prime farmland soils are usually located in a region where there is an adequate growing season, sufficient moisture supply, and nutrient rich bedrock. In the heritage area, prime farmland is often found where nutrient rich bedrock is most widespread. Prime farmland is most extensive in the southern portion of the Great Valley Section of the Ridge and Valley Physiographic Province. This area generally falls in the Maiden Creek, Tulpehocken Creek, and the upper Manatawny Creek watersheds of Berks County. A band of prime farmland also occurs along the southern border of the Great Valley Section to the northeast, east, and northwest of Reading. This area is exceptionally fertile due to the flat landscape that has developed on nutrient rich limestone and dolomite bedrock.
Prime farmland can also be found scattered throughout the following regions:

- In Schuylkill County, prime farmland soils occur in many of the undeveloped valleys where coal mining has not taken place. In this area, the Appalachian Mountain Section of the Ridge and Valley Province has valleys that are underlain by limestone, dolomite, and siltstone. Prime farmland occurs primarily within the Little Schuylkill River Watershed.

- In the Piedmont Province of Chester and Montgomery Counties, prime farmland is located in selected valleys where development has not occurred and rich sedimentary bedrock is present. The greatest concentration in this area occurs in the French Creek and lower Manatawny Creek watersheds. Prime farmland also occurs along a relatively narrow band of limestone that underlies part of the Piedmont Province. This band traverses the area from northwest to southeast, crossing the Schuylkill River in the area of Valley Forge National Historical Park and the confluence of the Perkiomen Creek.

The occurrence of prime farmland is limited in several sections of the Schuylkill River Valley National Heritage Area:

- Prime farmland is limited in Philadelphia and Montgomery Counties. This is partially due to the lack of nutrient rich bedrock, but also due to development. In order for an area to be designated prime farmland, it must be available for production. Relatively little land is available for production in these two counties.

- Northern Berks County has limited prime farmland due to the geology and varying topography in the northern part of the Great Valley Section. This area is characterized by undulating hills and nutrient poor shales and siltstones that are not optimal for farming.

- Much of Schuylkill County is lacking prime farmland due to the mountains in this part of the Ridge and Valley Province. This area has also been heavily mined, reducing the availability of prime farmland soils.

### 3.3 RECREATIONAL RESOURCES

The mission established for the Schuylkill River Valley National Heritage Area addresses recreational as well as natural, historic, and cultural resources. Recreational opportunities are abundant within the heritage area. The area is home to a national historical park which supports regional scale recreational activities, several state parks, and many regional and local parks. The diversity of the watershed from the urban setting in Philadelphia to the ridge and valley landscape in
Schuylkill and Berks Counties allows for the enjoyment of a variety of recreational activities. In addition to the many parks and recreational areas, the river, its tributaries, and adjoining lands are an extensive recreational resource.

The following text describes regionally significant parks and recreation resources located within the heritage area. These resources are shown on Figure 3-1.

### 3.3.1 National and State Parks

- **Valley Forge National Historical Park:** Valley Forge, located in Chester and Montgomery Counties along the Schuylkill River, is best known for its historic significance. However, the park offers many recreational opportunities over its 3,466 acres. Fishing, hiking, biking, running, walking, horseback riding, boating, birding, cross-country skiing, and picnicking are all encouraged activities. The Betzwood picnic area, located on the Montgomery County side of the River, is the terminus of the heavily used Valley Forge to Philadelphia Bike Trail (extended in the spring of 2002 northward to the Perkiomen Trail). The park also features a nature center.

- **Hopewell Furnace National Historical Site:** Like Valley Forge, Hopewell Furnace is best known for its historic significance as one of the finest examples of a rural American 19th century iron plantation (see Section 3.1.2D). Hopewell Furnace is located on 848 mostly wooded acres surrounded by French Creek State Park.

- **Appalachian National Scenic Trail:** A well-known recreational resource that traverses the heritage area along the ridge that forms the Berks/Schuylkill County line (see Section 3.3.4), the Appalachian Trail is a unit of the National Park System managed by the National Park Service.

- **Evansburg State Park:** Evansburg State Park is a 1,872-acre park located along the Skippack Creek in Skippack Township, Montgomery County. Recreational opportunities within the park include an 18-hole golf course, hunting, fishing, hiking, biking, softball fields, horseback riding, and picnicking.

- **Fort Washington State Park:** Fort Washington is a 493-acre park located along the Wissahickon Creek in eastern Montgomery County near the Towns of Fort Washington and Flourtown. Recreational activities include softball, picnicking, hiking, dog walking, group tent camping, fishing, sledding, and cross country skiing.

- **French Creek State Park:** French Creek State Park covers 7,339 acres in northwestern Chester and southwestern Berks Counties.
The park offers many recreational opportunities including camping, fishing, boating, swimming, picnicking, disc golf, orienteering, hunting, hiking, and horseback riding.

- **Locust Lake State Park**: Locust Lake State Park is situated on 1,089 acres in Schuylkill County, seven miles north of Pottsville. Recreational opportunities include camping, biking, boating, fishing, swimming, ice skating, ice fishing, sledding, and hunting. The park also has three playgrounds.

- **Tuscarora State Park**: This 1,618-acre park is located two miles west of Tamaqua in Schuylkill County. Recreational activities include boating, swimming, picnicking, fishing, hunting, ice skating, ice fishing, sledding, and hiking.

### 3.3.2 Other State Lands

- **State Gamelands**: The majority of state gamelands in the heritage area are located along the ridgeline that straddles the Schuylkill and Berks County line. Other gamelands exist in Montgomery, Chester, Berks and Schuylkill Counties but are smaller and scattered in their occurrence. Permitted activities include hunting and fishing during open season, hiking, and non-motorized riding in authorized locations.

- **Weiser State Forest**: Several tracts of the Weiser State Forest are located within Schuylkill and Berks Counties in the Schuylkill Watershed. The Appalachian Trail traverses the Weiser State Forest in this area. The forest covers areas where mountain water originates and provides drinking water for local communities such as Port Clinton. Hunting, fishing, hiking, cross-country skiing, mountain biking, horseback riding, snowmobiling, and ATV riding are all permitted recreational activities in the forest.

### 3.3.3 Other Regional Parks and Recreation Areas

- **Fairmount Park**: Fairmount Park is the name used for the Philadelphia Park System. The largest of these parks, usually referred to as Fairmount Park, is located along the Schuylkill River in Philadelphia from the Art Museum west to the Philadelphia City Line. The park includes the Wissahickon Valley, which is located along the Wissahickon Creek in the Germantown, Mount Airy, and Chestnut Hill sections of Philadelphia. Permitted activities within the park and along the river include rowing, hiking, biking, horseback riding, fishing, picnicking. There are also softball, baseball, and soccer fields within the park.

- **Green Lane Reservoir**: Managed by Montgomery County, the Green Lane Reservoir is located in northwestern part of the county.
at the northern end of the West Branch of the Perkiomen Creek. Recreational activities include fishing, boating, picnicking, horseback riding, hiking, mountain biking, camping, cross country skiing, ice skating, and ice fishing. The park also has an equestrian campground, tennis and sand volleyball courts, and playgrounds.

- **Blue Marsh Lake**: Blue Marsh Lake is located near Leesport in Berks County. The lake is formed by a dam on the Tulpehocken Creek that is maintained by the United State Army Corps of Engineers. Recreational opportunities in the Blue Marsh Lake area include hunting, picnicking, swimming, boating, fishing, cross country skiing, sledding, ice fishing, ice skating, and an extensive trail system for hiking, biking, and horseback riding.

- **Hawk Mountain Sanctuary**: Operated by a non-profit, member-supported organization, Hawk Mountain Sanctuary is a 2,400-acre natural area on the Kittatinny Ridge that forms the Berks and Schuylkill County line. The sanctuary is a refuge for raptors and provides excellent wildlife viewing opportunities, especially for migrating birds and birds of prey. Hiking and walking is encouraged on Sanctuary grounds. The Appalachian Trail passes close by the Sanctuary and trails from the Sanctuary connect to it.

- **Warwick County Park**: Located four miles west of Routes 100 and 23 in Chester County, this 550-acre park offers a variety of recreational opportunities in a natural setting comprised of hardwood forest, meadows, wetlands, and French Creek. In the 18th and 19th centuries the forests within the park provided much of the raw timber used to make charcoal for the region’s iron furnaces and forges. Remains of the iron industry can still be seen at various charcoal hearths and along old cart paths.

- **Norristown Farm Park**: The Norristown Farm Park is located in Montgomery County next to the Borough of Norristown. Formerly farmed as part of the Norristown State Hospital, this park is now managed by the County and supports a working farm and visitors center. Recreational opportunities include hiking, biking, picnicking, and fishing.

### 3.3.4 Other Recreational Resources

- **Appalachian Trail**: The Appalachian Trail traverses the heritage area along the ridge that forms the Berks and Schuylkill County line. Running from Maine to Georgia, the 2,167-mile trail is a well known hiking corridor that is used by day, short-term, section, and through hikers. Approximately 30 miles of the trail cross through the heritage area, mostly within state gamelands. The trail passes through the community of Port Clinton at State Route 61.
• **Schuylkill River Trail:** The Schuylkill River Trail, when completed, will connect Philadelphia to Pottsville and beyond via a multi-use path along the Schuylkill River. A number of regional and local trails currently connect to the Schuylkill River Trail and several more will join it in the future. Completed sections of the trail include the segment from Philadelphia to Perkiomen Creek and smaller segments near Reading and Hamburg. Several other segments are currently either in the design stage or under study.

• **Schuylkill River Water Trail:** The Schuylkill River Water Trail is a series of boat landings and riverside parks that allow canoeists, kayakers, and boaters to access and travel on the Schuylkill River. Significant parks along the Schuylkill River Water Trail include Schuylkill Haven Island Park, Riverfront Park in Reading, Poplar Neck Park in Cumru Township, Riverfront Park in Pottstown, Upper Schuylkill Valley Park in Upper Providence Township, Riverfront Park in Norristown, Flat Rock Park in Lower Merion Township, and Fairmount Park in Philadelphia. In May 2002 the Schuylkill River Water Trail was designated as a National Recreation Trail in accordance with the National Trails System Act of 1968.

• **Perkiomen Trail:** The Perkiomen Trail is currently under development and will connect the Green Lane Reservoir to the Schuylkill River via a path along the Perkiomen Creek and the West Branch of the Perkiomen Creek. Northern and southern portions of the trail from Green Lane Reservoir to Spring Mount and from the Valley Forge National Historical Park to Collegeville were completed in the fall of 2001 and spring of 2002, respectively.

• **Horseshoe Trail:** Over 130 miles in length, the Horseshoe Trail runs west from Valley Forge National Historical Park through Chester and Berks Counties, eventually crossing into Lancaster County and connecting with the Appalachian Trail just north of Hershey.

### 3.4 LAND USE

#### 3.4.1 Generalized Land Cover

Land use in the heritage area varies from developed urban centers and suburbs to agricultural and forested lands. The most recent land cover information for the heritage area is the National Land Cover Dataset developed by the United States Geological Survey (USGS) in 1992-1993. According to this source, forest is the dominant land cover in the heritage area, accounting for approximately 62% of the area's 292,118 acres. This cover includes deciduous, evergreen, and mixed forests, as well as shrubland. Agricultural uses, including orchards, grasslands, fallow, pasture, and crop lands, are also significant, encompassing 32%
of the heritage area. Developed lands account for approximately 5% of the land area. Figure 3-4 provides a generalized depiction of land cover in the heritage area based upon the USGS dataset.

Land cover and uses vary according to the region, county, and watershed. Schuylkill County and the Upper Schuylkill and Little Schuylkill River watersheds are mostly forested. However, a significant amount of land in this area is occupied by abandoned coal mines, tracts in transition from past mining activities (regenerating or being remediated), and current mining uses. This unique landscape is the legacy of the anthracite coal mining industry that once thrived in Schuylkill County. The largest urban area is the City of Pottsville. Other developed areas include the towns of Tamaqua, Minersville, New Philadelphia, Schuylkill Haven, Frackville, Ashland, Mahanoy City, Shenandoah, and Middleport. Open water areas include the Little and Upper Schuylkill Rivers and their tributaries, several small lakes, and abandoned mines that have filled with water. Wetlands are present, but are small and scattered. Many wetlands have been created during restoration of the abandoned mine lands. Agricultural lands are present in isolated valleys where lack of coal seams precluded mining.

In Berks County, agriculture is the prevailing land use, particularly in the Tulpehocken Creek and Maiden Creek watersheds and parts of the Manatawny Creek watershed. Much of the heritage area's Prime Farmland lies within the Great Valley, which stretches across much of Berks County. Forested land is prevalent along the Blue Mountain ridge and in the hills to the east of Reading that form the Reading Prong Section of the New England Physiographic Province. Forested lands are also present in the upper portions of the French Creek watershed and to the west of the Schuylkill River between Reading and the southern Berks County border. Reading is the most prominent urban area in the region. Other urbanized areas include Birdsboro, Kutztown, Hamburg, and Boyertown.

Land use in Chester County is varied. Much of the northwestern and southwestern parts of the county within the heritage area are forested, including much of the French Creek watershed and the area to the west of Valley Forge National Historical Park in the Valley Creek and Pickering Creek watersheds. Significant agricultural areas include the lower part of the French Creek watershed, the area south of the Schuylkill River and north of the French Creek, and the upper part of the Pickering Creek watershed west of Phoenixville. Urban areas include Phoenixville, Spring City, Malvern, and parts of the US Route 30 corridor.

Montgomery County and Philadelphia County account for most of the urban uses within the heritage area. However, Montgomery County is quite diverse, with significant forested and agricultural land in addition
to urban uses. The primary forested area of the County is the upper portion of the Perkiomen Creek watershed, mainly in the vicinity of the Green Lane Reservoir. Other forested areas include the greenway along the Wissahickon Creek and Evansburg State Park. Many pockets of agricultural land use also exist in Montgomery County, including land in the lower portion of the Perkiomen Creek, along the East Branch of the Perkiomen Creek, and in the Swamp Creek watershed northeast of Pottstown. Significant urban areas include Pottstown, Collegeville, Royersford, Lansdale, Norristown, Conshohocken, and the west Philadelphia suburbs.

Philadelphia is the dominant urban area in the heritage area. While other uses are limited in extent, a large forested area does exist along the Wissahickon Valley portion of Fairmount Park. Parts of the Roxborough, Chestnut Hill, Germantown, and Mount Airy sections of Philadelphia are forested as well.

### 3.4.2 Land Use Issues

Land cover in the Schuylkill River Valley is a result of the area’s natural and cultural heritage. The area’s natural heritage is reflected in the rivers and forested lands that are prevalent across much of the landscape. As described in Section 3.3, cultural heritage is reflected in the area’s agricultural lands, historical sites, industrial complexes, and abandoned mine landscapes. A number of land use related issues pose potential threats to natural and cultural resources in the heritage area:

- The conversion of farmland and forested lands threatens natural resources and historic landscapes. Land development in much of the heritage area has far outpaced population growth. Although the designation of parkland and the preservation of farmland has increased in the region, farmland and forested lands are still being acquired and developed.

- Remnants of historical industrial practices in the heritage area impede waterfront access, hinder recreational opportunities, contribute to water quality degradation, and are a blighting influence in many communities. Dams, abandoned mine lands, and vacant industrial sites can be found throughout the heritage area.

- Natural and cultural resources are vulnerable due to the expansiveness of the heritage area and fragmentation of the communities, habitats, and local destinations. The heritage area is naturally divided into different physiographic and vegetative zones. Multiple political units, including counties, townships, and boroughs, contribute to its fragmentation. Local and regional land use issues in distant reaches of the heritage area may not be apparent to residents or government officials. Likewise, residents or tourists many not be aware of local
and regional parks and historic sites. In addition, the number of governing bodies within the heritage area could lead to a lack of coordination that may impede the preservation of critical resources.

In response to these issues there are many active programs to preserve heritage resources. Natural resources in the region are being protected as state gamelands, state and local parks, and state forests. Resources are also being protected through the Pennsylvania Growing Greener Program, watershed conservation planning, county open space programs, non-profit land trusts, and other local efforts.

Cultural resources are being protected through reinvestment in urban areas, restoration of abandoned industrial and mine lands, and the conservation of farmland and historical landscapes. Abandoned mine lands in Schuylkill County are being restored by state and federal agencies with funding from the Pennsylvania Growing Greener Program, federal grants from the Office of Surface Mining, and forfeited reclamation bonds. Abandoned industrial buildings and sites are being restored and reused through local grants and brownfield redevelopment programs, such as Pennsylvania’s Land Recycling Program. One particular success story is the restoration of the former Phoenixville Iron and Steel Company site in Phoenixville; other significant restoration efforts underway include the Tamaqua Train Station and sections of the Schuylkill Canal. The management entity for the Schuylkill River Heritage Corridor, the Schuylkill River Greenway Association, is playing a key role in many of these projects through Pennsylvania’s Heritage Parks Program.

Farmland preservation efforts are also being actively pursued within the heritage area. Enacted in 1988, the Pennsylvania Agricultural Conservation Easement Purchase Program has been especially effective in preserving agricultural land through the purchase of conservation easements from land owners. The program is administered in Schuylkill, Chester, Berks, and Montgomery Counties by County Agricultural Land Preservation Boards. From 1989 to 2000, over 11,700 acres of farmland has been preserved in Chester County through this program, much of it in the heritage area. In Berks County, over 23,000 acres of county agricultural land have been preserved through this program, most of it within the heritage area. Local land trusts are also actively preserving farmland, often working with municipal and county officials.

Other programs in the Schuylkill River Valley National Heritage Area are being implemented to address a range of issues through one coordinated initiative. In Montgomery County, 16 boroughs and townships are collaborating in the development of the Schuylkill River Greenway. The initiative will protect open space along the river corridor and provide recreational opportunities and access to the waterfront. It
will revitalize urban centers and industrial complexes and protect and enhance historic sites and historic landscapes. A significant greenway has also been protected along the Wissahickon Creek.

The development of the Schuylkill River Trail is another collaborative effort that will help to protect and enhance heritage resources. The trail will eventually run from Schuylkill County to the confluence of the Schuylkill and Delaware Rivers in Philadelphia. Along its path it will utilize many local parks, connect industrial sites and historic waterfront towns, and traverse natural areas. It will connect to several local trails that provide access to additional parks, natural areas and historic landscapes.

### 3.5 SOCIO-ECONOMIC CONDITIONS

#### 3.5.1 Visitor Attractions and Levels of Use

The majority of the visitor attractions and tourism infrastructure in the Schuylkill River Valley National Heritage Area are located in the area’s major population centers of Philadelphia, Reading, and the Valley Forge/King of Prussia region of Montgomery and Chester Counties. Current offerings are relatively limited in other parts of the heritage area including the smaller population centers of Pottsville, Phoenixville, and Pottstown. Attractions in rural sections of the heritage area are especially limited, as these areas lack adequate lodging, dining, and entertainment choices.

Philadelphia is the focal point for tourist activities within the heritage area. Major attractions in the City include the Liberty Bell and Independence Hall, the Franklin Institute, Philadelphia Museum of Art, and Center City’s shops, restaurants, and historic sites. The City is highly accessible via a number of expressways and roads, public transit, and an international airport.

Montgomery County’s tourism market is varied. The largest attractions in Montgomery County are Valley Forge National Historical Park (located partially in Montgomery and partially in Chester County) and the King of Prussia Mall in the southern part of the heritage area. The mall is the largest in Pennsylvania, and Valley Forge attracts approximately two million visitors each year. Attractions in other parts of Montgomery County are somewhat limited. Much of the county’s visitor infrastructure is located along the Pennsylvania Turnpike. Lodging and dining opportunities are less well developed away from the Turnpike and in many of the county’s larger boroughs.

In Chester County, the Valley Forge National Historical Park draws many visitors to the area. However, the majority of visitor attractions
are located in the southern portion of the county away from the heritage area.

Reading is the center of tourism for Berks County. Many of the visitor attractions are located within the City, including the Reading Outlets. Berks does have many rural attractions, including Kutztown, Hopewell Furnace, and Dutch Hex barns, but these areas lack visitor amenities.

Schuylkill County does have several visitor attractions but lacks an overall tourist identity. The most significant attractions include the Yuengling Brewery in Pottsville and the Pioneer Tunnel Coal Mine in Ashland. These attractions draw 60,000 and 40,000 tourists each year respectively.

A new attraction planned near the Berks/Schuylkill County line will significantly increase visitation to the area. Cabela’s, a major retailer of hunting, fishing and outdoor gear, is building a 225,000-square-foot store, its first East Coast location, at the intersection of I-78 and Route 61 near Hamburg. Cabela’s stores have become major tourist attractions due to features such as museum-quality animal displays, indoor archery ranges, and stocked aquariums. Anticipated to be open for business by late fall 2003, the store is expected to attract 6 million customers a year.

### 3.5.2 Visitor Market Characteristics

#### A. Primary Market

The Schuylkill, Berks, Chester, Montgomery, and Philadelphia five-county region is the primary market for tourism in the heritage area. An understanding of the region’s population characteristics, employment profiles, and demographic trends will help to determine potential use of tourist attractions from this core group as well as potential economic impacts from increased heritage tourism.

The overall population of the five heritage area counties has been relatively stable between 1950 and 2000, peaking in 1970 at 3.31 million persons. Recent trends have included population decline in Philadelphia and increases in the surrounding counties. Berks, Chester, and Montgomery Counties have all experienced significant growth between 1950 and 2000, while Philadelphia’s population has been consistently falling over that time period. Schuylkill County, which has no connection to a major metropolitan area, has been steadily declining in population since the peak of the coal industry in 1930. Future estimates for these areas project moderate to aggressive growth in Chester, Berks, and Montgomery Counties and moderate losses in Philadelphia and Schuylkill Counties.

Characteristics of the resident market are variable among the five counties. Philadelphia has a high concentration of 18-24 year olds and
children under the age of 18. Montgomery County and Chester County have high concentrations of middle-aged families. Schuylkill County has a high concentration of senior citizens. Montgomery and Chester Counties have the highest per-capita and median household incomes. Philadelphia and Schuylkill Counties have the lowest. Berks County follows the regional average in both categories, moderating between the suburban and rural counties.

The economy of the five-county region has been steadily changing from a manufacturing to service base. Philadelphia and Schuylkill Counties lost 76 percent and 39 percent of their manufacturing jobs, respectively from 1970 to 1999. Overall, the region lost 27 percent of its manufacturing jobs. Other sectors have seen significant losses as well. Schuylkill and Berks Counties have each lost more than 50 percent of their mining jobs. Philadelphia lost 62 percent of its wholesale jobs, while wholesale jobs increased in the other counties. The services industry has helped to mitigate much of the losses, more than doubling in size with the most significant increases in Montgomery and Chester Counties.

The average unemployment rate in the heritage area as of February 2002 was 6.1 percent, a significant increase from the previous year. Schuylkill County has the highest unemployment rate at 8.6 percent. Philadelphia is also high at 7.3 percent. Berks and Montgomery Counties experienced the most substantial rise in unemployment over the previous year, but their rates still remain low.

The economic impacts of tourism on a county-by-county basis in the Commonwealth of Pennsylvania are documented in a study conducted for the Pennsylvania Department of Economic and Community Development. In the five-county heritage area, tourism spending directly produced 69,000 jobs and $1.5 billion in payroll. The job impacts by county were: Philadelphia, 26,000; Montgomery, 15,600; Berks, 13,500; Chester, 8,900; and Schuylkill, 4,500. Taking into consideration the indirect and induced multiplier effects of tourism spending, the study estimated the total economic impact to be $7.3 billion, with tourism spending being responsible for a total of 105,000 jobs with a payroll of $2.62 billion. The job impacts by county were: Philadelphia, 41,000; Montgomery, 25,000; Berks, 19,700; Chester, 13,400; and Schuylkill, 6,000.

B. Secondary Market

The secondary tourism market for the Schuylkill River Valley National Heritage Area consists primarily of the New York and Washington/Baltimore metropolitan areas, along with the remainder of Pennsylvania.

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and the three states that border the heritage area: Delaware, Maryland, and New Jersey. In total, there are 29.3 million people living in these nearby states and metropolitan areas, representing more than 10 percent of the population of the United States. While there is clearly a deep potential market for tourism from these areas, awareness of the Schuylkill River Valley National Heritage Area is very low and drawing visitors from outside of the region likely would require aggressive cross-marketing with other regional attractions.

C. Heritage Tourism Potential

The potential for enhanced heritage tourism in the Schuylkill River Valley National Heritage Area can be best described using tourist data from the Philadelphia region and visitation to heritage sites in Pennsylvania. One of these sites is the Schuylkill River State Heritage Corridor. Heritage tourism accounts for a large portion of leisure travel to and within Pennsylvania. However, the Schuylkill River State Heritage Corridor was ranked fairly low in awareness among Pennsylvania heritage sites based upon a study conducted for the Pennsylvania Department of Conservation and Natural Resources.\(^{11}\)

According to this study, 26 percent of leisure trips and 40 percent of total expenditures from leisure visitors in 1997 were from tourists visiting heritage sites. Among those visitors that claim heritage sites are a major part of their trip to the State, proximity was given as the greatest reason for doing heritage travel in Pennsylvania. Other motivating factors include the wide variety of activities available, beautiful landscape, superior heritage activities, and good value. Among this same group, awareness of the Schuylkill River Heritage Corridor ranked fairly low compared to the other ten heritage sites in the state at the time of the study. Only 32 percent were aware of the heritage corridor and just 16 percent had visited.

Heritage visitors to Pennsylvania primarily come from within the State. The neighboring states of New Jersey, New York, Maryland, and Ohio also account for a third of heritage tourism from core heritage visitors. A significant number of people who did not visit heritage sites live in Pennsylvania. Heritage visitors that did not engage in heritage related travel in Pennsylvania most often stated that Pennsylvania did not come to mind when planning their trips. Other factors contributing to tourists not visiting Pennsylvania heritage sites include having no family connections in the area and having already seen everything.

Core heritage visitors, those who believe heritage sites are an important part of their trip, tend to be older. As a result, they are not limited in the seasonality of their travel. Most travel from core visitors occurs

from August through November, peaking in September and October. Moderate visitors are younger with a high percentage of visitors in the 35-49 range. Moderate visitors usually have a higher income than low or core heritage visitors. Low heritage visitors are the youngest and have moderate incomes.

Studies by the Greater Philadelphia Tourism Marketing Corporation show that historic attractions and sites are the most popular destination for tourists to the Philadelphia region (defined as Philadelphia and the four surrounding counties of Bucks, Chester, Delaware, and Montgomery).12 Other highly ranked attractions were small towns and villages, rural areas, historic houses, and national and state parks. The most popular destination in the Philadelphia area was the King of Prussia Mall. Valley Forge National Historical Park was second. Most often trips to the Philadelphia region were by persons visiting friends and relatives. The greatest percentage of travelers to the Philadelphia region come from within Pennsylvania. New York, Virginia, New Jersey, and Maryland followed after Pennsylvania.

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12 Longwoods International, Profile of Visitation to the City of Philadelphia vs. Other Four Counties, 2000